

CASE NO.: PLN2022-00007

CASE NAME: Advancing Adams Comprehensive Plan Update

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**COMMUNITY & ECONOMIC DEVELOPMENT
DEPARTMENT
STAFF REPORT**

Planning Commission

September 8, 2022

Case No.: PLN2022-00007	Case Name: Advancing Adams - Comprehensive Plan
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Location of Request:	Unincorporated Adams County
Nature of Request:	Adams County Comprehensive Plan which includes the Future Land Use Map
Hearing Date(s):	PC: September 8, 2022 / 6:00 p.m.
	BoCC: September 27, 2022 / 9:30 a.m.
Report Date:	September 1, 2022
Case Manager:	Karl Onsager, Senior Implementation Planner
Staff Recommendation:	Adoption with 3 Findings of Fact and 1 Note

HISTORY OF THE ADAMS COUNTY COMPREHENSIVE PLAN

Adams County adopted its first Comprehensive Plan in 1968 and has since conducted regular amendments and updates to address changing conditions and needs. Targeted amendments to the County’s original plan were made between 1975 and 1984. The 1984 plan acknowledged that as conditions change, plans become outdated and need to be reviewed and revised to reflect current conditions and needs. Accordingly, the County has continued to update and amend the Comprehensive Plan as needed. The Comprehensive Plan underwent a major overhaul in 1999. Targeted updates to the 1999 plan were made in 2004 to address the completion of E-470, the formation of the City and County of Broomfield, and rapid growth in the north Metro area. Several Comprehensive Plan amendments were completed between 2004 and the 2012 Imagine Adams Comprehensive Plan (Imagine Adams) , including thirteen subarea plans.

The Imagine Adams plan included the Hazard Identification and Risk Assessment and incorporated components of the Transportation Master Plan and Open Space, Parks & Trails Master Plan. The integration of those components represented a significant departure from previous planning efforts in Adams County. While the integration of land use and transportation efforts was common in comprehensive plans, incorporating hazard mitigation was considered a new approach and reflected Adams County’s commitment to a more resilient and sustainable future. The plan relied on the Future Land Use Map to set growth and development expectations, along with six goals to support the County vision: Promote Coordinated and Connected Growth; Protect the Health, Safety, and Welfare of Adams County’s Inhabitants; Foster Regional Collaboration and Partnerships; Reduce the Fiscal Impact of Growth; Promote Economic Vitality; and Preserve the County’s Natural Resources.

SUMMARY OF THE COMPREHENSIVE PLAN

Based on the 2020 Census information, Adams County's current population is 520,070. The county population increased by 17.7 percent from a population of 441,603 in 2010. The population covers over 1,182 square miles but is heavily focused in the southwestern area of the county. The County contains a diverse mix of land uses, varying from older cities to new green-field suburbs to expanses of open rangeland. All or portions of ten municipalities (Arvada, Aurora, Brighton, Bennett, Commerce City, Federal Heights, Lochbuie, Northglenn, Thornton, and Westminster) are located within Adams County. Approximately 98,717 residents currently reside in unincorporated Adams County. Adams County is projected to grow into the third largest county in the Denver Council of Regional Governments (DRCOG) area, with the population expected to increase to 722,807 by 2040 with the population of unincorporated Adams County increasing by up to 40,000 new persons.

Along with current and anticipated growth in Adams County and the region, several significant changes have occurred to the planning context since the Imagine Adams plan. The completion of the Clear Creek - Federal Station and Pecos Junction light rail stations realized the region's investment in public transit in Adams County. The public investments in the Western Stock Show Complex, while in Denver, reinforce agricultural heritage in an urban setting and emphasizes the opportunity for supportive development in Adams County. The Central 70 widening of the I-70 corridor potentially unlocks growth in residential, commercial, and freight in eastern parts of the county. The Comprehensive Plan, in conjunction with the Transportation Master Plan (TMP) and Parks, Open Space & Trails (POST) Plan, guide the growth, development, and investment to meet the needs of current and future residents of Adams County.

The County embarked on an amendment to the three distinct, but closely integrated plans in August 2020 titled "*Advancing Adams*". The project relied on subject matter experts within the County in coordination with a team of consultants including: Design Workshop (Existing Conditions Report and foundation building & POST Plan) and Fehr & Peers (TMP). *Advancing Adams* is divided into three phases. Phase I consisted of an Existing Conditions Report (ECR) which evaluated demographics, county data, and community input and listening sessions to form the report. Phase II focused on foundation building which sought community feedback on the ECR, the core value lenses of *equity*, *sustainability*, and *livability*, and community preference for three growth scenarios and the 20-Minute Community model. Phase III resulted in the drafting of the plans under consideration. The Comprehensive Plan team decoupled from its consultant and has been a staff-lead initiative to draft the plan since December 2021. The Comprehensive Plan has been drafted by coordinating with the POST and TMP, utilizing the information gleaned from the ECR, the core value lenses, growth scenario preferences and support for the 20-Minute Community model.

The plan is structured by key issues, goals, policies, and strategies. Key issues summarize and synthesize the themes and community input heard throughout Phase I and Phase II of the planning process. The goals in the plan are aspirational statements that set the broad vision. The plan policies set County direction to achieve the stated goals. Strategies in the plan list actions the County may explore or take that implement the policies.

COMPREHENSIVE PLAN CHAPTERS

Chapter 1: Introduction

The Advancing Adams Comprehensive Plan (“Comp Plan”) is the official policy document of the Adams County Planning Commission and Board of County Commissioners. The Comp Plan is visionary and advisory and provides a concise statement of the County’s objectives for future development within the County and in future growth areas. It establishes goals, policies, and strategies to guide growth and investment in the County and to promote coordination and implementation of the community’s vision for the future.

The Comp Plan is an overarching plan that addresses the community’s vision for future land uses, housing and population growth, the natural and built environments, economic development, cultural heritage, and corridors and subareas. The Comp Plan builds upon the issues and opportunities identified in the Phase I ECR to establish policies and strategies to achieve this vision. While the Comp Plan is a visionary document, it can advise elected officials’ decisions, staff analysis and recommendations, as well as provide guidance for strategic planning to implement the vision, set development expectations, and guide public and private investments in the county.

Figure 1-4 in the chapter is a list of re-adopted plans and indicates whether the Comp Plan is re-adopting policy, future land uses, or both, and which plan supersedes in the event of conflicting policy.

Chapter 2: Future Land Use Plan

The future land use plan establishes the framework for how the county can sustain its existing population, infrastructure, and assets while accommodating the future growth and needs in the unincorporated portions of the county. The Future Land Use Map (FLUM) depicts the future land use categories that are described in this chapter and designates their place in the county. The future land use categories were determined after a thorough analysis of the 2012 Imagine Adams FLUM, current zoning and development entitlements, projected infrastructure capacity, public investments and transit assets, and extensive public feedback. The map is also informed by the 20-Minute Community model, further described in Chapter 5, proximity of supporting services, and the transect model to promote transitions and buffering between development patterns and intensities.

The FLUM presents a vision for the county, while the Adams County Development Standards and Regulations determines the regulatory zoning, uses, and development standards. In some cases, the future land use matches the existing zoning and land uses in an area. In other instances, the county’s vision for development or uses may not align with current zoning. In this case, the FLUM sets an expectation for future conditions while the regulatory requirements set by the zoning remain. The Comp Plan recognizes that there may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation overlay, may undermine the Comp Plan’s stated development goal, and in those instances existing and future development will need to accommodate those existing conditions. The vision for the community is realized incrementally when the zoning and FLUM align, generally by property owners rezoning their property to match the future land use designation.

Typical Zone Districts depicted in the future land use categories is intended to illustrate zone districts conventionally found in a category and not an exclusive list of potentially appropriate zone districts and may be evaluated along with additional criteria. Subsequent chapters outline the goals, policies, and strategies to guide investment, development, growth, and preservation to further realize the county's vision.

Chapter 3: Housing & Community

This chapter provides a high-level framework of housing goals and strategies that influence land-use policies and integrates principals of equity, sustainability, and livability. It establishes a vision for healthy, balanced neighborhoods that serve residents needs by providing choices in housing type, opportunities for both rental and homeownership, and ease of access for all ages and ability levels. There is also an underlying foundation of sensitivity to availability of resources, such as water and infrastructure, and fiscal impacts of residential development.

Housing markets operate at a regional level while also being strongly influenced by national markets and economic policies. Housing is also inextricably linked to local land use regulations and development standards because those factors drive housing densities, construction costs, and, ultimately, price points in home sales and rents. This chapter seeks to provide a current picture of housing needs across the county, identify policy areas to update and align with best industry practices, promote a fair housing environment, and outline land-use strategies that encourage responsive, sustainable, and equitable housing growth to meet the needs of Adams County residents into the future.

Chapter 4: Natural Resources & Environment

The natural resources & environment in Adams County include active and passive open space, agricultural lands, surface and groundwater sources, ecological resources, wildlife habitat, energy and mineral resources, and environmental quality. Conservation and preservation of resources are seen as one of the most important means of reducing our impact on the natural environment. Through a variety of strategies, the county aims to protect habitat, water and air resources, reduce impacts on the environment by ensuring responsible development and resource extraction, and promote climate resiliency.

Adverse impacts of development on the environment and natural resources may continue to expand unless strategies are implemented to direct and manage anticipated growth. Along with that growth additional stressors related to global climate change in the form of increased temperatures, greater variability and magnitude in storms, drier conditions, and changing precipitation patterns impose an increased risk of harm to the natural resources and residents of Adams County. As identified in the Adams County Hazard Mitigation Plan ("HMP", 2020), these factors will combine to increase the prevalence of drought conditions, especially hotter and drier summers, which may lead to increased wildfire risk (see Figure 1), additional air quality impairment, and alterations in ecosystem species composition. According to the HMP, there may also be an increased likelihood of floods (see Figure 2) and severe winter storm events. Note, the maps represent a snapshot and the HMP should be referred to for the latest data and images.

Anticipating these changes to our natural environment proffers an opportunity to build resiliency and adaptability into planned development and employ effective strategies to mitigate impacts to the county's natural resources. Knowing that Adams County will get hotter and drier with shifting precipitation patterns as the most likely scenario allows for ongoing succession planning for everything from agricultural species to street trees and entire ecosystems. Providing clear guidance to decision-makers on what to expect and how to plan for it can result in greater benefits for future generations.

This chapter identifies the key issues facing the County's natural resources and environment and presents mechanisms to address them, including encouraging sustainable development practices, reducing the consumption of natural resources, particularly energy and water, and promoting waste reduction and diversion to ensure quality and quantity are preserved for future generations.

Chapter 5: Built Environment and Connections

The built environment is characterized as the human-constructed, physical aspects we interact with on a regular basis. The road and transportation network, street design, buildings and development patterns, landscaping, utility infrastructure, and even human-made parks, constitute the built environment. The components of the built environment, especially when aligned, contribute to a sustainable and livable community.

It is important that new development be located out of areas with high risk for flood and wildfire, and that lands that have historically been used for environmentally hazardous industries are appropriately remediated or mitigated for new development. Expansion to undeveloped portions of the county should be limited. Instead, strategies should explore enhancing and adaptively reusing existing neighborhoods to support the county. New developments should prioritize energy efficiency, the use of renewable energy, and innovative technologies to mitigate greenhouse gas emissions.

The built environment significantly impacts the sense of urban, suburban, and rural characters found throughout the county. While the comprehensive Plan applies to the unincorporated parts of the county, it is important to recognize the interconnections between incorporated and unincorporated parts of the county and plan for transitions accordingly. This chapter further applies the 20-Minute Community framework. The framework seeks to integrate connections between transportation and parks from the TMP and POST plans by guiding services and supportive development to reinforce established communities in the county. Finally, the built environment has significant influence on sustainability, human-made and natural hazards, and the opportunities to live a fulfilled and healthy life.

20-Minute Community: Key Components

The 20-minute community is a planning model that seeks to cluster community resources and amenities, such as education, healthcare, healthy food access, neighborhood commerce and local employment, public parks, and public gathering areas so they are accessible in an easy 20-minute walk, bicycle ride or transit ride. The goal of the 20-minute community is to establish more resilient neighborhoods that can access essential services without sole reliance on automobile trips.

Chapter 6: Economic Development

The vision for Adams County to be the most innovative and inclusive county in America for all families and businesses is the central tenant for the framework of economic development activities, which serve to build economic health and sustainable opportunities for its resident, business, and development communities. A strong and vibrant economy provides for the creation of jobs and business investments by building a strong tax base that supports public safety, education, parks and open space, services, and other recreational and cultural amenities.

To continue economic growth and remain competitive over the next decade, a new analysis and augmented set of Target Industries will be conducted through the creation of a separate Economic Development Strategy & Implementation Plan for the county by the Adams County Economic Development Division. Industry sector targets will be identified for the 1) County's comparative advantage, 2) growth potential for the individual sector, 3) resiliency of the individual sector to potential future economic shocks, and 4) integration into the larger county vision. As a part of economic development strategic planning, Adams County will continue working with key public and private sector partners in strategy development and implementation.

Adams County has a rich history in agriculture and a well-established transportation network. These two key factors have shaped many of the land use patterns across the county over time and influence positioning for future economic development. Additionally, as one of the fastest growing counties in the state and part of a rapidly growing metropolitan region, there is pressure for higher wages and affordable housing that present challenges which must be addressed to ensure equity and continued opportunities.

Chapter 7: Culture & Heritage

The diversity of the people that have called Adams County home is as distinct as the landscapes within its borders. What makes this vast land so unique is not only the geography of the County - urban to suburban to urban fringe to rural - but the population's desires and subsequent lifestyles that thrive within these environments. Adams County continues to grow and to draw people from all over the globe to lay down their roots. As we look to the future, celebrating the history, people and places of Adams County will take an innovative approach, one that has the potential to offer a dynamic expression of our very unique cultural diversity.

Knowing that Adams County is over 90% "land in farm operations", promoting "Cultural Heritage as Agriculture" is one of the key themes of this chapter. In support of this concept, the Historic Splendid Valley plan sets blueprint for placemaking and farming districts. Another theme is "Cultural Heritage as Art", which is shown by strengthening cultural values and preserving heritage and history through art. Finally, the theme of "Cultural Heritage as Historic Assets" recognizes that Adams County has a number of historical assets that represent the cultural heritage of the county.

Chapter 8: Corridors & Subareas

Adams County has a broad and diverse geography, which varies from urban and transit-oriented areas to rural areas with large agricultural development. Adams County's population growth is expected grow largely in the southwestern portion, but with increases in the eastern areas of

Bennett and Strasburg. The County has identified these areas of future growth as Strategic Corridors and Subareas and expect to conduct specific planning efforts.

To highlight specific opportunities for focused improvements in key geographic areas, Advancing Adams selected five strategic corridors that were analyzed in greater detail as a part of the planning process—Federal Boulevard, Washington Street, Pecos Street, 104th Avenue, and 120th Avenue. The ECR profiled the current state of the corridors and provided opportunities for future land uses along the corridors.

The common corridor goal includes enhancing five strategic corridors in cooperation with multiple jurisdictions to provide improved connectivity that considers multiple modes and integrates with the parks and trails networks, and orderly transitions across jurisdictional boundaries, infrastructure and uses, and corridors that provide opportunities for safe travel and vibrant communities.

There have been several county-wide and sub-area plans adopted prior to and after the Imagine Adams plan. Some plans were recently adopted and are well aligned with the Comp Plan, such as the Colorado Air & Space Port (CASP) sub-area plan in 2021 and Square Lake sub-area plan in 2022, while other older plans, such as the 2002 Strasburg Plan and 2008 Berkeley Neighborhood Plan have not been updated. Some plans have been adopted since 2012 but need updates to align with Advancing Adams and the pace of change facing those areas (2014 Welby Subarea Plan and the 2014 Federal Boulevard Framework Plan). The following seeks to summarize the various sub-area plans, address and update certain policies in those plans, and establish next steps for additional strategic plans for a well-planned county.

Strasburg Plan:

Policy and Strategies to Align Plan with Advancing Adams:

1. Evaluate existing population and households and encourage appropriate measures to attract and sustain services and employment opportunities while maintaining the small town and agricultural character.
2. Evaluate and promote connections to enhance walking and biking, especially when connecting to open space and trails.
3. Consider designating an urban growth boundary to limit sprawl to reinforce the 20-minute community in Strasburg.
4. Evaluate uses and opportunities to reinforce a vibrant ‘Main Street’ character where appropriate.

Berkeley Neighborhood Plan:

Policy and Strategies to Align Plan with Advancing Adams:

1. Evaluate and improve transit and multi-modal connections in the neighborhood.
2. Review opportunities for cultural and social interaction between Berkeley residents and Regis University.
3. Evaluate public safety and foster prospects relationships between the community and safety agencies.

Welby Subarea Plan

Policy and Strategies to Align Plan with Advancing Adams:

1. Continue to coordinate with neighborhood groups, stakeholders, and commercial and industrial users on the Welby character and uses.
2. Encourage property owners to explore mixed-use development opportunities to align “Mixed Use Neighborhood” character identified in the Welby Plan with the newly available Mixed-Use zone district.
3. Explore additional opportunities to reinforce a Welby identity for neighborhood cohesion and economic development.
4. Coordinate with the POST Plan and Welby Plan to enhance recreational amenities and trail connections in the neighborhood.
5. Evaluate additional planning, transit-oriented development, and connections to the Thornton 88th light rail station.
6. Continue to monitor land-uses and transportation pressures in the plan area.
7. Evaluate strategies to reinforce the cultural heritage as highlighted in the Welby Plan, especially through incorporating local art.

COMPREHENSIVE PLAN APPENDICES

Appendix A: Advancing Adams Existing Conditions Report

The ECR examines the County’s current and projected profile. Analysis includes current and future demographics, economy, environmental considerations, and housing. These statistics are then compared to those of other County’s throughout the state. In addition, this section includes an evaluation of the physical characteristics of the County including the land use patterns, health, parks and community resources, and the transportation network. This report also includes several inventory maps which include maps of the various school districts, fire districts, water and sanitation districts, roadway plans, and land use.

Appendix B: Outreach and Engagement Summary

The Outreach and Engagement Summary details the robust outreach and engagement efforts throughout the planning process. The activities are described in each of the three project phases to notify and receive community feedback. Community input was synthesized and summarized into takeaways. The outcomes are the work products for each phase and were drafted from the foundations of community input, preferences, and analysis in the planning process.

The report expounds upon the varied methods utilized to adapt to changing circumstances and reach people. Bi-lingual outreach and engagement to Spanish speakers in the county was integrated throughout the project. The vigorous engagement efforts and community input provided the foundation for the goals and policies to achieve the community vision reflected in the plan.

Appendix C: Growth Scenarios

Three growth scenarios were developed after the Phase I ECR to illicit community preference on future development patterns and the 20-Minute Community model.

Scenario A: “Stay the Course” - keep the current pattern of growth in place (i.e., through market forces)

Scenario B: “Many Focused Centers” - to establish neighborhood/town centers throughout Adams County in areas that can build nodes of 20-minute community growth (i.e., walkable blocks with medium-density residential development, shopping, parks, and other neighborhood-friendly amenities)

Scenario C: “Larger Areas of Concentrated Development” - to establish a few larger activity centers around transit areas (i.e., high-density residential development with pocket parks, multimodal transportation options within a mile or less of the area, and vertical mixed-use buildings)

Appendix D: Technical Memorandum: Supporting Data and Analysis for Economic Development Chapter of 2022 Advancing Adams Comprehensive Plan

The report includes additional data tables and narrative explanation that support the goals and policies in the Economic Development chapter of the Comp Plan.

OUTREACH

The Advancing Adams process included numerous opportunities for input from a variety of stakeholder groups, jurisdictional partners, and the community-at-large. A full description of the engagement efforts and results can be found in Appendix B of the Comp Plan and included as Exhibit 3.2 in the public hearing documents.

The outreach and engagement efforts are differentiated into three phases during the process. Each phase provided takeaways and insights which were fed into the process and laid the foundations for the next phase. Phase I focused on initial fact-finding, stakeholder interviews and focus groups, and general public feedback to develop the ECR. Overall, outreach efforts in this phase had approximately 264 live interactions, 161 survey responses or submitted comments, and 43,000 impressions. The initial planning phases recognized and refined the three core values of equity, livability, and sustainability and utilized the values to vet, filter, and examine available data.

The second phase focused on foundation building. Outreach included a number of in-person events, including fairs, concerts, and festivals. The main focus of this outreach was to determine how Adams County should grow based on population projections (current pattern of growth, town centers, urban center preferences) and how transportation and parks planning are addressed within these various growth scenarios. Engagement efforts also sought public confirmation of the findings in the ECR, the core values, and buy-in for the 20-Minute Community Model. Overall, outreach efforts in this phase had approximately 750 interactions, 500+ survey responses or comments submitted, and 39,776 impressions.

The feedback from the outreach and engagement efforts significantly reinforced conclusions from the ECR and provided a foundation for drafting the policies for the Comp Plan. The support for the 20-Minute Community Model influenced draft future land-use categories and their placement on the FLUM. Community input supporting growth Scenario B and interest in additional services, mixed use development, and employment opportunities influenced the expansion of the Mixed Use and Mixed Use Commercial designations, especially on the strategic corridors. The feedback on the Transect Model guided mapping decisions to transition future land-uses based on intensity, proximity to incompatible uses, and transportation needs. Feedback from the community strongly influenced written policies, that were then grounded in best practices and professional planning standards. Policy statements were written to reflect and reinforce the core values of equity, livability, and sustainability.

Phase III built upon the previous phases to articulate the community visions through draft goals, policies, strategies, and FLUM. Outreach and engagement focused on obtaining feedback on the draft FLUM and Comp Plan as well as communicating updated recommendations to interested stakeholders. The County utilized social media channels, blast emails to stakeholders, in-person and virtual open-houses, video recordings, in-person meeting requests, physical postings, and a utility mailer insert that reached over 11,000 people to notify and solicit feedback on the public comment draft.

Referral Agency Comments

Staff received written and verbal comments from referral agency partners in the review of the Comp Plan. Overall, the comments expressed agreement with the articulated vision in the Plan. Concerns raised were reviewed and addressed in staff recommendations. A summary of staff's recommendations in response to referral comments is included in Exhibit 4. Comments on the FLUM are subsequently addressed in the Map Comments section.

PUBLIC COMMENTS

The County received three written comments from the public recommending amendments to the text of the Comp Plan. A summary of staff's recommendations in response to public comments is included in Exhibit 5.

MAP COMMENTS AND CHANGES

The county received 57 public comments and 15 referral agency comments on the comment map which was available since April 13, 2022. All comments that included contact information were responded to with staff's recommendation. Of the 78 map comments, 11 were general in nature. Of the comments pertaining to specific land use recommendations, 6 were in sub-areas and administered through those plans and 9 were supportive of the land-use designation. Staff reviewed and evaluated the properties where comments suggested a different use. Staff revised its recommendation on 27 of those properties and did not change its recommendation on the other 25. A complete list of comments and staff responses and recommendations is included as Exhibit 6.4.

In the review of map designations, staff identified additional map revisions since the public comment draft. A complete Map Change Log is included as Exhibit 6.4. In addition to revising

designations based on public comments, staff received additional direction from Planning Commission regarding the appropriate land-uses along the I-76 corridor generally between E. 88th Ave. and E. 104th Ave. Staff revised its recommendation for properties to better align with Industrial Low or Industrial Medium based on services, zoning, and context. Recommendations were revised for residential properties on the western part of the corridor to either Agricultural Small Scale or Residential Low based on lot-size, zoning, and context. Overall, the change impacted 128 parcels. Staff also identified additional map corrections, mostly private properties that were mis-designated as Parks and Open Space. Staff reviewed each property based on zoning, lot-size, and context to revise the recommended future land use designation. A complete list of map revisions between the public comment draft and public hearing draft is included as Exhibit 6.5.

RECOMMENDATION

Staff believes the proposed Comp Plan demonstrates a forward-thinking approach to planning. The Comp Plan also continues more collaboration between Adams County and the surrounding municipalities. The proposed Comp Plan establishes a vision and policy for a more resilient, sustainable, equitable, and livable county. Therefore, staff is recommending **Approval** of the Advancing Adams Comp Plan and the re-adoption of those plans as listed in Figure 1-4 of the Comp Plan.¹ with 3 Findings-of-Fact and 1 Note.

Findings-of-Fact:

1. The Comprehensive Plan amendment is consistent with the goals and policies of the Adams County Comprehensive Plan.
2. The Comprehensive Plan amendment is consistent and/or compatible with the land use, transportation, and open space maps in the Adams County Comprehensive Plan.
3. The Comprehensive Plan amendment advances the health, safety, and welfare of the citizens and property owners of Adams County.

Notes:

1. The Planning and Development Department staff may make minor corrections to the Comprehensive Plan, limited to typographical errors, to ensure that there is consistency between the Comprehensive Plan, TMP, and the POST Plan.

¹ Note, re-adoption of existing plans is not required, but is intended to provide clarity to the public.

PUBLIC HEARING DRAFT | 2022

Comprehensive Plan



ADVANCING **ADAMS**
PLANNING FOR A SHARED FUTURE



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Image caption

CHAPTER 1

Introduction to Advancing Adams



ADAMS COUNTY GENERAL INFO

Adams County encompasses approximately 1,184 square miles and is located in the northeast part of the Denver-Metro area. The county is a nexus in the region’s transportation network with I-25, I-70, I-76, I-270, and E-470, along with other state highways and local arterials, intersecting in the county and serving freight, commuting, and other transportation needs. The county also hosts diverse housing, commercial, and industrial uses.

The county contains, either partially or in whole, ten incorporated municipalities: Arvada, Aurora, Bennett, Brighton, Commerce City, Federal Heights, Lochbuie, Northglenn, Thornton, and Westminster. Adams County also includes the unincorporated communities of Strasburg, Henderson, and Watkins. Adams County is bordered by Jefferson, Broomfield, Weld, Morgan, Washington, Arapahoe, and Denver Counties.

Adams County is projected to grow into the third largest county in the Denver Council of Regional Governments (DRCOG) area with

population increasing to 722,807 by 2040 (See Figure 1-1). The unincorporated portion of the county is expected to increase by up to 40,000 new persons by 2040 from about 99,000 in 2020 (See Figure 1-2).¹

An existing conditions report was conducted at the outset of the Advancing Adams comprehensive planning process and published in April 2021. It is important to note that the 2020 decennial census data was published between the existing conditions report and the comprehensive plan draft. The 2020 census provides raw population counts with some demographic classifications. The 2019 American Community Survey (ACS) includes more extensive and specific demographic categories available in the data set. As such, the comprehensive plan utilizes available and applicable information from both data sets, along with other primary sources to provide a complete picture. Some discrepancies will occur as a result.

¹ As a note, references to the “county” denote the county as a collective, while references to the “County” signify the County as an entity, represented by the Board of County Commissioners and the Adams County government)

Population Forecast - DRCOG Region
2010-2050

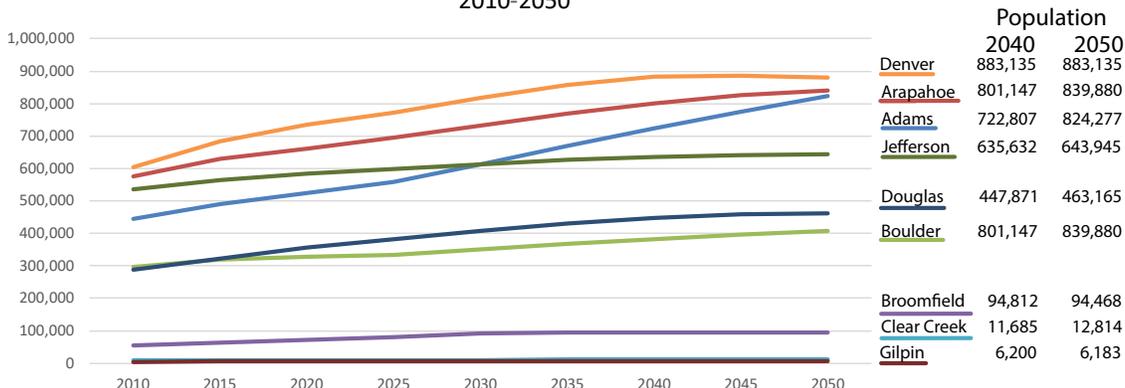


Figure 1-1: Population forecast

PLAN PURPOSE

The Advancing Adams initiative establishes a renewed vision for the county’s future. The Plan updates three fundamental long-range planning documents to accommodate the future growth, transportation, and livability needs of the county through the Comprehensive Plan (Comp Plan), Transportation Master Plan (TMP), and Parks, Open Space, and Trails (POST) Plan. This coordinated planning effort recognizes the intersections between land use, transportation, and an integrated parks and trails system to support a livable and thriving community.

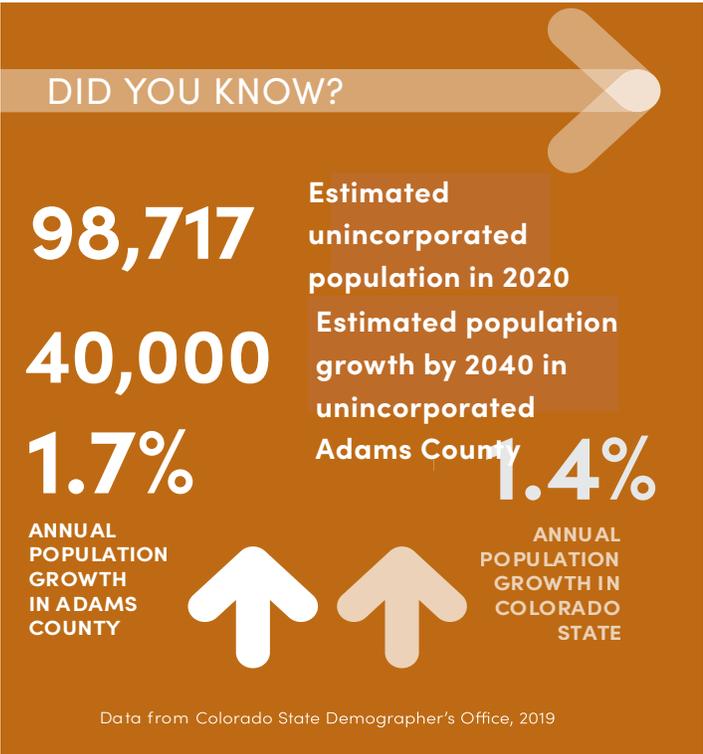
The 2012 Imagine Adams Comprehensive Plan, 2012 Transportation Plan, and 2012 Open Space, Parks, and Trails Master Plans provided a foundation for policies, priorities, and investments in the county.

- The 2022 Advancing Adams Comp Plan update builds upon those

foundations by updating policies, further refining and clarifying land use categories, and coordinating land uses with the 20-minute community planning concept, integrated with the 2022 TMP and 2022 POST plans.

- The 2022 TMP refreshes its policies, emphasizes a need to consider all modes of transportation, and recognizes parks and trails as a key component to an integrated transportation network.
- The 2022 POST plan builds upon the Parks Open Space & Cultural Arts Department’s ability to ensure parks, open space, and trails remain a prominent community asset and cornerstone to the character and heritage of Adams County.

Advancing Adams is intended to be general in nature and serve as a guide for County actions and investments through the next 20 years.



- Key Takeaways from the Existing Conditions Report:**
1. Population is expected to grow.
 2. Housing is not on pace to meet demand.
 3. Rising housing prices threaten attainability and displacement.
 4. Conflicts and environmental issues exist between land uses and residents.
 5. Opportunities to strengthen economic resiliency and employment exist.
 6. Agriculture continues to be a regional asset and cultural keystone but is threatened by development expansion.
 7. Availability of water, utilities, and services constrain future development and growth.
 8. Diversity and inclusion are assets and values in the county.

Figure 1-2: Adams County projected growth

WHAT IS A COMPREHENSIVE PLAN?

The Advancing Adams 2022 Comp Plan is an overarching plan that addresses the community’s vision for future land uses, housing and population growth, the natural and built environments, economic development, cultural heritage, and corridors and subareas. The plan builds upon the issues and opportunities identified in the Phase 1 Existing Conditions and Opportunities Report (included as Appendix A) to establish policies and strategies to achieve this vision. The *Comp Plan* is intended to be a visionary policy document. The Plan broadly serves to inform elected officials’ decisions, staff analysis and recommendations, and provide

guidance for strategic planning to implement the vision, set development expectations, and guide public and private investments in the county.

Based on the State of Colorado’s land use law, Comprehensive Plans are developed for the general purpose of “...guiding and accomplishing a coordinated and harmonious development of the relevant territory, which, in accordance with present and future needs and resources, will best promote the general welfare of the inhabitants.” (§ 30-28-107) The foundation for the Comp Plan is in the Colorado Revised Statutes which informs counties on the specific scope and authority of comprehensive plans. The statute assigns the Adams County Planning Commission the duty to adopt a comprehensive plan for the physical development of the unincorporated portions of the county. The Advancing Adams *Comp Plan*, *TMP*, and *POST* plans replace the Imagine Adams 2012 Comprehensive Plan, Transportation Plan, and POST Plan. The trio of plans in Advancing Adams provide a policy foundation and a framework for future countywide updates.



Farm in Adams County

WHAT IS A PARKS, OPEN SPACE AND TRAILS PLAN?

The *POST* Plan provides an inventory of existing and proposed parks, trails, and open spaces owned and operated by the County or its partners. The plan aids decision-makers in making financial decisions by outlining in detail near-term and future priorities for improvements, land acquisitions and capital improvements. The purpose of this master plan is to chart the course for the next 10 years of operations. The *POST* plan defines opportunities for conservation, closes gaps in the county's recreation

network, and sets priorities to ensure long-term sustainability of the Parks, Open Space & Cultural Arts Department and its assets to meet the needs and vision of the community.



Native vegetation along the Big Dry Creek Trail

WHAT IS A TRANSPORTATION MASTER PLAN?

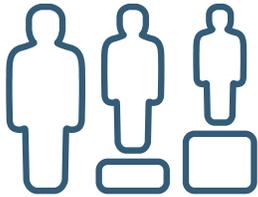
The Advancing Adams *TMP* serves as the guiding document for changes to the mobility network in the county through 2040. The *TMP* represents a year-long effort to assess existing conditions of the transportation network, engage key local, regional, and state officials to understand the future mobility needs of Adams County, and to understand how community members seek to connect with key destinations around Adams County and the Front Range. The *TMP* identifies a long-term vision for transportation looking into the future, including a roadmap of short-term investments to accomplish this goal. These investments include infrastructure, as well as policies and programs that will ensure an efficient and connected transportation network that accommodates the population and employment growth. This plan makes recommendations that will improve the experience for people walking, biking, taking transit, and driving in the near term and as Adams County grows.

CRAFTING THE PLANS

Each of the three Advancing Adams plans was drafted with the following core value lenses to evaluate existing conditions, community feedback, policies, and strategies to guide the County to realize its vision of being the “the most innovative and inclusive county in America for all families and businesses.”

- 1. Equity:** The vibrance and strength of a community emerges from diversity and equity. Equity can be measured through distribution of resources, affordability and access to services and experiences, as well as balancing land uses with environmental justice. Adams County will celebrate and leverage a diverse community through equitable land planning as the region continues to grow in population and various ethnicities and identities.
- 2. Sustainability:** The County is committed to build smarter and retrofit existing development to include new technologies and efficiencies, all while embracing a holistic and metrics-based approach. Sustainability will be part of Adams County’s identity.
- 3. Livability:** Adams County has numerous multimodal and walkable districts that support a human-scaled, comfortable, and engaging experience. The Advancing Adams plans help to further enhance livability through the thoughtful integration of artful placemaking strategies and urban design best practices that celebrate the culture of Adams County.

These values:



Equity: Just and fair inclusion into a society in which all can participate, prosper, and reach their full potential.

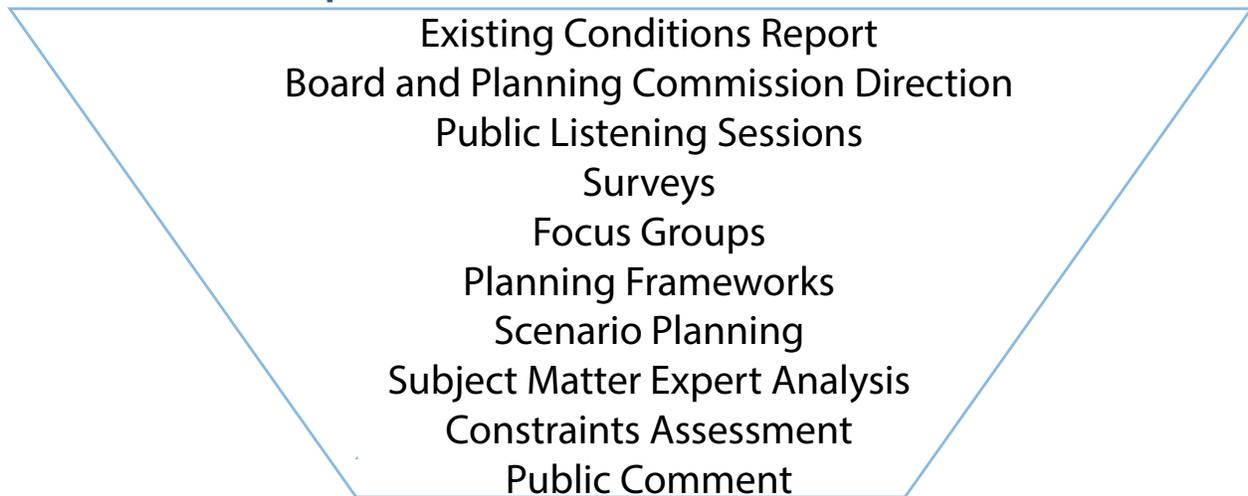


Sustainability: The practice of creating and maintaining conditions to meet the needs of the present without compromising the ability to meet the same needs elsewhere or in the future.



Livability: sum of the factors that add up to a community's quality of life—including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities.

Drove these processes:



To guide these plans:



ADVANCING **ADAMS**
 COMPREHENSIVE PLAN



ADVANCING **ADAMS**
 PARKS, OPEN SPACE & TRAILS



ADVANCING **ADAMS**
 TRANSPORTATION

Figure 1-3: Crafting the plan

CRAFTING THE PLANS

EXISTING CONDITIONS

A key component of the planning process is the evaluation of existing conditions. The Existing Conditions Report performed at the outset of Advancing Adams is a snapshot of where the county stands today in population, housing, environmental, and economic circumstances. The report also assessed trends, reported



results from public feedback, and explored potential frameworks to inform the planning process and provide recommendations detailed in the Comp Plan. The complete Existing Conditions Report is incorporated by reference as Appendix A.

BOARD OF COUNTY COMMISSIONERS AND PLANNING COMMISSION DIRECTION

The scope, process, and framework were set broadly by the Board of County Commissioners (BoCC) and Planning Commission (PC). Both BoCC and PC have been integral partners for confirming direction, policies and goals of the Advancing Adams plans. The BoCC and PC are ultimately responsible for the adoption and ratification of the Advancing Adams plans.

PUBLIC PARTICIPATION IN THE PLANNING PROCESS

Advancing Adams has used a robust public engagement process to ensure the voice of the community is heard and reflects a common vision. The process and input is detailed in the Outreach and Engagement Summary included as Appendix B.

PLANNING FRAMEWORKS

Two primary frameworks were incorporated into the planning process to develop scenarios, focus analysis, and guide policy recommendations. The 20-Minute Community Framework

connects housing and population with amenities, services, transportation, and parks to support livability. The Transect Framework was utilized when considering adjacent land uses and buffering between land use intensities and transitions. More detail on the frameworks can be found in Chapter 2.

SCENARIO PLANNING

The county developed three planning scenarios, full analysis of which is included in Appendix C, to further refine and coordinate parks, trails, and open space with transportation, land use, and policy to achieve the preferred scenario outcomes.

SUBJECT MATTER EXPERT ANALYSIS

County staff, in coordination with professional consultants, applied their expertise to the data analysis, public feedback, and best practices to craft the goals, policies, and recommendations for the plans.

CONSTRAINTS

Any plan faces constraints that influence its final direction of the plan. While the plan is visionary and aspirational, it is grounded by capacity, fiscal considerations, conceptual feasibility, scope limits of a comprehensive plan, and statutory authority, amongst other considerations. It is worth acknowledging that this plan was drafted during the COVID pandemic between 2020 and

2022. The pandemic influenced analysis perspectives, outreach and engagement efforts, and coordination as the pandemic impacted the planning process and future considerations for response and recovery.



HOW TO USE THESE PLANS

HOW TO USE THESE PLANS:

The Comp Plan, TMP, and POST plan follow the same general outline by detailing Key Issues from the Existing Conditions Report, subject matter expert analysis, along with feedback from surveys, focus groups, and listening sessions. Key Issues summarize the over-arching themes and Goals offer a broad vision to address those issues. Policies and Strategies provide the direction and recommendations to achieve the goals of the County.

A list of re-adopted plans is included below as Figure 1-4.

Four appendices are referenced but are not formally adopted. The appendices provide the foundation for the vision, goals, policies, and strategies in the plan.

Appendix A: Existing Conditions Report

Appendix B: Engagement and Outreach Summary

Appendix C: Scenario Planning Exhibit

Appendix D: Technical Memorandum: Supporting Data And Analysis For Economic Development Chapter Of 2022 Advancing Adams Comprehensive Plan

Plan Name	Original Adoption Year	Advancing Adams is Re-Adopting Plan Policy	Advancing Adams is Re-Adopting Plan Future Land Use Map	If conflicting policy, plan supersedes
Balanced Housing Plan	2018	Yes	N/A	Comprehensive Plan
Berkeley Neighborhood Plan	2008	Yes	No	Subarea Plan
Clear Creek Valley Transit Oriented Development Plan	2009	Yes	No	Comprehensive Plan
Colorado Air & Space Port Subarea Plan	2021	Yes	Yes	Subarea Plan
District Plan (Splendid Valley)	2016	Yes	Yes	Subarea Plan
Federal Blvd. Framework Plan	2014	Yes	No	Subarea Plan
Imagine Adams Comprehensive Plan	2012	No	No	Comprehensive Plan
Mineral Extraction Plan	2005	Yes	N/A	Comprehensive Plan
Riverdale Road Corridor Plan	2005	Yes	No	Subarea Plan
Southwest Area Framework Plan	2005	Yes	N/A	Comprehensive Plan
Square Lake Plan	2022	Yes	Yes	Subarea Plan
Strasburg Plan	2002	Yes	No	Comprehensive Plan
Welby Subarea Plan	2014	Yes	Yes	Subarea Plan

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Chapter 2



FUTURE LAND USE

FUTURE LAND USE

The future land use plan establishes the framework for how the county can sustain its existing population, infrastructure, and assets while accommodating the future growth and needs in the unincorporated portions of the county. The Future Land Use Map (FLUM) depicts the future land use categories in this chapter and designates their place in the county. The future land uses were determined after extensive analysis of the 2012 Imagine Adams FLUM, current zoning and development entitlements, projected infrastructure capacity, public investments and transit assets, and extensive public feedback. The map is also informed by the 20-Minute Community model, further described in Chapter 5, and proximity of supporting services, and the transect model to promote transitions and buffering between development patterns and intensities.

The FLUM presents a guiding vision for the county, while the *Adams County Development Standards and Regulations* determines the regulatory zoning, uses, and development standards. In some cases, the future land use matches the existing zoning and land uses in an area. In other instances, the county’s vision for development or uses may not align with current zoning. In this case, the FLUM sets an expectation for future conditions, while the regulatory requirements set by the zoning remain. There may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation overlay, may undermine the Plan’s stated development goal, and in those instances existing and future development will need to accommodate these existing conditions. The vision for the community is realized incrementally when the zoning and FLUM align, generally by property owners rezoning their property to match the future land use designation. Goals, policies, and strategies to guide investment, development, growth, and preservation to further realize the county’s vision are in subsequent chapters.

FUTURE LAND USE BY THE NUMBERS

Figure 2-1 to the right depicts the FLUM land area between 2012 Imagine Adams and 2022 Advancing Adms plans. Areas designated as “Agriculture” make up the vast area in the county and are projected to remain as such. The 2012 plan indicated that “Residential Urban” allowed for properties up to one acre. The increased percentage in the “Residential Low” category is partly because larger lot properties with applicable zoning have been re-categorized as “Residential Low”.

FLUM Category as Percentage of Total Land Area		
General FLUM Category	2012 Percent	2022 Percent
Agriculture	81.9%	81.3%
Commercial	0.2%	0.2%
Industrial	0.8%	0.8%
Mixed Use	0.2%	0.5%
Mixed Use Commercial	4.1%	5.1%
Parks Open Space	5.6%	6.6%
Public	0.6%	0.8%
Residential Low	3.4%	3.6%
Residential Medium/High	1.6%	1.1%

Figure 2-1

The decrease of “Residential Medium” and “Residential High” categories as a percentage of total land is partly because of the re-allocation of large lots and certain zones to “Residential Low”. Annexations also account for some decrease in these categories. Other areas designated “Residential Urban” in the 2012 plan were changed to “Mixed Use” which is where residential growth is also anticipated

FUTURE LAND USE CATEGORIES

Generalized Zoning to FLUM Percentage

General FLUM Category	2022 FLUM	Current Zoning
Agriculture	81.3%	91.4%
Commercial	0.2%	0.03%
Industrial	0.8%	0.9%
Mixed Use *	0.5%	0%
Mixed Use Commercial	5.1%	0.3%
Parks Open Space	6.6%	0%
Public	0.8%	0.1%
Residential Low	3.6%	3.0%
Residential Medium/High	1.1%	0.8%
Misc. (AV, DIA, PUD)**		3.5%

* This zone district was created in 2021, however, no properties have rezoned been rezoned prior to adoption of the comprehensive plan.
 ** It is difficult to allocate these zone districts to a complementary FLUM category, however, most is either Agriculture or Mixed Use Commercial
Figure 2-2

Current Zoning and Uses Compared to FLUM Category

Future Land Use	Total Acres	Percent of Zoned Area
Agriculture Large (A -3)	592,609	90.9%
Agriculture Small (A -2)	3,356	0.5%
Commercial (C -0, C-1, C-2, C-3)	220	0.0%
Industrial Low (I -1 [50%], I-2)	1,870	0.3%
Industrial Medium (I -2 [75%], I-3)	3,701	0.6%
Institutional (PL)	346	0.1%
Misc. (AV, DIA, PUD)	23,316	3.6%
Mixed Use Commercial (C -4, C-5, I-1 [50%])	1,763	0.3%
R-1-C, R-2, MH (Residential Medium)	192	0.0%
Residential High (R -3, R-4)	275	0.0%
Residential Low (A -1, RE)	19,507	3.0%
Residential Medium (R -1, R-2, MH)	5,024	0.8%
Total Acres	652,177	100.0%

Figure 2-3

Figure 2-2 to the right depicts the generalized FLUM categories (eg. Industrial rather than Industrial High, Medium and Low) to correlated current zone district land area. Figure 2-3 depicts the land area to current zoning and uses as a quantity and percentage. Note, some zones coordinate specifically with a FLUM category while others, I-1 for instance, may apply to several categories (Industrial Low and Mixed-Use Commercial). Some properties zoned I-3 were allocated into the Industrial Medium category for purposes of calculation based on operations and uses more consistent with the Industrial Medium character, and likewise with I-2 into the Industrial Low category. Note, the table is illustrative and not intended to conflict with Future Land Use Categories listed below.

As noted, the plan vision is realized incrementally through rezonings and public and private investments. The snap-shot of current zoning serves as a benchmark to guide direction of the plan.

Typical Zone Districts depicted in the future land use categories is intended to illustrate zone districts conventionally found in a category and not an exclusive list of potentially appropriate zone districts and may be evaluated along with additional criteria.

FUTURE LAND USE MAP



For the latest Future Land Use Map visit www.adcogov.org

FUTURE LAND USE CATEGORIES

Agriculture Small Scale (AS)	Standards	
 <p>This land use category is included for smaller agricultural operations that balance housing and agricultural production on the site. Examples can be found in the Welby and Splendid Valley District Plan areas. This category is not intended for properties where residential is the only use.</p>	Typical Zone Districts	A-1, A-2
	Dwelling Units per Acre	<1
	Ideal Mobility	Moderate capacity road corridors. Separated bicycle infrastructure, sidewalks, connected street pattern (collectors, arterials)
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Residential Low • Parks & Open Space • Agriculture Large Scale
	2012 Land Use Category	Agricultural

Agriculture Large Scale (AL)	Standards	
 <p>This land use category features large-lot agriculture and may have corporate agricultural operations on the property, primarily occurring on the eastern portion of Adams County. Farming or ranching should be considered the primary use of the property and supplementary housing considered secondary.</p>	Typical Zone Districts	A-3
	Dwelling Units per Acre	<1
	Ideal Mobility	Trails, limited street network (collectors, arterials, highways)
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Parks & Open Space • Agriculture Small Scale
	2012 Land Use Category	Agricultural

FUTURE LAND USE CATEGORIES

Residential Low (RL)	Standards	
 <p>This land use category is most appropriate for suburban and exurban areas in Adams County as it primarily consists of single-family housing. The Estate Residential designation from 2012 is included in this category.</p>	Typical Zone Districts	A-1 (<2.5 acres), Residential Estate, R-1-C
	Dwelling Units per Acre	Up to 6
	Ideal Mobility	Frequent transit, protected, separated, or shared bicycle infrastructure, sidewalks with limited curb cuts, connected street pattern (local streets, collectors and limited on arterials).
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Agricultural Small Scale • Parks and Open Space • Residential Low
	2012 Land Use Category	Estate Residential

Residential Medium (RM)	Standards	
 <p>The Residential Medium land use category functions as a transitional category between higher and lower density. Although some single-family housing may be located in this district, it is primarily reserved for lower density multifamily housing such as fourplexes, cottage courts, and small townhome complexes.</p>	Typical Zone Districts	R-1-C, R-2, R-3
	Dwelling Units per Acre	6-20
	Ideal Mobility	Frequent transit, protected, separated, or shared bicycle infrastructure, sidewalks with limited curb cuts, connected street pattern (local streets, collectors and limited on arterials).
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Commercial • Institutional • Mixed Use • Mixed Use Commercial (limited) • Parks and Open Space • Residential High • Residential Low
	2012 Land Use Category	Urban Residential

FUTURE LAND USE CATEGORIES

Residential High (RH)	Standards	
 <p>This land use category is reserved for the highest residential density in Adams County. Multifamily residential buildings are most appropriate for this category. An example of the types of multifamily residential buildings includes apartments, multi-plex and townhouses.</p>	Typical Zone Districts	R-3, R-4
	Dwelling Units per Acre	14-35+
	Ideal Mobility	High capacity transit, protected or separated bicycle infrastructure, sidewalks with limited curb cuts, supported street pattern (collectors and arterials).
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> · Commercial · Institutional · Mixed Use · Mixed Use Commercial (limited) · Parks and Open Space · Residential Medium
	2012 Land Use Category	Urban Residential

Mixed Use (MU)	Standards	
 <p>The mixed-use land use category includes commercial, office, multifamily residential, and institutional. Mixed-use is expected to develop into horizontal mixed-use for a district or corridor mixing of uses, or single-property development of mixed use in vertical development.</p>	Typical Zone Districts	C-0, C-1, C-2, R-3, R-4, MU, TOD
	Dwelling Units per Acre	N/A
	Ideal Mobility	High capacity transit, separated or shared bicycle infrastructure, sidewalks, connected street pattern (collectors and arterials)
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> · Commercial · Institutional · Mixed Use Commercial · Parks and Open Space · Residential High · Residential Medium
	2012 Land Use Category	Activity Center

FUTURE LAND USE CATEGORIES

Commercial (C)	Standards	
 <p>The commercial land use category is intended for a broad range of commercial areas including smaller scale and neighborhood commercial that could include corner stores and/or small commercial strips and larger commercial centers.</p>	Typical Zone Districts	C-0, C-1, C-2, C-3, C-4, C-5
	Dwelling Units per Acre	N/A
	Ideal Mobility	Separated or shared bicycle infrastructure, sidewalks, connected street pattern (arterials, collectors, and local streets)
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> · Industrial Medium (limited) · Industrial Low · Institutional · Mixed Use · Mixed Use Commercial · Parks and Open Space · Residential High · Residential Medium
	2012 Land Use Category	Commercial

Mixed Use Commercial (MUC)	Standards	
 <p>Serves as a land use for areas transitioning to industrial or heavy commercial developments where activities and operations are contained within buildings. Mixed Use Commercial areas often have environmental considerations or are adjacent to more intense industrial uses that do not necessarily support residential uses. Limited residential uses may be acceptable in a vertical mixed-use setting if all environmental conditions and concerns have been remediated and land-use adjacencies are mitigated.*</p>	Typical Zone Districts	C-3, C-4, C-5, I-1
	Dwelling Units per Acre	N/A
	Ideal Mobility	High capacity transit, separated or shared bicycle infrastructure, sidewalks, connected street pattern (collectors and arterials)
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> · Commercial · Institutional · Industrial Low · Industrial Medium · Mixed Use · Residential High (Limited)
	2012 Land Use Category	Mixed Use Employment

*  Area formerly in Imagine Adams DIA Reserve category or substantially in noise contour and not suitable for FAA sensitive uses such as residential uses or schools.

FUTURE LAND USE CATEGORIES

Industrial Low (INL)	Standards	
 <p>This land use category includes low impact industrial uses that primarily operate in buildings. This category may be adjacent to residential use if nuisances or pollution are minimal and sufficiently mitigated.</p>	Typical Zone Districts	C-5, I-1
	Dwelling Units per Acre	N/A
	Ideal Mobility	Moderate capacity road corridors. Separated bicycle infrastructure, sidewalks, connected street pattern (collectors, arterials)
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Commercial • Industrial Medium • Mixed Use (limited) • Mixed Use Commercial • Residential (limited)
	2012 Land Use Category	Industrial

Industrial Medium (INM)	Standards	
 <p>This land use category includes moderate impact industrial uses that can operate in buildings or openly on a site. Operations may include some nuisances or pollution, therefore, adjacency to residential uses should be avoided.</p>	Typical Zone Districts	I-1, I-2
	Dwelling Units per Acre	N/A
	Ideal Mobility	High capacity road and freight network (collectors, arterials, highway access). Multi-modal infrastructure in coordination with truck and freight (collectors, arterials).
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Commercial (limited) • Industrial High • Industrial Low • Mixed Use Commercial
	2012 Land Use Category	Industrial

FUTURE LAND USE CATEGORIES

Industrial High (INH)	Standards	
 <p>This land use category includes industrial uses that have some component of nuisance or pollution and should not be adjacent to or nearby any residential uses. This future land-use category is reserved for the most intense uses that would prohibit the viability of any future uses other than heavy industrial. Uses generally have State or Federal regulatory oversight. Examples include oil-refineries, land-fills, toxic waste processing, etc.</p>	Typical Zone Districts	I-3 or higher
	Dwelling Units per Acre	N/A
	Ideal Mobility	High capacity road and freight network (collectors, arterials, highway access). Multi-modal infrastructure in coordination with truck and freight (collectors, arterials).
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Industrial Low • Industrial Medium • Mixed Use Commercial (limited)
2012 Land Use Category	N/A	

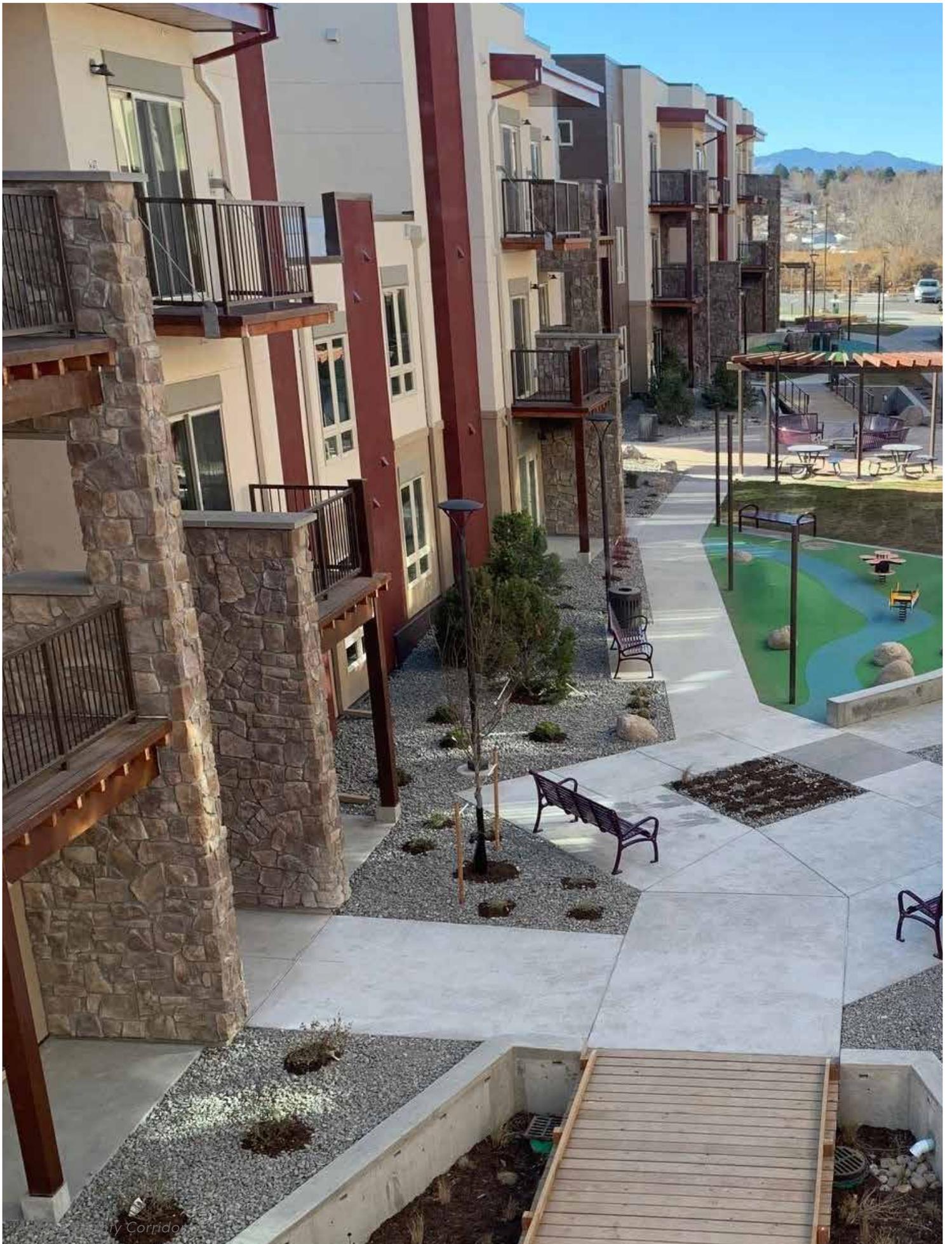
Public (P)	Standards		
 <p>This land use category is intended for public infrastructure such as utilities, utility corridors, water and waste-water treatment sites, railroad corridors, etc. where the infrastructure is not expected to change. Schools or institutional residential uses would not be allowed in this category.</p>	Typical Zone Districts	N/A	
	Dwelling Units per Acre	N/A	
	Ideal Mobility	N/A	
	Land Use Adjacencies	N/A	
	2012 Land Use Category	None	

FUTURE LAND USE CATEGORIES

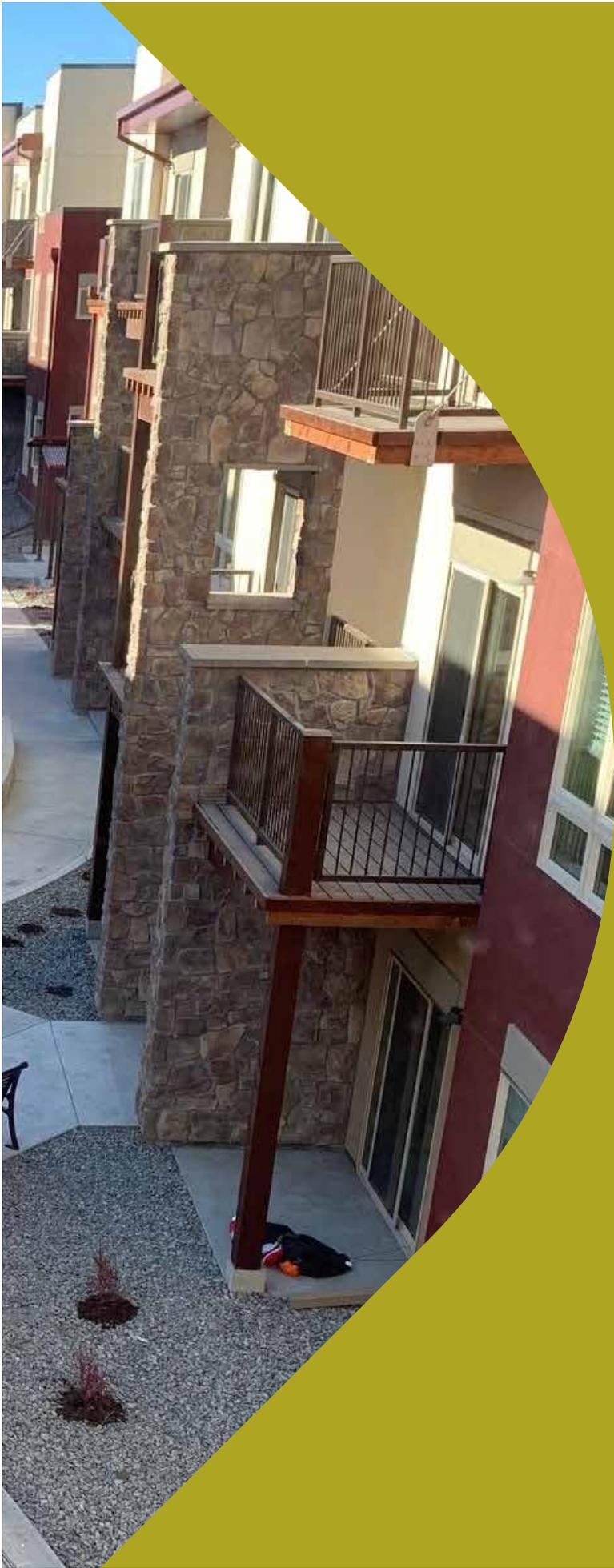
Institutional (INS)	Standards	
 <p>The institutional land use category is reserved for education facilities, government facilities, hospitals, public buildings, fire stations, etc. Institutional land uses can be found in almost any zone district depending on the nature of the use and services it provides.</p>	Typical Zone Districts	N/A
	Dwelling Units per Acre	N/A
	Ideal Mobility	Separated or shared bicycle infrastructure, sidewalks, connected street pattern (arterials and local streets)
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Commercial • Industrial (Limited) • Mixed Use • Mixed Use Commercial • Parks and Open Space • Residential High • Residential Medium • Residential Low
	2012 Land Use Category	Public

Parks & Open Space (P/OS)	Standards	
 <p>This land use category includes a variety of parks and open space typologies including regional parks, community parks and neighborhood parks.</p>	Typical Zone Districts	Parks and Open Space zones when rezoned otherwise N/A
	Dwelling Units per Acre	N/A
	Ideal Mobility	Accessed from shared mobility trails, separated bicycle infrastructure, sidewalks, supported street pattern
	Land Use Adjacencies	Integrated with: <ul style="list-style-type: none"> • Agricultural Large Scale • Agricultural Small Scale • Commercial • Industrial (limited) • Institutional • Mixed Use • Mixed Use Commercial • Parks and Open Space • Residential (all)
	2012 Land Use Category	Parks and Open Space

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CHAPTER 3



Community and Housing

OVERVIEW

Adams County endeavors to provide housing that works for people on all paths of life. A central topic raised throughout the community engagement process was access to housing for all residents. Adams County residents expressed a need to support a broad spectrum of opportunities beyond the current predominantly single-family detached homes including manufactured housing, apartments, and townhomes. Residents also expressed needs for more homeownership opportunities. Responses indicated a need for housing that meets the needs of people at different stages in their life including housing that meets the needs of seniors and those with disabilities. Encouraging a diversity of housing options for a variety of

income levels and life stages supports the goal of offering everyone the opportunity to live, work, and play in Adams County.

This chapter provides a high-level framework of housing goals and strategies that influence land use policies and integrates principles of equity, sustainability, and livability. It establishes a vision for healthy, balanced neighborhoods that serve residents' needs by providing choices in housing type, opportunities for both rental and homeownership, and ease of access for all ages and ability levels. There is also an underlying foundation of sensitivity to availability of resources, such as water and infrastructure, and fiscal impacts of residential development.

Housing markets operate at a regional level while also being strongly influenced by national markets and economic policies. Housing is also inextricably linked to local land use regulations and development standards because those factors drive housing densities, construction costs, and, ultimately, price points in home sales and rents. This chapter seeks to provide a current picture of housing needs across the county, identify policy areas to update and align with best industry practices that promote a fair housing environment, and land use strategies that encourage responsive, sustainable, and equitable housing growth to meet the needs of Adams County residents into the future.



ROLE OF THE COUNTY

Adams County Government oversees the land use regulations and permitting for housing in unincorporated areas of the county; however, it is also the administrator of federal housing funds allocated to serve residents across the county more broadly. County staff, therefore, work regularly in partnership with the municipalities and three public housing authorities to develop programs and fund projects that serve low- and moderate-income populations.

As a statutory county under Colorado law, Adams County plays a limited role in the direct development of housing. Instead, the public housing authority for Adams County, Maiker Housing Partners, leads many of the development initiatives to meet the County’s goals. The housing authorities for the Cities of Brighton and Commerce City are also key partners. Additionally, the County may apply federal entitlement funds in the form of Community Development Block Grants (CDBG) and HOME Investment Partnerships (HOME) program dollars to private development projects that provide affordable housing and community benefits. As a federal entitlement community, there are supportive plans, reports, and studies that complement this chapter and provide extensive background information on Adams County and its residents. The County is approaching a five-year

update to the Balanced Housing Plan and accompanying Housing Needs Assessment.

In matters of market-rate private housing development, the County seeks to promote diversity of housing types, a variety of neighborhood scales, accessibility for a range of ages and abilities, and proximity to amenities and services. This is done through zoning, design standards, and attention to federal and state laws governing accessibility. Following adoption of this Plan, the County will undertake a comprehensive overhaul of the existing Adams County Development Standards and Regulations to reflect current needs and values of the community.

Supplemental documents:

- *2020 Analysis of Impediments to Fair Housing Choice in Adams County*
- *2020-2024 Consolidated Plan,*
- *2018 Balanced Housing Plan*
- *2017 Housing Needs Assessment*



ADAMS COUNTY PROFILE

Since 2000, the Denver metropolitan region has experienced significant population growth and, more recently, rapidly rising housing costs as a result of that growth. Housing construction has not kept pace with increases in population while wages have stagnated. Adams County has consistently been one of the fastest growing counties on an annual basis, due in large part to affordability pressures in Denver and availability of developable land.

Based on 2019 Census data, there were 36,430 total housing units in unincorporated areas of Adams County. Of those, an estimated 26,323 (72%) were owner-occupied, while approximately 8,748 (24%) were renter-occupied. This represents a higher percentage of owner-occupied housing than in the incorporated areas (61.3%).

The age of housing stock is relatively consistent across the county, with

the median year of construction for unincorporated areas being 1978, compared to 1980 for incorporated areas. Older construction is less likely to be designed to accommodate accessibility needs and to allow aging in place; it is also less likely to be energy efficient. The table below outlines the age of housing stock in Adams County as a whole and unincorporated areas.

As captured from 2018 American Community Survey data, the great majority of households across Adams County are family households (71%). Approximately one quarter (24%) are married with children, while a nearly equal number (26%) are married without children. Households headed by single mothers represent 8%, and 29% of households are categorized as non-family – roommates, unrelated people living together, and single people living alone.

More than 52,000 individuals in Adams County have at least one disability, which is equivalent to roughly 10% of the total population.

Estimated number of housing units built by decade

Year Built	Adams Co. (all)	Adams Co. (all)	Unincorporated	Unincorporated
2000 - 2019	12,084	7%	3,306	9%
1990 - 1999	38,824	23%	9,613	27%
1980 - 1989	28,459	17%	4,724	13%
1970 - 1979	22,069	13%	2,660	7%
1960 - 1969	29,342	17%	5,603	16%
1950 - 1959	17,026	10%	3,685	10%
1940 - 1949	19,373	11%	5,488	15%
1939 or earlier	2,830	2%	480	1%
Total	170,007		35,559	

Source: U.S. Census Bureau www.census.gov

Figure 3-1: Estimated number of housing units built by decade

Disabilities are more prevalent among older populations, and approximately one quarter (25.2%) of the 65 to 74-year-old cohort report having at least one disability. That rises to more than half (51.2%) of the population age 75 years and older. The highest numbers of disabilities are ambulatory (more common in older adults) and cognitive (more prevalent in youth). Residents with disabilities are relatively evenly distributed throughout the county.

Adams County has some of the most racially, ethnically, and economically diverse neighborhoods in the Denver metro region and is now a “majority-minority” community. The largest single racial or ethnic group is residents of Hispanic descent, representing approximately 40% of the county’s population. From 2000 to 2018, the size of this population effectively doubled in the county and accounted for more than half (56%) of countywide population growth. The cities and the county have very few African American/Black residents, and there has been little change since 2000. As covered in the 2020 Analysis of Impediments to Fair Housing Choice in Adams County, African Americans

are more likely than other groups to experience housing challenges.

When examining the unincorporated areas of Adams County, there are very few concentrations of minority racial or ethnic groups. A geographic concentration is defined as a Census tract with 150% of the county proportion of that demographic group. There are four Census blocks with concentrations of Hispanic residents (greater than 59.5%) in unincorporated Adams County. However, there are no Census blocks with concentrations of African American/Black, Asian, or Native American populations.

Currently, 69% of homes in Adams County are single-family dwellings. To support future population growth, both increases in diversity of unit types and densities, including missing-middle, multi-family, and mixed-use developments, in some areas will be important. A substantial amount of housing growth may be anticipated to occur within incorporated areas of the county. The estimates provided in the table below represent projections for the whole of Adams County, including both incorporated and unincorporated areas.

Adams County Projected Housing Needs

	POPULATION EST.	HOUSING UNITS NEEDED	TOTAL UNITS NEEDED AFTER 2020	ANNUAL PRODUCTION NEEDED
2025	580,775	193,592	15,075	3,015
2030	637,554	212,518	34,001	3,400
2035	694,085	231,362	52,845	3,523
2040	748,318	249,439	70,922	3,546

Source: Colorado State Demographer's Office

Figure 3-2: Projected housing needs

KEY ISSUES

Information in this section is taken directly from the 2020 Analysis of Impediments to Fair Housing Choice in Adams County prepared for Adams County by Root Policy Research. The data also aligns with anecdotal information collected through community outreach activities done specifically for the Advancing Adams campaign, including focused outreach with the Spanish language community.

- It is estimated one in five Adams County residents struggle to pay their rent or mortgage, and renters are more likely than homeowners to struggle (43% compared to 12%). Additionally, large families, children under the age of 18, persons with disabilities, and those of Hispanic or Native American backgrounds are more likely than average Adams County residents to struggle with housing costs.
- Overall, 30% of Adams County residents rate the condition of their home as “fair” or “poor” condition.
- 78% of surveyed households that include a family member with a disability have accessibility needs, but 28% of those households live in a home that does not meet their accessibility needs.
- While 95% of households with incomes above \$75,000 have an internet subscription, 85% of households earning between \$20,000 and \$75,000, and 68% of households earning below \$20,000 have internet service.
- Twenty tracts in the county are identified as food deserts, and one in four USDA food deserts in the county are in Census tracts with a concentration of African American residents. 35% are Census tracts with a concentration of Hispanic residents.

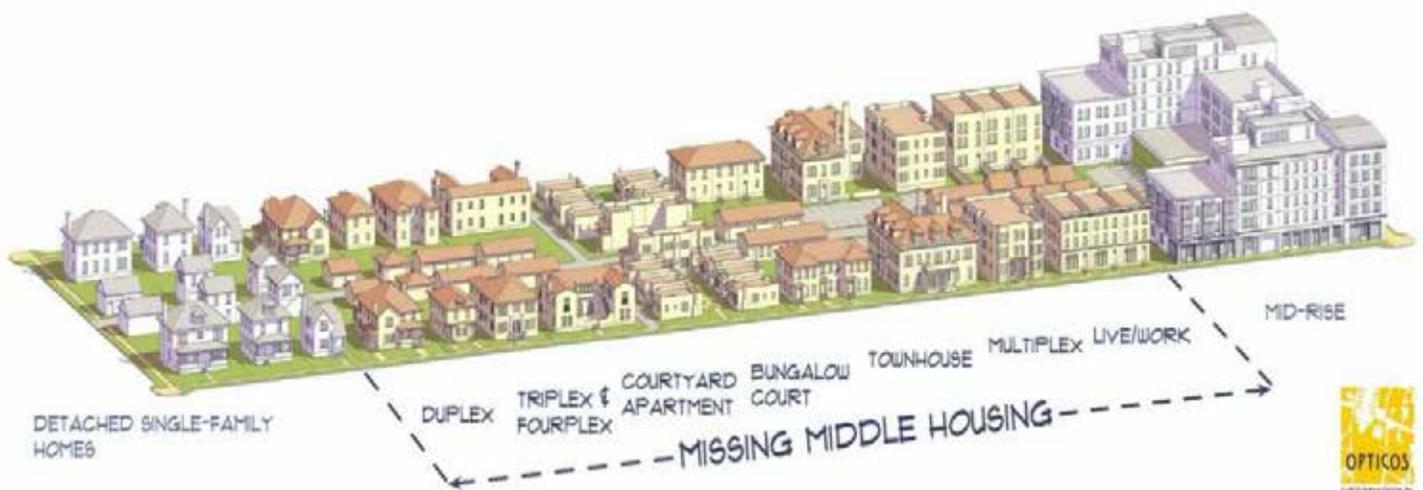


Figure 3-3: Missing middle housing



GOALS, POLICIES, AND STRATEGIES

Community and Housing (COH)

Goal 1: Support sustainable and responsible land use planning for residential growth and development.

Policy COH 1.1: *Adams County's policy is to promote smart growth that concentrates higher residential densities in areas served by transit and with access to employment, education, and amenities, while limiting residential growth in areas of significant agricultural value or with environmental sensitivity. This policy was a primary focus in the 2012 Imagine Adams Comprehensive Plan, and those policies and strategies continue to be relevant into the future.*

- **Strategy COH 1.1.01:** Encourage greater density in defined growth areas, such as Mixed Use areas, particularly those with access to transit and services.
- **Strategy COH 1.1.02:** Work cooperatively within the region on housing issues that transcend jurisdictional boundaries and with Adams County municipalities on development in their urban growth boundaries.
- **Strategy COH 1.1.03:** Analyze and evaluate fiscal and other impacts to the County when extending residential development into previously undeveloped or agricultural areas.

- **Strategy COH 1.1.04:** Conduct a nexus study to evaluate impacts on housing of new development and explore options for mitigating those impacts.
- **Strategy COH 1.1.05:** Preserve existing productive agricultural lands, open space, designated view corridors, wildlife habitat, and sensitive environmental areas.
- **Strategy COH 1.1.06:** Avoid new residential development in areas impacted by airport-related development or within aviation easements.

Goal COH 2: Increase housing opportunities throughout Adams County by taking a proactive role in addressing housing affordability, diversity, and supply through land use regulations.

Policy COH 2.1: *Adams County's policy is to support a diverse and inclusive community. This is achieved by offering a range of housing options that include opportunities for homeownership and rental, a variety of housing types and price ranges, and housing that is designed to meet the needs of all ages and ability levels.*

- **Strategy COH 2.1.01:** Support diversity of housing types through updates to the Adams County Development Standards & Regulations and by aligning zoning with future land uses.
- **Strategy COH 2.1.02:** Encourage a variety of housing types in locations proximate to job centers and transit access.

GOALS, POLICIES, AND STRATEGIES

- **Strategy COH 2.1.03:** Support programs, partners, and development projects that increase housing choices including affordable housing and missing-middle housing, as further detailed in the 2018 Balanced Housing Plan and subsequent updates.
- **Strategy COH 2.1.04:** Continue to implement residential unit classifications, zone districts, and site design requirements for alternative housing types.
- **Strategy COH 2.1.05:** Inventory public property and other resources that may contribute to attracting or constructing affordable housing.

Goal COH 3: Preserve, stabilize, and improve upon existing housing stock and neighborhoods.

Policy COH 3.1: *Adams County's policy is to preserve the character and quality of existing housing and neighborhoods through programs and partnerships. This is achieved by minimizing displacement pressures and taking an active role in redevelopment activities.*

- **Strategy COH 3.1.01:** Strengthen neighborhood identity, place-making, and civic pride by supporting updates to and the development of additional corridor, neighborhood, and subarea plans.



Crossing Pointe in Thornton

- **Strategy COH 3.1.02:** Support updates in the Adams County Development Standards & Regulations that increase opportunities for infill housing, which expands housing options and property investments through alternative dwelling types like accessory dwelling units (ADUs).
- **Strategy COH 3.1.03:** Collaborate with regional partners to develop resources for financial literacy and down payment assistance that address barriers to home ownership.
- **Strategy COH 3.1.04:** Encourage long-term affordability of housing and neighborhoods through various tools, such as land trusts. This will be further developed in an update to the 2018 Balanced Housing Plan and subsequent updates.
- **Strategy COH 3.1.05:** Promote access to financial resources designed to preserve and stabilize existing housing stock, such as the Minor Home Repair (MHR) Program through the County's Community Development Block Grant (CDBG) funds.

Goal COH 4: Leverage partnerships and financial assistance opportunities to invest in housing development that serves vulnerable populations.

Policy COH 4.1: *Adams County's policy is to collaborate with other jurisdictions, state and local agencies, nonprofit organizations, and service providers to respond to needs of vulnerable populations, including youth, seniors, and the disabled.*

- **Strategy COH 4.1.01:** Assess updates needed in the Adams County Development Standards & Regulations to respond to fair housing findings identified in the 2020 Analysis of Impediments to Fair Housing Choice in Adams County. This includes topics such as group homes, processes for reasonable accommodations, and exclusionary language.
- **Strategy COH 4.1.02:** Explore various funding opportunities with housing partners to plan for and develop housing that meets targeted needs such as permanent supportive housing, transitional housing, youth aging out of foster care, and other identified special populations.
- **Strategy COH 4.1.03:** Promote access to resources designed to address poor housing conditions, such as the MHR Program available for income-qualified households through the County's CDBG funds.
- **Strategy COH 4.1.04:** Expand community engagement and outreach efforts in corridor, neighborhood, and subarea planning to ensure representation of vulnerable populations.

GOALS, POLICIES, AND STRATEGIES

- **Strategy COH 4.1.05:** Coordinate statewide policy, regional partnership efforts, and funding opportunities to focus on communities vulnerable to displacement, and more specifically mobile home park residents facing displacement and predatory property management practices.
- **Strategy COH 4.1.06:** Explore opportunities to expand affordable housing and work-force housing to meet the needs of current and future residents and the County's economic development goals.

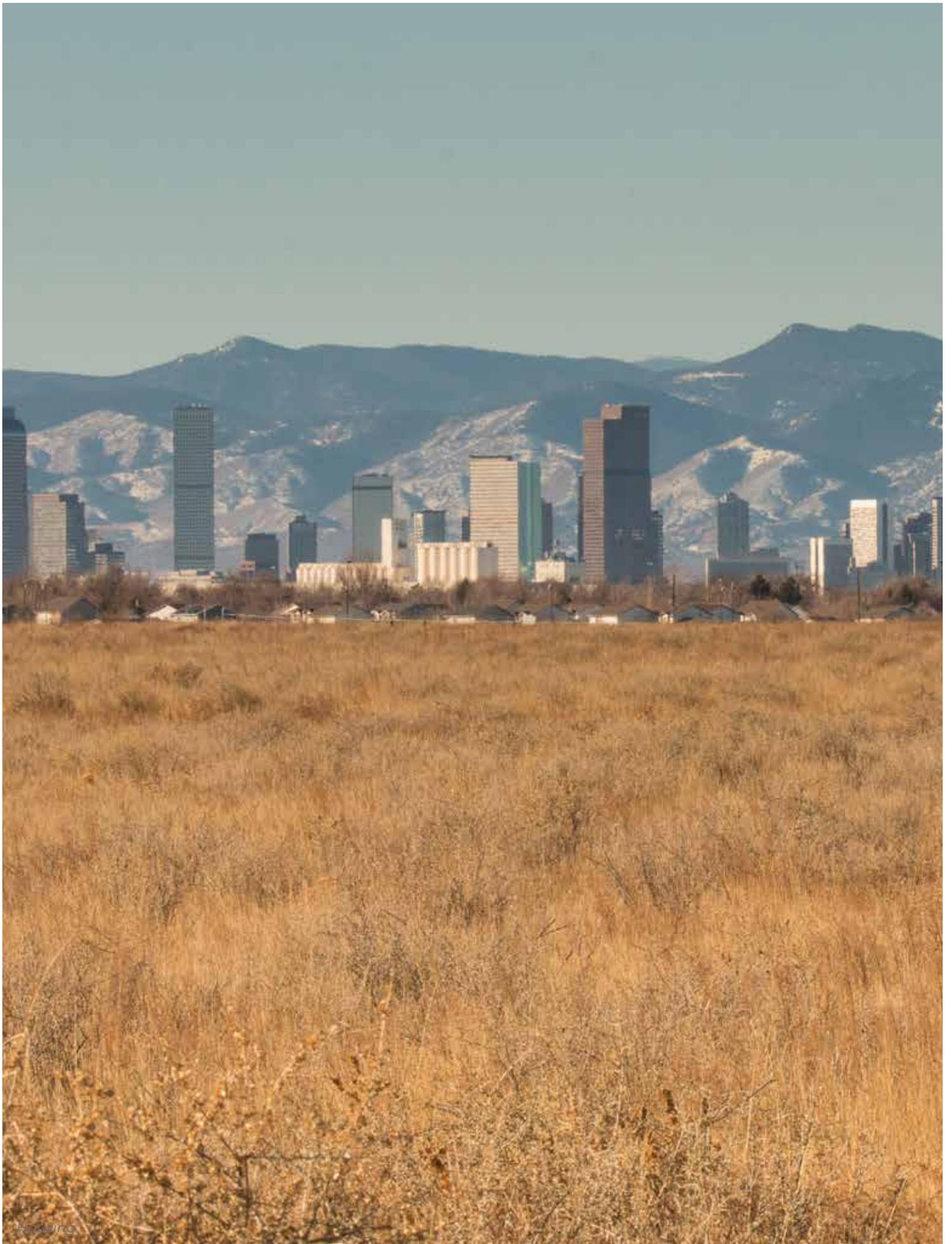
Goal COH 5: Establish and sustain safe, secure, and livable neighborhoods that meet the everyday needs of residents.

Policy COH 5.1: *Adams County's policy is to actively work to improve safety and security in neighborhoods through emergency planning and capital investments. The County also addresses issues of access to essential goods and services to promote equity and improved quality of life.*

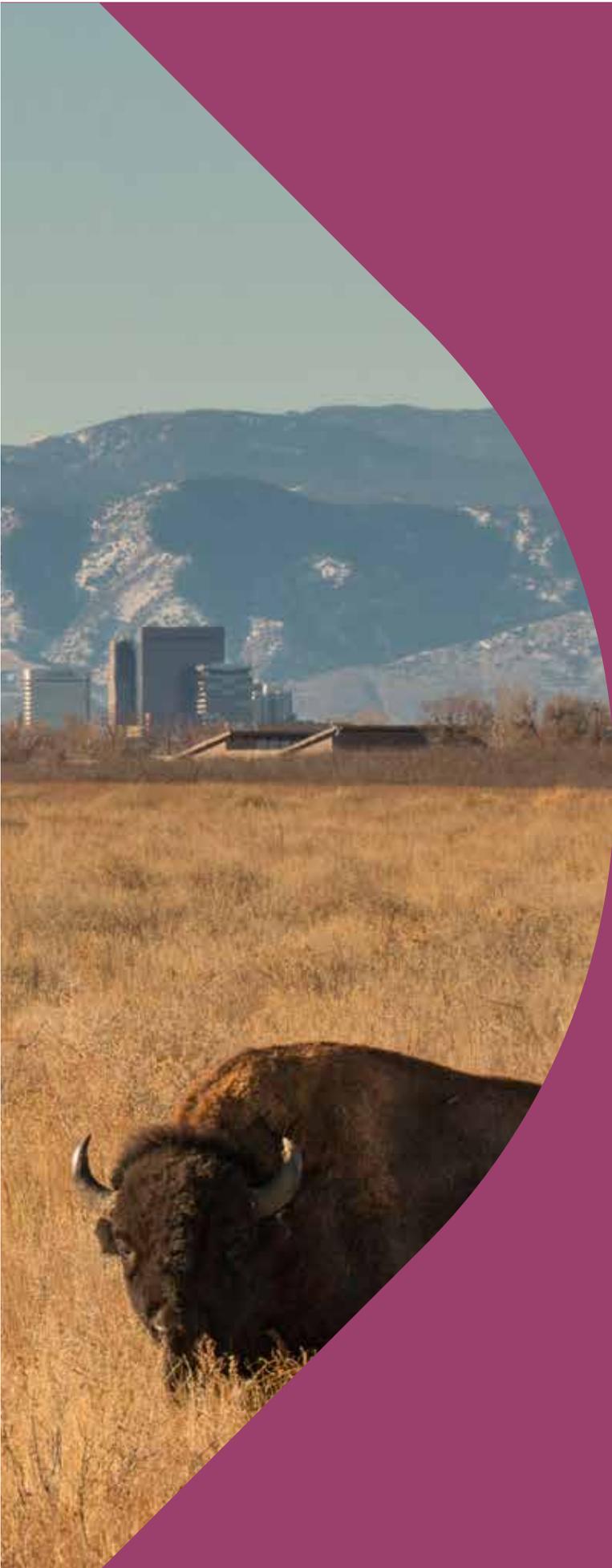
- **Strategy COH 5.1.01:** Establish transitions in land use between residential and industrial areas to reduce exposure to air and noise pollutants.

- **Strategy COH 5.1.02:** Approach neighborhood planning efforts in a comprehensive manner that includes capital improvement projects (streets, sidewalks, lighting), neighborhood economic development strategies (NEDS), and design standards.
- **Strategy COH 5.1.03:** Assess barriers and infrastructure needs to expand high-speed internet access in the county, specifically for low-income households and neighborhoods.
- **Strategy COH 5.1.04:** Continue to support programs and initiatives that address emergency planning and resiliency, including the 2020 Adams County Hazard Mitigation Plan (and subsequent updates) and zoning overlay districts within the Adams County Design Standards & Regulations.
- **Strategy COH 5.1.05:** Address food deserts through targeted economic development efforts to attract grocers and retailers providing healthy food options, as further developed in a forthcoming Economic Development Strategy & Implementation Plan.

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CHAPTER 4



**Natural Resources &
Environment**

OVERVIEW

The Natural Resources & Environment in Adams County include active and passive open space, agricultural lands, surface and groundwater sources, ecological resources, wildlife habitat, energy, and mineral resources. Conservation and preservation of resources are seen as one of the most important means of reducing our impact on the natural environment. Through a variety of strategies, the county aims to protect habitat, manage water resources and air quality, reduce impacts on the environment by ensuring responsible development and resource extraction, and promote climate resiliency.

Some of the most significant natural areas in the region are located within Adams County. Barr Lake State Park is a 2,715-acre wildlife preserve

located southeast of the City of Brighton. Riverdale Regional Park is the only regional park in the county that is not state or federally operated and serves as an ecological asset, recreational location, and destination for environmental education. Formerly a chemical weapons manufacturing center, Rocky Mountain Arsenal is now a wildlife refuge comprised of almost 16,000 acres and home to a variety of birds and a bison herd. Several large rivers and creeks run through Adams County, creating wildlife corridors and unique habitats for a diverse assortment of flora and fauna. Clear Creek runs from the Continental Divide, carrying snow melt year-round, to its confluence with the South Platte River, which also originates in the mountains. The South Platte River is the principal source of water for eastern Colorado.

Human activities in Adams County have impacted the natural environment in a variety of ways. With a history that includes agricultural land uses in the eastern portion, intensive industrial uses in the western portion, and residential development throughout - there has been a wide range of environmental impacts across the county. Industrial activities, coupled with growth and development, have led to increased impairment of aquatic resources such as streams and wetlands, exacerbated air quality issues through increased ozone precursor emissions, and produced brownfield sites from historical land uses. This has led



Riverdale Regional Park Bridge

to a subsequent reduction in the diversity, acreage, and connectivity of natural habitats. Some of the natural environment has been well preserved, whether as dedicated natural resource areas such as parks, open space, and trail corridors or through regulations on how growth can occur.

Adverse impacts of development on the environment and natural resources may continue to expand unless strategies are implemented to direct and manage anticipated growth. Along with that growth, additional stressors related to global climate change in the form of increased temperatures, greater variability and magnitude in storms, drier conditions, and changing precipitation patterns pose an increased risk of harm to the natural resources and residents of Adams County. As identified in the Adams County Hazard Mitigation

Plan (“HMP”, 2020), these factors will combine to increase the prevalence of drought conditions, especially hotter and drier summers, which may lead to increased wildfire risk (see Figure 4-1), additional air quality impairment, and alterations in ecosystem species composition. According to the HMP, there may also be an increased likelihood of floods (see Figure 4-2) and severe winter storm events. Note, the maps represent a snapshot, and the HMP should be referred to for the latest data and images.

Anticipating these changes to our natural environment proffers an opportunity to build resiliency and adaptability into planned development and employ effective strategies to mitigate impacts to the county’s natural resources. Knowing that Adams

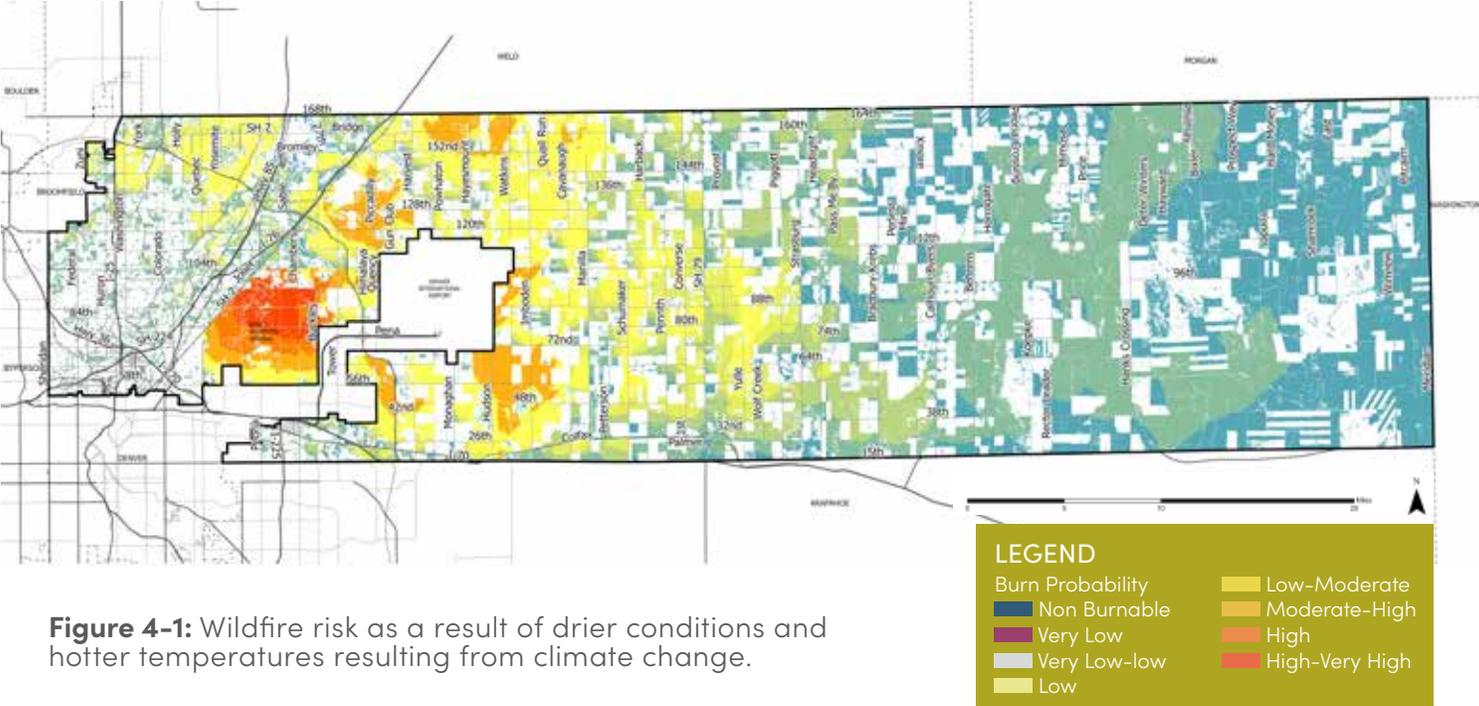
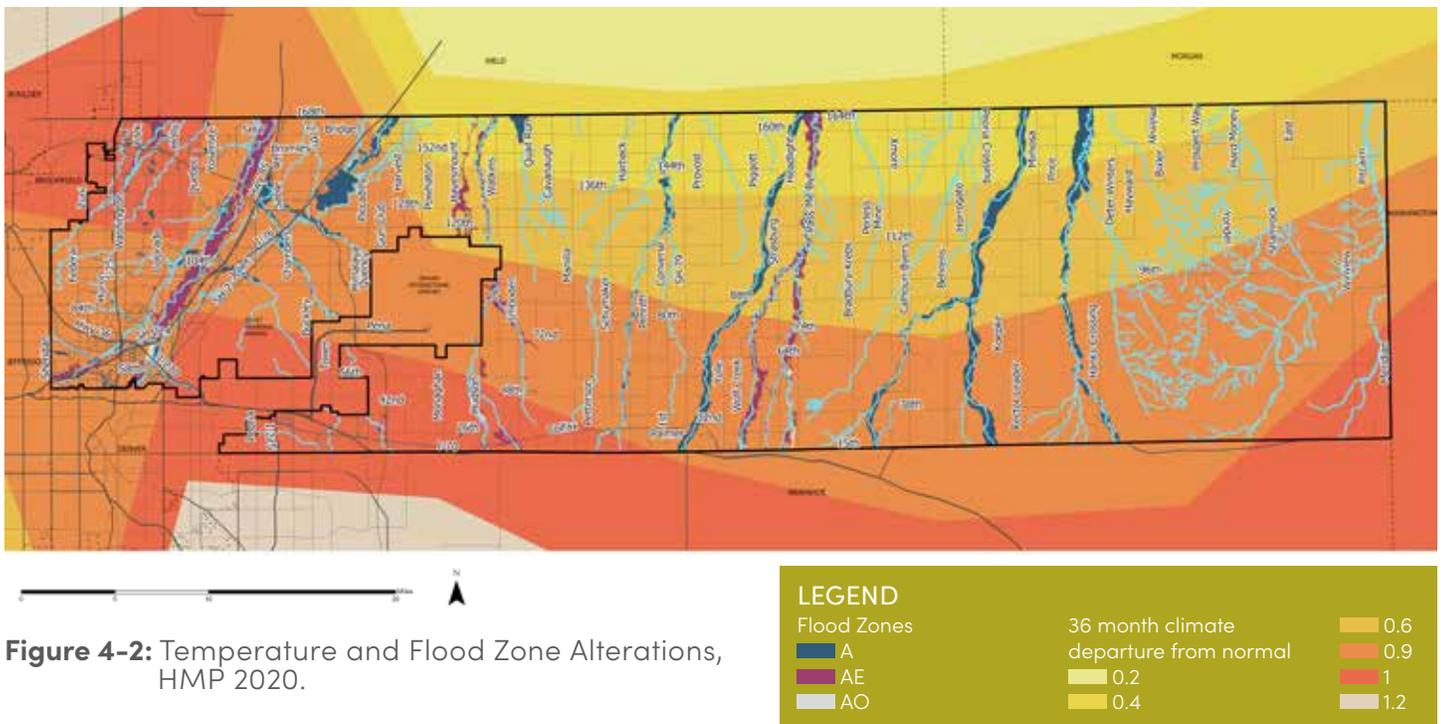


Figure 4-1: Wildfire risk as a result of drier conditions and hotter temperatures resulting from climate change.

KEY ISSUES

County will get hotter and drier with shifting precipitation patterns as the most likely scenario allows for ongoing succession planning for everything from agricultural species to street trees and entire ecosystems. Providing clear guidance to decision-makers on what to expect and how to plan for it can result in greater benefits for future generations.

Critical partners in this effort include the Community & Economic Development Department (CEDD), Office of Emergency Management (OEM), Public Works Department, and Parks, Open Space & Cultural Arts Department.



KEY ISSUES

Ecological Resources: Preserve, link, and layer existing undeveloped and underdeveloped prairie in the County through greater parks, open space, and trail corridor connectivity. This can help create resiliency in ecological resources as climate change impacts will be felt through increased temperatures, extreme droughts, and more frequent storm events.

Water Resources: With limited water resources, it is important to understand the supply and demand outlook as well as critical ecosystem services provided by riparian corridors, wetlands, and other aquatic ecosystems in order to implement effective conservation methods that will, in turn, improve the county's climate adaptability and resiliency.

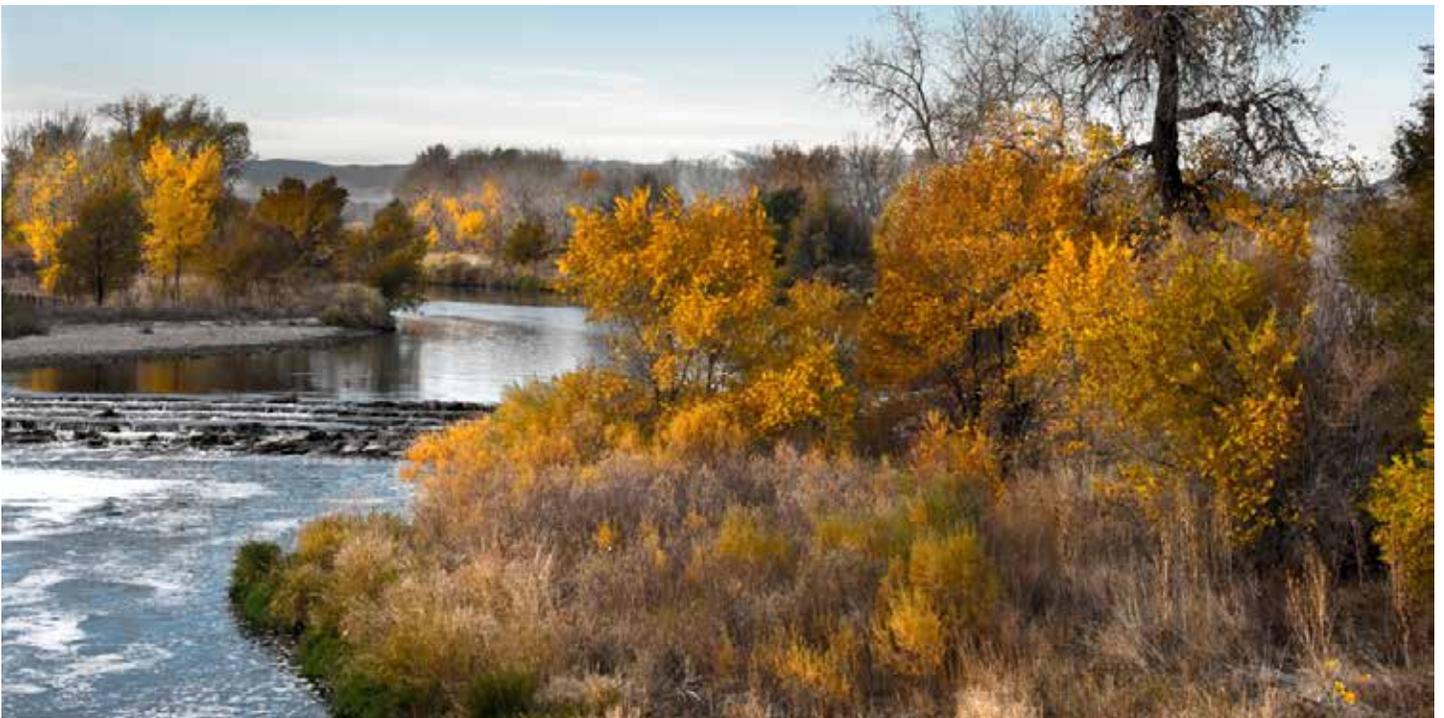
Climate Change: Oil and gas resources are readily available

around much of the county, which has resulted in their extraction near residential areas and important natural resources. Impacts to air quality and greenhouse gas emissions

from the full cycle of oil and gas production and use are significant concerns on both the local and regional level.

The county has significant potential to utilize natural, renewable energy resources such as solar, wind, and geothermal.

Natural Hazards: Wildfires within the Wildland Urban Intermix, as defined in the 2020 HMP, hailstorms, and floods in the urbanized parts of the county are both concerns addressed in the HMP and will need to inform development planning and construction.



Autumn on the Platte River

GOALS, POLICIES, AND STRATEGIES

Goal NRE 1: Facilitate the protection and restoration of natural areas and ecosystems to improve habitat connectivity, sensitive lands, and natural habitats while enhancing the quality of life and shaping urban areas.

Policy NRE 1.1: *Adams County is committed to sustainability and livability and values its natural resources and habitat as assets that need to be preserved and protected for future generations.*

- **Strategy NRE 1.1.01:** Continue to implement the Adams County Parks, Open Space, and Trails (POST) Master Plan, Riverdale Regional Park Master Plan, the Clear Creek Corridor Master Plan, and the South Platte River Heritage Corridor Plan. Greenways, parks, and natural corridors along rivers and streams should be prioritized for preservation and made available for the public to enjoy.



- **Strategy NRE 1.1.02:** Encourage new development in a manner compatible with the preservation of open space. Promote development strategies, such as clustering, that mitigate impacts to important natural areas including wildlife and riparian habitat.
- **Strategy NRE 1.1.03:** Evaluate and update the County's Transfer of Development Rights program.
- **Strategy NRE 1.1.04:** Expand Natural Resource Conservation Overlay (NRCO) to encompass additional areas that provide habitat corridor connections and open space and strengthen protections for habitat, especially proximate to water bodies.
- **Strategy NRE 1.1.05:** Consider habitat restoration efforts that provide multiple ecosystem services such as flood mitigation, water quality, aesthetics, shading, carbon sequestration, and air quality benefits.
- **Strategy NRE 1.1.06:** Enhance landscape connectivity between existing Parks and Open Space land to provide for habitat corridors and species movement throughout the county (POST Goal NE 4.0).
- **Strategy NRE 1.1.07:** Encourage conservation easements on private land to encourage the preservation of open space, water, and wildlife habitat. Continue to implement the Public Land Dedication (PLD) Fee and update the data used to calculate the fee on a regular basis to ensure equitable dedication (SP2030 Goal 10).

- **Strategy NRE 1.1.08:** Encourage the preservation of greenfields by promoting infill and brownfield redevelopment opportunities through education, development regulations, and federal or state grant programs.

Goal NRE 2: Preserve and enhance surface and groundwater quality and ensure the long-term viability of groundwater supplies.

Policy NRE 2.1: *Adams County has a limited supply of water, which can impact both existing residents and future development; it is critical for the economic and environmental health of the county that a special focus is placed on water quality and quantity, its conservation, and protection.*

- **Strategy NRE 2.1.01:** Develop a County Water Analysis that identifies the water supply resources, current and future demand, and methods for conservation.
- **Strategy NRE 2.1.02:** Preserve the groundwater aquifers by continuing to limit subdivisions of land east of Denver International Airport (DEN) and north of the Colorado Air & Spaceport (CASP) subarea.
- **Strategy NRE 2.1.03:** Consider the inclusion of water conservation in building and development codes, specifically within sustainable development menu options for new projects. Promote water use efficiency for new and redeveloped residential and commercial properties in unincorporated Adams County (SP2030 Goal 9).

- **Strategy NRE 2.1.04:** Update the County's landscaping regulations to include incentives for xeriscaping and low-water plants. Consider different regulations for the eastern and western portions of the county, which have considerably different water resources and availability.
- **Strategy NRE 2.1.05:** Minimize volume of untreated surface runoff by incorporating low-impact development practices that utilize native vegetation and xeriscaping. Encourage green infrastructure techniques, such as grass-lined drainage swales and reductions in impervious area.
- **Strategy NRE 2.1.06:** Restrict development of permanent structures within designated floodplain areas and preserve associated aquatic ecosystems and the services they provide. Expanding flood protection areas will help to maintain good ecosystem health.



GOALS, POLICIES, AND STRATEGIES

Goal NRE 3: Proactively plan to adapt to climate change while mitigating its extent. Reduce vulnerability to, and protect people, property, and the environment from natural hazards.

Policy NRE 3.1: Adams County recognizes the need to plan for the future with the changing climate in mind.

- **Strategy NRE 3.1.01:** Expand, create, and advocate for equitable clean energy opportunities (SP2030 Goal 3). This includes supporting the development of large-acreage solar energy facilities and their associated infrastructure.
- **Strategy NRE 3.1.02:** Proactively prepare for natural hazards and disasters by implementing the recommendations in the 2020 Hazard Mitigation Plan.



Winter on the Platte River

- **Strategy NRE 3.1.03:** Use sustainable infrastructure to mitigate impacts of natural hazards (SP2030 Goal 11).
 - Implement the recommendations of the Mile High Flood Control District as set forth in its plans to preserve the current capacities of drainage basins and corridors located within Adams County. Work cooperatively with municipalities to coordinate the implementation of regional drainage plans.
 - Achieve a FEMA Community Rating Score of 7 or better.
 - Increase number and quality of flood control/detention facilities to mitigate flood risk.
- **Strategy NRE 3.1.04:** Promote the use of sustainable building and site design techniques that encourage the use of renewable energy, support energy and water conservation, and provide other benefits to the environment and community.
- **Strategy NRE 3.1.05:** Expand protections of and establish development restrictions within the Wildland Urban Interface, as delineated in the 2020 Hazard Mitigation Plan (HMP Figure 4-50). Reduce noxious weeds and heavy infestations of non-native weed species that contribute to wildfire fuel, water consumption, and decreased wildlife habitat.
- **Strategy NRE 3.1.06:** Encourage and foster best practices in agriculture, such as regenerative agriculture, to strengthen the health and quality of soil.

Goal NRE 4: Foster responsible resource use, from cradle to grave, including extraction, production, recycling, adaptive reuse, and disposal.

Policy NRE 4.1: *Adams County has a long history of mining and landfill uses that have created a visible impact on the landscape. Ensuring the county's resources are conserved, recycled, and used responsibly will allow for future generations to enjoy the land, water, and air as we do today.*

Strategy NRE 4.1.01: Complete a Waste Management Plan to determine strategies needed for reducing waste generation and increasing recycling and re-use (i.e. composting). This plan will also help determine the landfilling capacity needed for future Adams County generations.

- **Strategy NRE 4.1.02:** Support and promote recycling opportunities for both residents and businesses.
- **Strategy NRE 4.1.03:** Require waste haulers in the County to report amounts landfilled, recycled, or diverted so that a baseline can be established, and goals can be developed for improvement.
- **Strategy NRE 4.1.04:** Review and update the County's Mineral Extraction Plan (2005) to reflect new extraction technologies and methodologies and maps delineating areas of commercially viable sand and gravel deposits.
- **Strategy NRE 4.1.05:** Encourage post-reclamation uses to be compatible with the County's long range plans.



Rocky Mountain Arsenal



GOALS, POLICIES, AND STRATEGIES

- **Strategy NRE 4.1.06:** Continually review and update the County’s oil and gas development regulations to ensure they reflect current health studies, environmental protection measures, and take into account new extraction technology.
- **Strategy NRE 4.1.07:** Work with state agencies on policies and legislation that further the County’s goals on resource conservation, extraction, and reuse.



The Platte River



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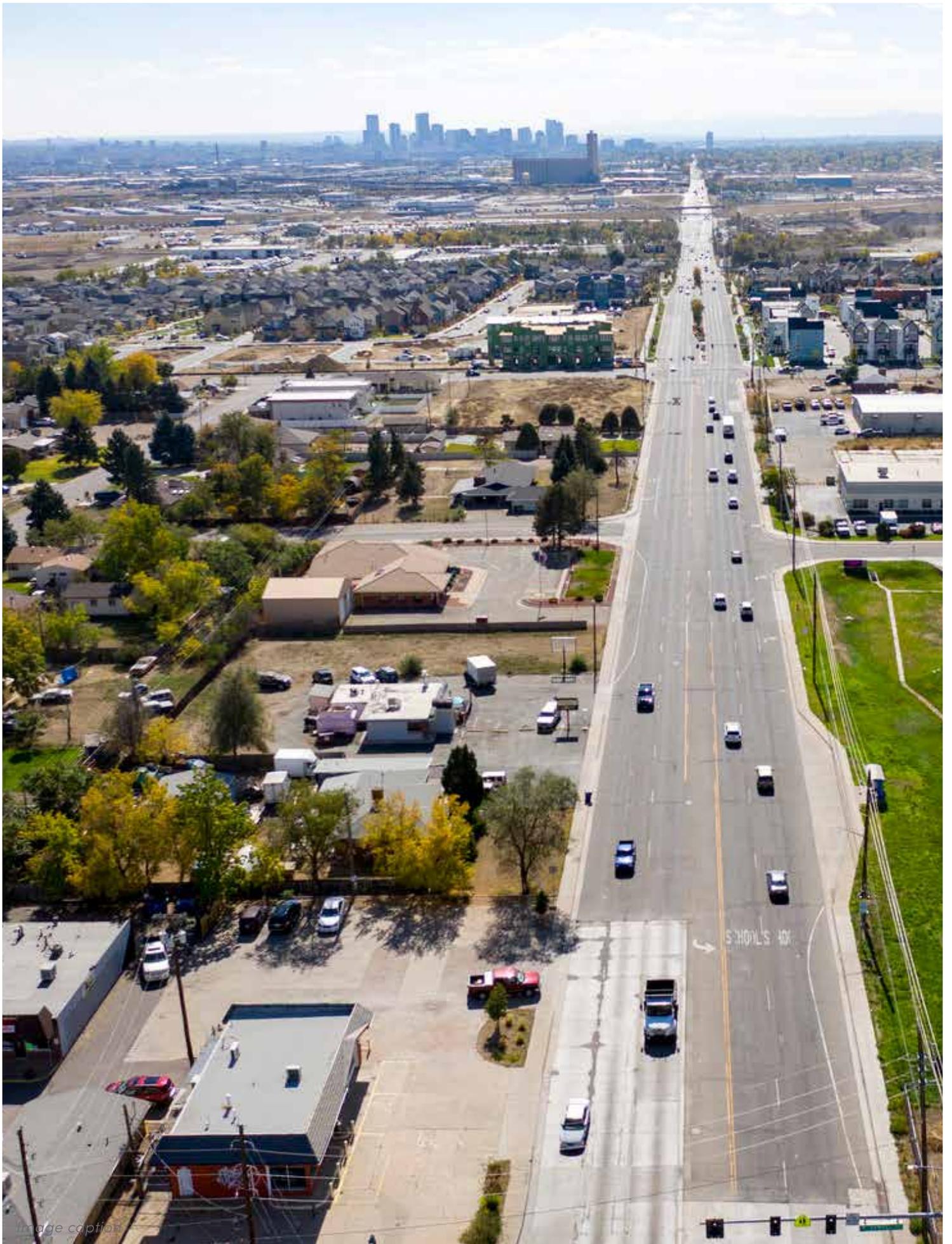


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CHAPTER 5



**Built Environment and
Connections**

OVERVIEW

The built environment is characterized as the human-constructed, physical aspects we interact with on a regular basis. The road and transportation network, street design, buildings and development patterns, landscaping, utility infrastructure, and even human-made parks constitute the built environment. The components of the built environment, especially when aligned, contribute to a sustainable and livable community.

Community can be characterized as the interaction of people supported by destinations, places to gather, and chance interactions and is a cornerstone of livability. People are drawn to areas where they can socialize, recreate, shop, find work, eat, and learn; centers are intrinsic to our idea of community. These land use characters detailed in Chapter 2 establish the development expectations and populations necessary to attract and sustain the housing choice, services, employment, and business for a complete community. People must have comfortable, direct, and safe ways to get to necessary daily locations such as work, services, retail, and schools. The transportation system should be multi-modal and work within the context of the surrounding land uses to support a full spectrum of transportation needs, from the facilitation of freight to the enhancement of a safe and accessible trail network.

The county provides services for roads, code enforcement, and

development review. Water and utilities, on the other hand, are administered by municipalities or special districts. Coordinating the provision of utilities with existing infrastructure is crucial for future sustainable development, redevelopment, and infill.

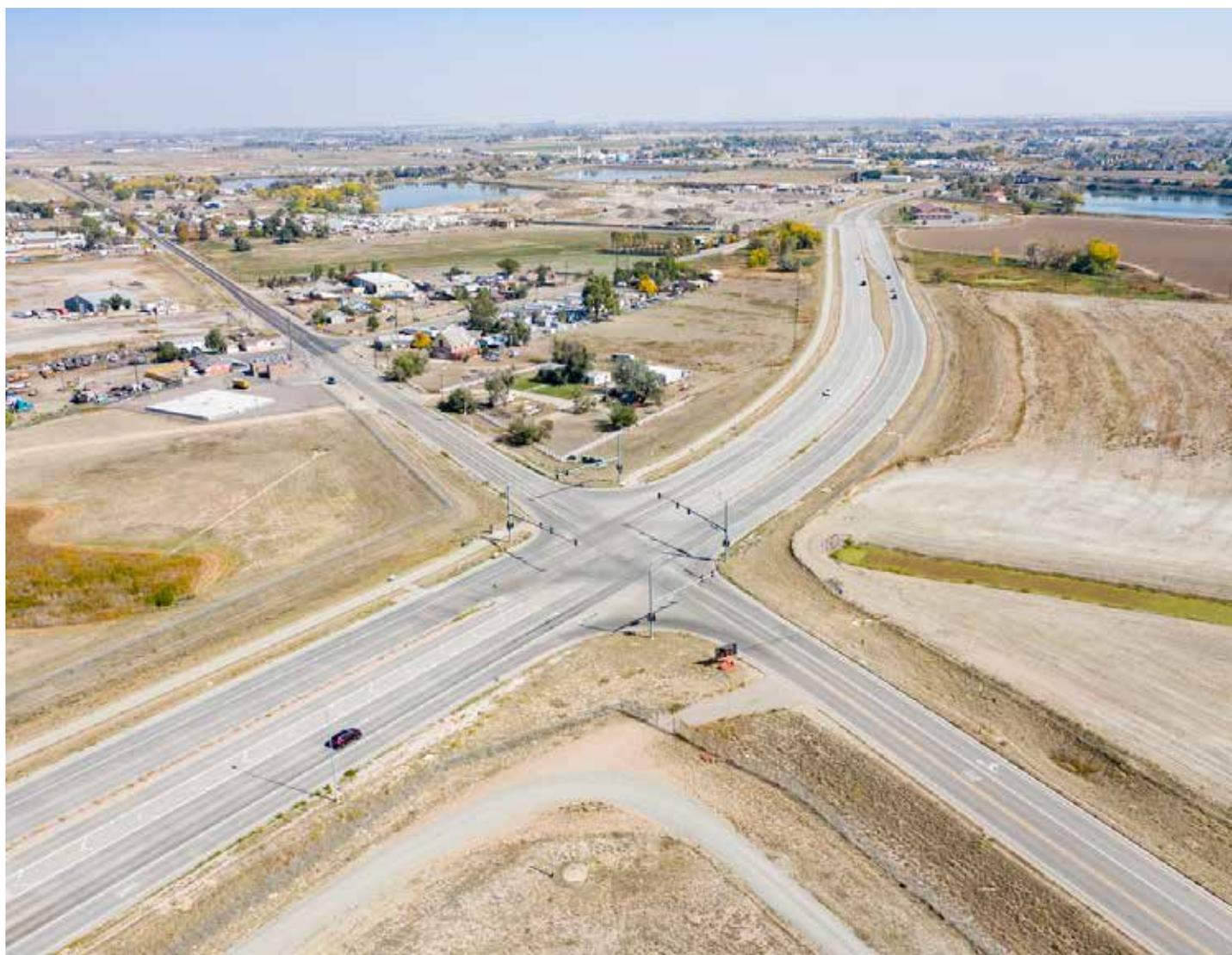
The built environment must be planned in a way that considers functionality and livability. Careful placement of development advances the County toward meeting its aspirations for the future. This includes ensuring infrastructure like utilities and broadband are easily accessible to development and do not require excessive expenditures to extend. Economic development strategies can address workforce development in a localized sense. Place-based strategies include ensuring homes and jobs are connected by reliable and safe transportation networks, protecting against low-to-moderate income job holders being priced outward and, therefore, bearing the burden of high transportation costs, and ensuring the workforce is not displaced by high housing costs.

It is important that new development be located out of areas with high risk for flood and wildfire and that lands that have historically been used for environmentally hazardous industries are appropriately remediated or mitigated for new development. Expansion to undeveloped portions of the county should be carefully considered and limited. Instead, strategies should explore enhancing

and adaptively reusing existing properties to support responsible development patterns. New developments should prioritize energy efficiency, the use of renewable energy, and innovative technologies to mitigate greenhouse gas emissions.

The built environment significantly impacts the sense of urban, suburban, and rural characters found throughout the county. While the Comprehensive Plan applies to the unincorporated parts of the county, it is important to recognize the interconnections between incorporated and

unincorporated parts of the county and plan for transitions accordingly. This chapter further applies the 20-Minute Community framework. The framework seeks to integrate connections between transportation and parks from the TMP and POST plans by guiding services and supportive development to reinforce established communities in the county. Finally, the built environment has significant influence on sustainability, human-made and natural hazards, and the opportunities to live a fulfilled and healthy life.



20-MINUTE COMMUNITY: KEY COMPONENTS

The 20-minute community is a planning model that seeks to cluster community resources and amenities, such as education, healthcare, healthy food access, neighborhood commerce, local employment, public parks, and public gathering areas so they are accessible in an easy 20-minute walk, bicycle ride, or transit ride. The goal of the 20-minute community is to establish more resilient neighborhoods that can access essential services without sole reliance on automobile trips.

KEY ISSUES:

- a. Transit and trails, along with roads, are important for connecting people to places.
- b. Essential services, amenities, and infrastructure are distributed more toward the western part of the county.
- c. New development can and should better utilize the existing transit, bike/pedestrian paths, and trail network.
- d. Development patterns can better support a safe and effective transportation network.
- e. The built environment should be designed to be resilient toward climate change and subsequent hazards and support the sustainability goals of the county.



The 20-minute community composite map (See Figure 5-1) shows a spectrum of concentrations of essential services and amenities, primarily located on the western portion of the county.

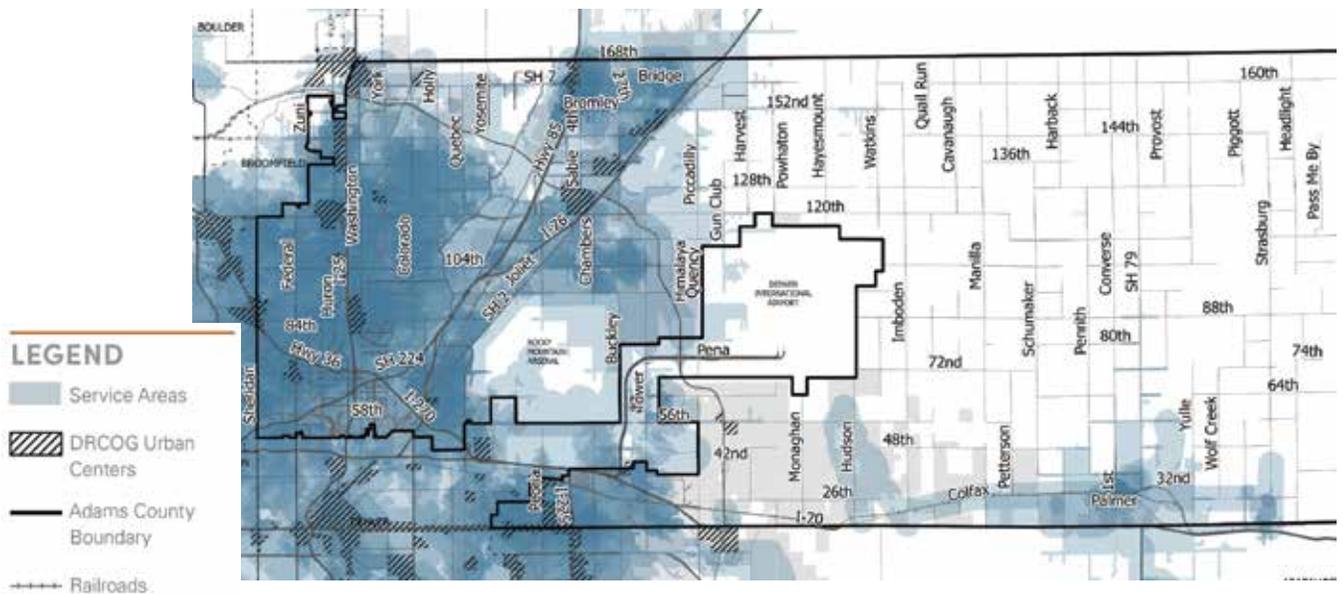


Figure 5-1: 20-minute community

GOALS, POLICIES, AND STRATEGIES

Goal BEC 1: Support existing communities and accommodate growth and development that coordinates with local plans, is fiscally and environmentally responsible, and enhances the overall well-being of the community.

Policy BEC 1.1: *Adams County's policy is to cooperate and coordinate with incorporated communities within the county on planning and land use decisions within Municipal Growth Areas (MGAs).*

- **Strategy BEC 1.1.01:** Review and maintain Inter-Governmental Agreements (IGAs) with incorporated communities. IGAs should stipulate the commitment to follow plans, establish procedures for referral and review of land use applications, and potentially processes for prioritizing and coordinating annexations and de-annexations within an MGA.
- **Strategy BEC 1.1.02:** Review and update subarea plans. Collaborate with incorporated communities when plan area overlaps jurisdictional boundaries.
- **Strategy BEC 1.1.03:** The county should work with municipalities to realize efficiencies and deliver coordinated services to enclaves within the county. Discourage redundant or duplicative services and consolidate services where possible. Whenever possible, the county shall encourage enclaves to annex into the surrounding municipality.
- **Strategy BEC 1.1.04:** Areas with municipal water and sewer services are strongly encouraged to annex.
- **Strategy BEC 1.1.05:** Coordinate with local jurisdictions to share and update information and data, especially related to comprehensive plans, maps, annexations, and zoning changes that may influence or impact planning in the MGAs in the county.
- **Strategy BEC 1.1.06:** Continue to coordinate with local municipalities, special districts, and regional organizations to identify, plan, and collaborate on multi-jurisdiction CIP projects. Work with jurisdictional partners to pursue funding for transportation, capital improvements, and planning efforts when feasible.
- **Strategy BEC 1.1.07:** Explore planning and potential modifications to development standards to promote compatible transitions of land uses, transportation networks, and urban design between incorporated and unincorporated areas in the county. Evaluate opportunities to enhance visual aesthetics and reduce visual impacts at key community gateways.

Policy BEC 1.2: *Adams County's policy is to expect development to be fiscally and environmentally responsible.*

- **Strategy BEC 1.2.01:** New development, including new special districts, should mitigate impacts and improve livability in the county by contributing appropriate impact and land-dedication fees, including but not limited to traffic, fire districts, school districts, and parks and open space.
- **Strategy BEC 1.2.02:** The County should coordinate with internal departments and jurisdictional partners to assess needs and resources and to review and revise associated impact and land-dedication fees as necessary.
- **Strategy BEC 1.2.03:** Encourage a diverse and compatible mix of land uses that support the housing, commercial, and industrial needs of the county that promotes a resilient economy and opportunities for a more livable community. Identify potential receiving areas for industrial uses that may undermine the return on public investments around existing locations. Explore criteria for siting new industrial uses to mitigate the social and environmental impacts and avoid worsening historical inequities.
- **Strategy BEC 1.2.04:** Consider mapping private development plans, traffic studies, drainage reports, and other relevant development documents with existing and planned public improvements to support the CIP planning process. Consider establishing a CIP overlay to coordinate public and

private improvements to realize opportunities for efficiencies and avoid redundant outcomes when feasible.

- **Strategy BEC 1.2.05:** Explore creative solutions to congestion and degrading levels of service. For instance, consider working with property owners and users to form a “Transportation Improvement District” when individual development and users contribute to a degrading level of service in which on-going conditions threaten future development rights.
- **Strategy BEC 1.2.06:** Continue to enforce provisions that require groundwater resources be demonstrated for 300 years to ensure long-term viability of groundwater for development. Consider the development of a County Water Analysis to understand the capacity of existing water sources and sanitary resources (See also NRE 2.1.01).
- **Strategy BEC 1.2.07:** Review and evaluate urban design and landscaping criteria in the development standards and update as necessary to support best practices, water conscious landscape selections and design, biodiversity and native plants, and pollinator friendly habitats.
- **Strategy BEC 1.2.08:** Review the development standards to support adaptive re-use and investment in existing buildings to reduce carbon footprint of new construction.

GOALS, POLICIES, AND STRATEGIES

Goal BEC 2: An inclusive community that provides opportunities for people to live, work, and achieve their highest level of health and well-being.

Policy BEC 2.1: *The county's policy is to be the most innovative and inclusive county in America for all families and businesses, and the built environment and planning processes should reflect that.*

- **Strategy BEC 2.1.01:** Explore using census data, CDPHE models, and other data sources to identify traditionally under-represented, under-served, under-invested, or vulnerable communities when considering new investments, programs, or land use decisions and evaluate mitigating impacts to public health, displacement, and other factors.

- **Strategy BEC 2.1.02:** Evaluate approval criteria for equitable and livable outcomes.
- **Strategy BEC 2.1.03:** Consider methods to ensure a creative and robust engagement process to include diverse stakeholder groups for equitable planning projects and outcomes.

Policy BEC 2.2: *Adams County's policy is to expand access to safe and reliable housing, transportation, service destinations, recreation, and commuting choices in the county.*

- **Strategy BEC 2.2.01:** Direct growth to areas that are supported by multimodal connectivity, meets expectations for services, and can utilize existing infrastructure.
- **Strategy BEC 2.2.02:** Encourage subdivisions to provide internal connectivity to enhance walkability. Encourage public and private connections to public trails when adjacent to the subdivision or neighborhood.
- **Strategy BEC 2.2.03:** Support public health needs by seeking opportunities to enhance access to community resources, such as healthy food, healthcare, childcare, safe neighborhoods, and places for physical activity.

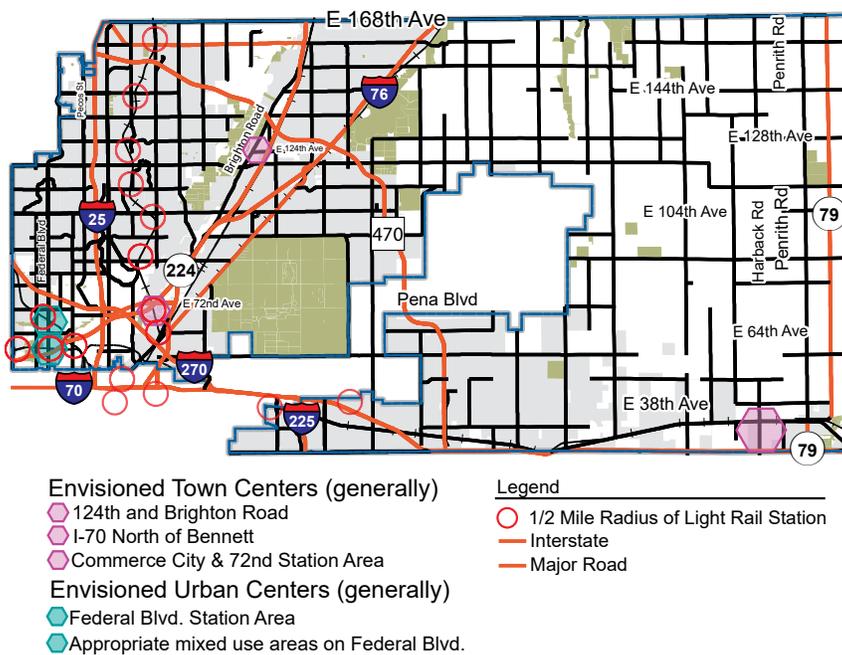


Figure 5-2: Envisioned town centers

- **Strategy BEC 2.2.04:** Support development that reduces “Vehicle Miles Traveled.” Emphasize the 20-minute community in established neighborhoods and identified town centers and urban centers by encouraging service and commercial supportive densities and development patterns. Review development standards to realize the 20-minute community model while discouraging major developments that are disconnected from existing communities, result in overly burdensome commutes or travel to community resources, do not support or attract community resources, and strain the County’s ability to provide adequate services.
- **Strategy BEC 2.2.05:** Promote mixed use, multi-modal, pedestrian-oriented development patterns in urban centers, town centers, around transit hubs, and in mixed-use zones.
- **Strategy BEC 2.2.06:** Support expanding access to high-speed internet in the county with a particular emphasis on rural or under-served or vulnerable populations. Consider coordinating on regional capital improvements that include opportunities to expand broadband and fiber.
- **Strategy BEC 2.2.07:** Encourage development with supportive design, uses, and intensities that promote connection to the bicycle and trail networks, especially in service of the first and last mile connections to transit.
- **Strategy BEC 2.2.08:** Promote opportunities that align the future land use and zoning to build both horizontal and vertical mixed-use development. Consider additional housing units, compatible mixing of uses, height, walkable design, and reduced setbacks when proposed mixed-use development is connected to high-capacity transit.
- **Strategy BEC 2.2.09:** Review County operations, such as plowing and street service, and revise to avoid creating unintended barriers to walking and biking, especially around key transit and trail connections. For instance, plowing that blocks pedestrian access points to sidewalks or transit stations or street operations that undermine bike routes without providing alternatives.
- **Strategy BEC 2.2.10:** Reinforce access to transit with improved connections, pathways, and transit supporting uses and densities around transit stations.

Goal BEC 3: A built environment that meets the needs of the community while mitigating adverse impacts, recognizes known and unknown hazardous conditions, and responds to the increasing resource constraints going forward.

GOALS, POLICIES, AND STRATEGIES

Policy BEC 3.1: *Adams County’s policy is to support development that is cognizant of existing hazards and responds to the growing risks posed by climate change and continued encroachment into the natural interface.*

- **Strategy BEC 3.1.01:** Growth should be focused in a way that minimizes adverse impacts on the natural environment, provides for energy efficiency and green building techniques, and protects residents from hazardous areas.
- **Strategy BEC 3.1.02:** Discourage new developments located within the FEMA flood plain. Continue participation in the National Flood Insurance Program Community Rating System and maintain any related and applicable community certifications or designations.
- **Strategy BEC 3.1.03:** Encourage private landowners to grant maintenance and flowage easements to entities such as the Mile High Flood District or Public Works to allow for proper management of floodplain areas.
- **Strategy BEC 3.1.04:** Discourage new residential developments located within proximity to air quality contaminants, such as heavy industrial areas, railyards, and high-polluting roadways. Reduce indoor and outdoor air quality impacts on disproportionately impacted communities through advocacy and mitigation practices. Explore alternatives for existing residences, including possible relocation, when severe air-quality impacts cannot be mitigated.
- **Strategy BEC 3.1.05:** Support preparedness strategies for areas at highest risk for a variety of manmade and natural disasters, such as wildfire, chemical spills, and flooding.
- **Strategy BEC 3.1.06:** Review building code and development standards for storm shelter requirements, specifically in related to tornadoes for use in new commercial and industrial buildings. Consider the number, spacing, and access during an event in larger buildings and “tilt-up” style construction. Consider updating relevant codes when appropriate.
- **Strategy BEC 3.1.07:** Evaluate mitigation, building, and maintenance tactics when hazardous conditions may potentially exist and coordinate with property owners to lower that risk, including through education.
- **Strategy BEC 3.1.08:** Support remediation efforts on brownfield and contaminated sites and encourage viable uses that further county goals and community benefits. There may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation overlay, may undermine the Plan’s stated development goal, and in those instances existing and future development will need to accommodate these existing conditions.

- **Strategy BEC 3.1.09:** Coordinate with applicable health department and agencies to monitor environmental conditions and public health outcomes when appropriate.
- **Strategy BEC 3.1.10:** Prioritize and plan for green infrastructure and sustainable infrastructure in public and private projects. Explore activating and utilizing infrastructure for community benefit and connectivity beyond the primary purpose of stormwater management, and hazard mitigation. For example, consider activating drainage basins to become parks and trails assets. Consider planning and leveraging viaducts as trail connections as well as flood ways.
- **Strategy BEC 3.1.11:** Plan for a climate that is hotter, more prone to drought, and produces more extreme weather events. Support community amenities that consider refuge from heat events, such as cooling stations, water pads, and shade. Evaluate building and development codes to strengthen resilient and sustainable building design, energy efficiency, and environmental standards.
- **Strategy BEC 3.1.12:** Review development regulations with local FAA staff to ensure regulations are current and consistent.





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CHAPTER 6



Economic Development

OVERVIEW

The vision for Adams County to be the most innovative and inclusive county in America for all families and businesses is the central tenet for the framework of economic development activities, which serve to build economic health and sustainable opportunities for its resident, business, and development communities. A strong and vibrant economy provides for the creation of jobs and business investments by building a strong tax base that supports public safety, education, parks and open space, services, and other recreational and cultural amenities.

In recent years, economic development has become an essential function of local government with greater attention to issues of social and economic equity and the removal of barriers to opportunity for all community members. Local government also serves as the

administrator of local incentives to attract and support primary employers, small businesses, and development that meets strategic objectives. While still focused primarily on economic growth and opportunity, successful economic development activities look to the community's needs, workforce development, and market influences.

Partnerships with state and local organizations are critical in the promotion of long-term economic health and vitality. This is particularly true for the relationship between a county and its incorporated municipalities, who have their own economic development teams and activities. Through collaborative efforts, it is possible to more effectively leverage resources and work toward a common vision that benefits both the cities and the unincorporated areas of the county.



ROLE OF THE COUNTY

Adams County has a combined Department of Community & Economic Development; the primary purpose of this structure is to better integrate various steps in the development of projects in unincorporated Adams County and to facilitate improved communication and coordination across the organization, as well as in the community and with other agencies. Economic development staff lead the attraction of new primary employers and support existing businesses in their operations and expansions. The Economic Development Division also monitors economic data and trends in the county and provides policy guidance to the Board of County Commissioners and other County leadership as needed.

As a statutory county under Colorado law, Adams County is empowered to negotiate and provide incentives at the countywide level. The Board of County Commissioners exercises discretion in these decisions and follows adopted policy in making financial incentive agreements. Economic Development staff work in partnership with their counterparts in the municipalities to leverage additional resources and incentives in pursuit of building wealth across the county in the form of jobs, property investment, and building target industries, as well as developments that provide a public benefit.

In alignment with the County’s vision, economic development activities include efforts at the neighborhood level to remove barriers for minority- and women-owned businesses, entrepreneurs, and small business owners. Neighborhood Economic Development Strategies (NEDS) are local plans designed in conjunction with community stakeholders to bring needed services and desired options for people to live, work, play, and recreate in the neighborhood they choose. Adams County has prioritized a focus on “neighborhood up” approaches and community-based economic development, and this will be a central theme in the forthcoming Economic Development Strategy & Implementation Plan.

- 10 Largest Employers in Adams County**
1. *University of Colorado Health*
 2. *Children’s Hospital Colorado*
 3. *Amazon*
 4. *United Parcel Service*
 5. *FedEx*
 6. *Sturgeon Electric*
 7. *Gaylord Rockies Resort & Convention Center*
 8. *Maxar Technologies*
 9. *Steven Roberts Original Desserts*
 10. *HealthONE: North Suburban*



ADAMS COUNTY PROFILE

As part of the Denver Metropolitan Statistical Area (MSA), Adams County benefits from a larger regional economy that attracts global and national headquarters and highly skilled workforce talent. It benefits from proximity to world-class universities and federal laboratories. Adams County is home to top-ranked hospitals and a leader in the life sciences market. It is also included in one of the top housing markets in the country.

Adams County is a transportation nexus not only for the region, but for the State of Colorado and the Inter-Mountain West. The county surrounds Denver International Airport, one of the busiest airports in the United States with hub status for three major airlines: United, Southwest, and Frontier/Spirit. Adams County is also the owner and operator of the Colorado Air and Space Port, one of only 12 licensed spaceports in the country by the Federal Aviation Administration (FAA) in 2022. In addition to air transportation services, Adams County has a robust surface transportation system. The County includes the intersection of all four interstate highways in Colorado (I-25, I-70, I-270, I-76), as well as major state highways. Class I and Class III rail lines for Burlington Northern Santa Fe (BNSF) and Union Pacific (UP) provide rail services to and from national destinations. Combined,

the local intermodal opportunity of air, rail, and truck transportation infrastructure make Adams County a regional and national destination for trade, transportation, and distribution investments and employment.

Adams County is also a strong partner for the Fitzsimmons Innovation Community and Anschutz Medical Campus and supports investments that have attracted over 70 life sciences firms and over 25,000 workers to the area. Additionally, the campus is home to world-class medical facilities, including University of Colorado School of Medicine, Children’s Hospital Colorado, and the recently completed Rocky Mountain Regional Veterans Administration Medical Center.

For the last decade, Adams County has identified and engaged target industries for business attraction and expansion efforts. The County has seen growth in all of these sectors as measured by employment and number of firms, including both small and large companies:

- Aviation/Aerospace
- Energy
- Logistics
- Wholesale Trade
- Manufacturing
- Healthcare/Life Science

To continue economic growth and remain competitive over the next decade, a new analysis and

augmented set of target industries will be conducted through the creation of a separate Economic Development Strategy & Implementation Plan for the county by the Adams County Economic Development Division. Industry sector targets will be identified for the 1) County's comparative advantage, 2) growth potential for the individual sector, 3) resiliency of the individual sector to potential future economic shocks, and 4) integration into the larger county vision. As a part of economic development strategic planning, Adams County will continue working with key public, private, and non-profit sector partners in strategy development and implementation.

Partnerships and collaborative relationships are a critical component in the success of long-term economic health and stability for the County and its residents. The goals, policies, and strategies outlined later in this chapter are based on the interdependent nature of economic development. It is essential public, private, and nonprofit sectors remain engaged and aligned toward a vision that benefits the whole and not just the few.

In support of this chapter, a technical memorandum on employment and industry trends from 2000 to 2020 was prepared and is included in Appendix D. It includes an analysis of Adams County's employment patterns and growth, industry concentration, and wage characteristics. This level of detailed analysis is essential to understanding the past and future

trends in Adams County. Highlights are included here as context and background to inform goals, policies, and strategies.

EMPLOYMENT

Since the Great Recession ended in 2010, Adams County has seen steady "covered employment" growth rising from 147,987 to 220,788 workers in 2020 (an increase of 49.2%). Covered employment is waged or salaried employment and does not include the self-employed. These values come from a quarterly count of employment and direct wages reported by the U.S. Bureau of Labor Statistics as collected from employers. Total employment growth and growth by major industry sector are provided in the technical memorandum found in Appendix D.

The largest three employment sectors in Adams County are the Trade, Transportation, and Utilities sector, followed by Professional and Business Services, and Construction. It is worth noting in terms of employment growth, the State Government sector increased five-fold from 2010 to 2020, likely as a direct result of the investment in and build-out of the Fitzsimmons/Anschutz Campus. While the employment growth is captured under State Government for statistical purposes, this significant growth has a direct and indirect positive impact on private industrial sectors, such as healthcare in both job opportunity and wage impacts.

WAGES AND PAY

Wages are an important economic indicator that contribute to an understanding of the community’s standard of living. Annual average pay varies over time and across industries. Annual average pay growth, adjusted for inflation, is shown in Figure 6-1 for both the county and the state.

The average annual pay and wage growth for workers in Adams County is lower than the state as a whole. In addition, real annual growth in pay was only two-tenths of one percent (0.2%) annually from 2000 to 2005, and slightly negative from 2005 to 2010 as a result of economic losses associated with the 2008 Great Recession. Since 2010, annual wage growth has averaged just under 2% annually.

Annual average pay is shown by sector and compared to the state in Figure 6-2:

PROJECTED JOB GROWTH

As previously mentioned, “covered employment” does not represent all jobs because self-employment and some seasonal employment numbers are not included. Covered employment data is often used for analysis because it is reportedly quarterly with wage information and is compiled by the Federal government. “Total jobs” estimates come from non-Census statistics and estimate the number of self-employed and some seasonal agricultural workers. However, the data is only available annually, does not include industry level detail, and does not include wage data.

Annual Growth in Average Pay in Constant 2020 Dollars 2000 to 2020* State of Colorado and Adams County, Colorado				
Year	State	AGR	County	AGR
2000	\$56,084	-	\$50,495	-
2005	\$55,275	-0.29%	\$50,994	0.20%
2010	\$56,952	0.60%	\$50,178	-0.32%
2015	\$59,198	0.78%	\$54,745	1.76%
2020	\$66,646	2.40%	\$60,263	1.94%

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer’s Office, Adams County Community & Economic Development Department, January 2022.

Figure 6-1: Annual Growth 2000–2020



Covered employment represented an average of 80.8% of all Adams County jobs over the past 20 years. Because forecasts of “total jobs” are available at the county level, those estimates may also be used to project covered employment growth as a percent of total jobs for Adams County for the period 2025 through 2050. These projections and estimates are shown in the Figure 6-3:

As shown, total covered employment and total jobs are expected to reach approximately 300,000 and 350,000 respectively by 2050.



2020 Annual Average Pay by Industry Sector* State of Colorado and Adams County, Colorado			
Industry	State	County	County as % of State
10 Total, all industries	\$ 66,649	\$ 60,263	90.4%
Federal Government	\$ 87,291	\$ 98,152	112.4%
State Government	\$ 69,688	\$ 97,034	139.2%
Local Government	\$ 54,355	\$ 57,214	105.3%
10 Total, all <i>private</i> industries	\$ 67,431	\$ 55,638	82.5%
101 Goods-producing	\$ 74,557	\$ 66,241	88.8%
1011 Natural resources and mining	\$ 91,879	\$ 61,002	66.4%
1012 Construction	\$ 68,209	\$ 69,064	101.3%
1013 Manufacturing	\$ 77,207	\$ 62,397	80.8%
102 Service-providing	\$ 66,010	\$ 52,561	79.6%
1021 Trade, transportation, and utilities	\$ 55,719	\$ 52,043	93.4%
1022 Information	\$ 123,495	\$ 115,169	93.3%
1023 Financial activities	\$ 97,276	\$ 66,686	68.6%
1024 Professional and business services	\$ 90,744	\$ 63,453	69.9%
1025 Education and health services	\$ 55,198	\$ 56,179	101.8%
1026 Leisure and hospitality	\$ 28,424	\$ 24,269	85.4%
1027 Other services	\$ 45,642	\$ 46,485	101.8%
1029 Unclassified	\$ 87,352	\$ 42,818	49.0%

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

Figure 6-2: Annual Average Pay

Projected Covered Employment and Total Jobs 2025 to 2050 Adams County, Colorado		
Year	Covered Employment	Total Jobs
2025	248,722	307,825
2030	260,987	323,004
2035	273,264	338,199
2040	281,487	348,376
2045	290,777	359,873
2050	297,764	368,520

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), U.S. Bureau of Census Non-Employer Statistics, Denver Regional Council of Government (DRCOG), Adams County Community and Economic Development Department, January 2022.

Figure 6-3: Projected Employment 2025 to 2050

ADAMS COUNTY PROFILE

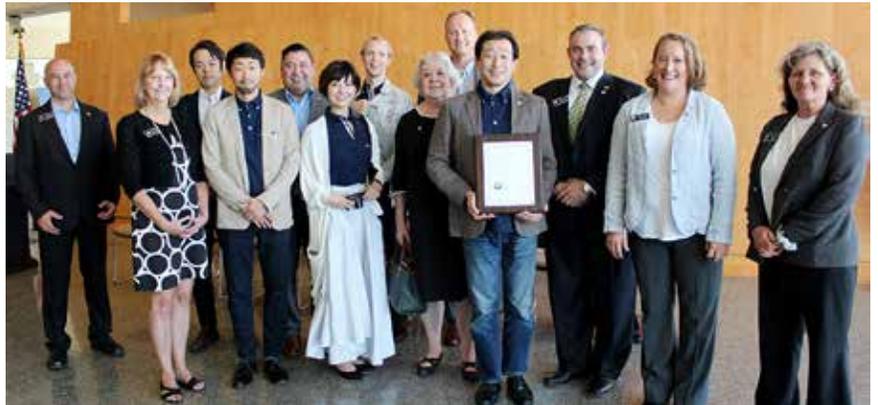


KEY ISSUES

Adams County has a rich history in agriculture and a well-established transportation network. These two key factors have shaped many of the land use patterns across the county over time and influence positioning for future economic development. Additionally, as one of the fastest growing counties in the state and part of a rapidly growing metropolitan region, there is pressure for higher wages and affordable housing that present challenges which must be addressed to ensure equity and continued opportunities.

- Wages and housing supply have not kept pace with the cost of living, and the average annual wage in Adams County is below the state average.
- Clear development processes and business support services are areas for improvement as the County works to implement its vision, mission, and values.
- Growth in residential development increases land use conflicts with more impactful industrial uses that have historically provided much of the county's economic base.
- There is a need to plan infrastructure investments in strategic locations to support economic growth and diversification in alignment with the county's vision.

- Long-term impacts from the COVID-19 pandemic, climate change, and socioeconomic factors continue to influence the economy changing the labor market, business operations, and technologies.
- Adams County is part of a strong regional economy, and success is built on relationships between the County and its municipalities, neighboring counties, other regulatory agencies, business and development communities, and residents.



GOALS, POLICIES, AND STRATEGIES

Goal ED 1: Encourage a “people first” philosophy in economic development that is committed to innovation, exceptional service, and transparency.

Policy ED 1.1: *Adams County’s policy is to prioritize responsiveness and customer service, leading with an innovative approach, and managing resources for long-term sustainability.*

- **Strategy ED 1.1.01:** Strengthen communication between the County, educational and training partners, businesses, employees, and residents to meet the community’s educational, job-training, and job search needs.
- **Strategy ED 1.1.02:** Evaluate and continuously improve the County’s development standards and permitting processes to ensure they are equitable, cost-effective, timely, and meet community needs and goals.
- **Strategy ED 1.1.03:** Work with the business community, major employers, economic development organizations, and residents to maintain a healthy and supportive business climate.
- **Strategy ED 1.1.04:** Provide technical assistance and development review process coordination to help developers and businesses navigate land-use and permit applications with clarity and in a timely manner.

- **Strategy ED 1.1.05:** Encourage innovation in service delivery, utilizing new technologies and communication tools to disseminate information in user-friendly platforms that make it readily accessible for the public.

Goal ED 2: Foster fair and equitable economic development throughout the county.

Policy ED 2.1: *Adams County’s policy is to support all people and businesses to grow and flourish educationally and economically. This is achieved through the creation and retention of sustainable jobs that provide a livable wage and reduce income disparities, as well as by developing a well-educated and qualified labor force that is competitive and responsive to the changing needs of the market and workplace.*

- **Strategy ED 2.1.01:** Understand the needs of target industries and primary employers and develop programs that address and support, such as those that elevate workforce training and advancement, provide access to education, and those that foster research opportunities.
- **Strategy ED 2.1.02:** Focus community economic development programs and activities in neighborhoods that may require additional resources or services and facilitate access to funding and technical support.

- **Strategy ED 2.1.03:** Encourage neighborhood revitalization through understanding neighborhood needs and supporting catalytic projects that address local small businesses and start-ups, workforce housing, and needed community services and amenities, such as access to fresh food, daycare, and healthcare.
- **Strategy ED 2.1.04:** Pursue the recruitment and retention of businesses that offer full-time and high-paying jobs with competitive benefits that are commensurate with the cost of living in the area.
- **Strategy ED 2.1.05:** Promote cross-departmental coordination when implementing infrastructure improvements through Capital Improvement projects to promote equity and access at neighborhood scale.

Goal ED 3: Guide growth and development to targeted areas and provide compatible transitions between land uses.

Policy ED 3.1: *Adams County's policy is to direct businesses and development to appropriate locations based on available public facilities and infrastructure, land capacity, adjacent uses, and environmental impact.*

- **Strategy ED 3.1.01:** Encourage redevelopment of brownfields and infill parcels to encourage revitalization of neighborhoods and utilize existing infrastructure.

- **Strategy ED 3.1.02:** Support a mix of land uses that bring positive impact to neighborhoods, including employment, retail, community services, and residential activity into shared locations that stimulate economic activity and reinforce multimodal transportation connections.
- **Strategy ED 3.1.03:** Focus more intensive industrial uses in strategic locations that are served by supporting infrastructure and removed from residential areas.
- **Strategy ED 3.1.04:** Discourage new development on agricultural lands that are productive or in cultivation.

Goal ED 4: Build and sustain a resilient and diverse economy.

Policy ED 4.1: *Adams County's policy is to pursue the attraction of target industries, while also promoting the retention and expansion of existing businesses, to provide a range of resilient employment opportunities and support living wages.*

- **Strategy ED 4.1.01:** Stimulate economic growth by focusing on business attraction, retention, and expansion to ensure Adams County stays at the forefront of business development in identified target industries.
- **Strategy ED 4.1.02:** Support efforts that advance innovation in business practices and technology and provide resources to entrepreneurs and startup industries, as well as established small businesses, to grow and scale as needed.

GOALS, POLICIES, AND STRATEGIES

- **Strategy ED 4.1.03:** Promote emerging green industries and advanced technologies that provide transitions from heavy industry and those with negative environmental impacts.
- **Strategy ED 4.1.04:** Align incentives that support the County's broader strategic goals and economic development activities that provides positive community impact and a return on investment.
- **Strategy ED 4.1.05:** Support the establishment of proactive resiliency plans and post-disaster economic recovery plans, with a focus on stronger communication between the County and the business community.

- **Strategy ED 4.1.06:** Coordinate infrastructure investments in targeted areas to promote redevelopment.

Goal ED 5: Promote the character and potential of the area through strong partnerships and effective collaboration with key stakeholders.

Policy ED 5.1: Adams County's policy is to work with its municipalities, state and local agencies, and community partners to market and support development consistent with the shared vision for the county's future.

- **Strategy ED 5.1.01:** Work with incorporated jurisdictions in the county to leverage resources that support the attraction, retention, and expansion of target industries.
- **Strategy ED 5.1.02:** Support regional economic development organizations in their efforts to reinforce and strengthen the regional economy through marketing and attraction campaigns.
- **Strategy ED 5.1.03:** Expand internal efforts to market the vision of Adams County more broadly and to targeted audiences to establish new partnerships and potential opportunities for economic growth.
- **Strategy ED 5.1.04:** Collaborate with public and private sector partners on redevelopment tools such as Opportunity Zones, State Enterprise Zones, and Urban Renewal Areas to maximize investment dollars.



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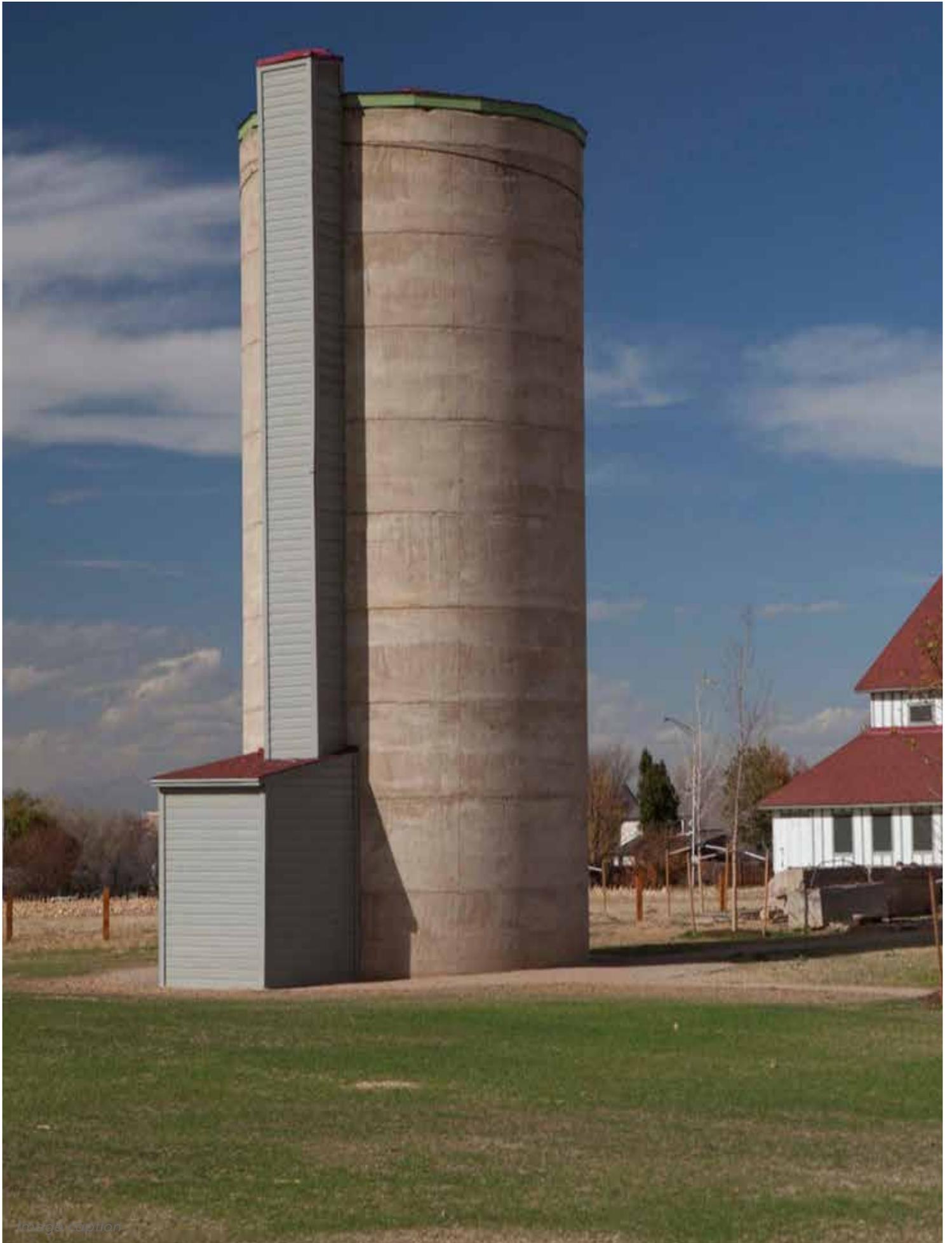
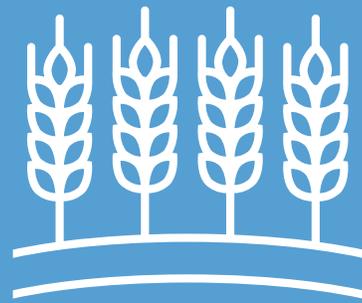


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CHAPTER 7



Cultural Heritage

OVERVIEW

The diversity of the people who have called Adams County home is as distinct as the landscapes within its borders. What makes this vast land so unique is not only the geography of the county – urban to suburban to urban fringe to rural – but the population’s desires and subsequent lifestyles that thrive within these environments. Adams County continues to grow and to draw people from all over the globe to put down their roots. As we look to the future, celebrating the history, people, and places of Adams County will take an innovative approach, one that has the potential to offer a dynamic

expression of our very unique cultural diversity.

As Adams County continues to grow, the unincorporated portion of the county is becoming more diverse. An estimated 31% of the population speaks a language other than English at home (ACS 2019 – 5 Yr Table S1601), which is the highest percentage in the region. Nearly 47% of the population identifies as Latino or Hispanic, which is expected to increase in the next 20 years. This diversity should continue to be celebrated, and policies to support all residents must be encouraged.



ROLE OF THE COUNTY

The Colorado Revised Statutes state, “a master plan shall contain a recreational and tourism uses element pursuant to which the County shall indicate how it intends to provide for the recreational and tourism needs of residents of the county and visitors to the county...” Adams County is varied in its geographies and, thus, how the population recreates and promotes tourism. Much of the population recreates within a vast amount of open space, trails, parks, and facilities owned and maintained by the County, such as the County Fairgrounds at Riverdale Regional Park.

Additionally, Adams County strives to implement the Artfully Adams Master Plan, created in 2018, by committing to invest in cultural arts through an allocated percentage of county revenue, and to expand on arts programming. This occurs in parks through visual and performing art mechanisms, such as the Dragon Boat Festival at Riverdale Regional Park. It is also found in open space and trail corridors with visual arts as a means of wayfinding and placemaking, such as the Murals for Hope program.



AGRICULTURE AS CULTURAL HERITAGE

Agricultural land uses are the cultural heritage backbone of Adams County. A large percentage of the overall county, though mostly clustered in the eastern portion, is committed to an agricultural lifestyle. According to the USDA 2017 Census of Agriculture, 93% of the county land area (705,289 acres) is classified as “land in farm operations” with a ranking of 10th out of 64 Colorado counties in market value of agricultural products sold. While the number of farms increased from 2012 to 2017, the overall average farm size decreased by 5%, with 45% of farms in the county being 10–49 acres in size. As a result, it is important to identify land uses that may accommodate growth

while preserving and highlighting agriculture as a cultural asset.

The District Plan was created through an intergovernmental agreement (IGA) with the City of Brighton. The plan was adopted in 2016 as the District Plan (now marketed/branded as “Historic Splendid Valley”) for a study area of 5,000 acres with two-thirds of the area located within unincorporated Adams County. The District Plan seeks to “create a community-based regional vision for guiding the development of, among other things, local food production, agritourism, conservation, and future land use planning in the area to the south of Brighton,” as well as to “recognize that the Adams County Open Space, Parks, and Trails Master Plan and Comprehensive Plan identify an opportunity to create a Local Food

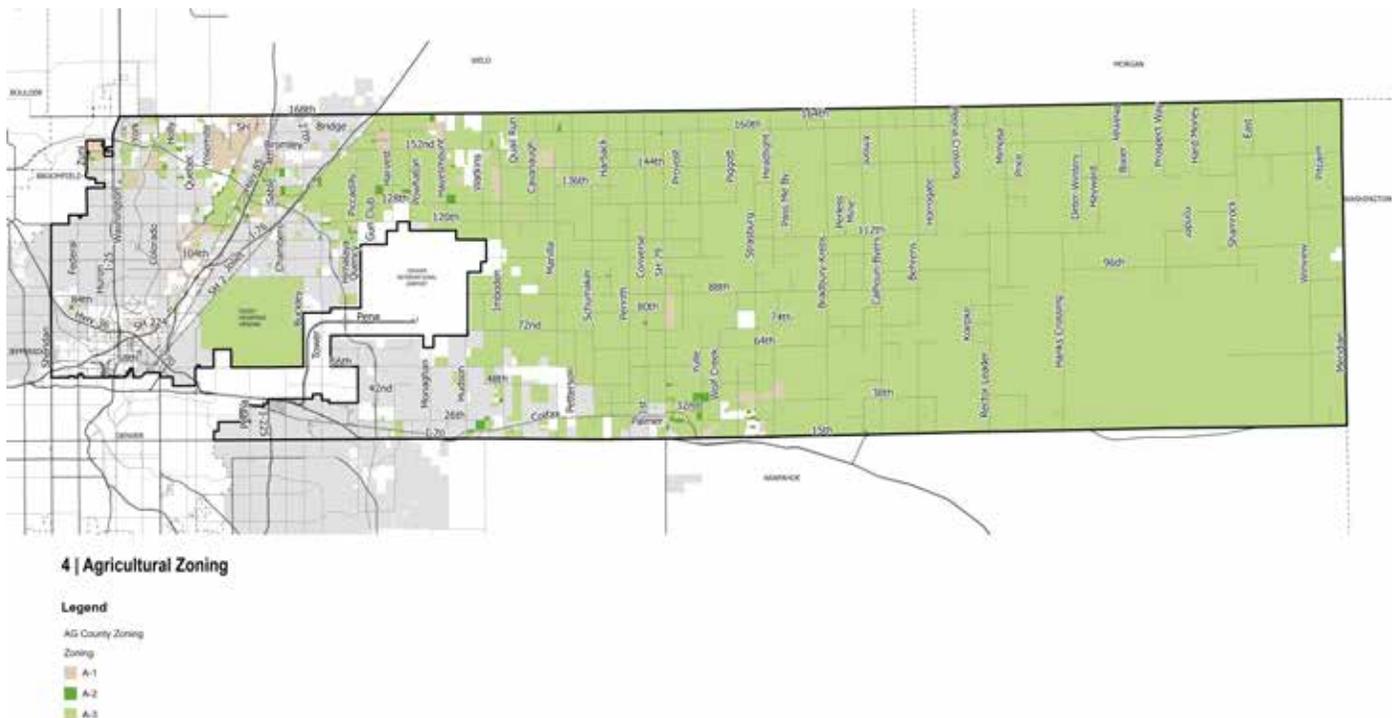


Figure 7-1: Agricultural zoning

AGRICULTURE AS CULTURAL HERITAGE

Production District south of Brighton.” The area includes historic farms with vegetable growers, nurseries, U-pick farmstands, and community-supported agricultural farms. As of 2021, 445 acres of this 5,000-acre study have been preserved through a series of open space acquisitions and conservation easements.

The 2017 Colorado Blueprint of Agriculture and Food reinforces the District Plan and wishes to create, retain, and recruit agricultural firms, develop workforce and youth to support agriculture, promote the Colorado brand, enhance agricultural innovation, improve access to resources and capital for agriculture, and integrate agriculture and food with healthy, vibrant communities. Several efforts demonstrate Adams County’s continued support of agriculture as cultural heritage including the District Plan partnership, efforts from the I-70 Regional Economic Advancement Partnership (REAP) to promote agritourism, and support for linkages to the National Western Center’s anticipated food system work and expansions. The agriculture as cultural heritage theme is also highlighted by the County’s continued work at Riverdale Regional Park as a regional hub for hosting agricultural programming with the Colorado State University (CSU) Extension Service, 4-H programs, and the Adams County Fair.



ART AS CULTURAL HERITAGE

Strengthening cultural values and preserving heritage and history through art creates “community character and sense of place, enhances community engagement and participation, and enhances economic vitality” (American Planning Association). As such, the Cultural Arts in Adams County continue to be a focus for residents and businesses in community surveys.

The Adams County Cultural Council, established in 1987, makes recommendations on the distribution of the Scientific and Cultural Facilities District (SCFD) funds within the whole of the county (incorporated and unincorporated). SCFD currently distributes over \$66 million to more than 300 organizations, with nearly \$2 million going to directly support

organizations serving Adams County residents.

The County’s Visual Arts Commission is currently in a Tier III status with 14% receipt of funds from the SCFD. Riverdale Regional Park aims to elevate Adams County’s Tier III status to Tier II status (or a 22% provision for grant distribution). The 2018 Riverdale Regional Master Plan envisioned greater flexibility for cultural uses at the park and is facilitated through a package of code amendments to the Parks and Open Space zone district adopted in 2021.

The Adams County Visual Arts Commission (established in 2009) acts as an advisory board to the County’s arts and culture initiative to place public art in county facilities. In 2016, the Board of County Commissioners voted to allocate 0.5% of every county capital facilities project for public art, entitled the “Adams County Percentage for the Arts Program.” In 2021, the Board increased the number to 2% for all eligible capital projects (not just facilities) at or exceeding \$250,000. The 2% allocation begins on January 1, 2023.

The Adams County Arts, Culture and Venue Task Force (2014) was established to “identify and recommend steps to define Adams County’s role to support and develop scientific and cultural opportunities for all citizens.”

In 2018, County staff, along with the Adams County Arts, Culture and Venue



HISTORIC ASSETS AS CULTURAL HERITAGE

Task Force, created *Artfully Adams: Adams County Arts & Culture Master Plan* to develop the vision of Adams County as “an inclusive community where everyone has the opportunity to enjoy a rich diversity of art and culture experiences.”

The Adams County Fair has grown into the largest county fair in the state and attracts over 100,000 people annually. The event is held the first week of August and highlights the partnership with the CSU Extension and 4-H programs in the county. The fair represents a uniquely Adams County experience and exhibits the culture and heritage to residents and visitors.

Enhancing, creating place, and telling stories through performance and visual arts provides a mechanism for all Adams County residents and businesses to actively participate in their community or to passively explore where they live and reside.

HISTORIC ASSETS AS CULTURAL HERITAGE

Historical assets are found throughout the county, including State Historic Register designated properties such as the Brannan Sand and Gravel Pit #8, Lake Sangraco and Boat Complex (2011), and historic state roads and highways. The County does not have an established historic preservation program, nor has it sought designation as a Certified Local Government (CLG) by the state. Several of the incorporated areas do have such programs in place.

The current desire is to expand the County’s relationships with local and regional experts and organizations on preservation and to continue our support to our jurisdictions in this effort.

As Adams County continues to conserve farms and lands through open space preservation and build out or enhance current assets in the form of former government buildings and facilities, the history and stories from these acquisitions are unearthed. Many of the County’s master and subarea plans have captured the history behind the geography, acreage, and structures; for instance, the 2018 Riverdale Regional Park Master Plan provides the history of the Adams County Fair dating back to October 1904, the acquisition of the 1860s John Henderson Ranch/Poor Farm in 1960, and the Adams County Board of County Commissioners in 1965 voting to move the fairgrounds

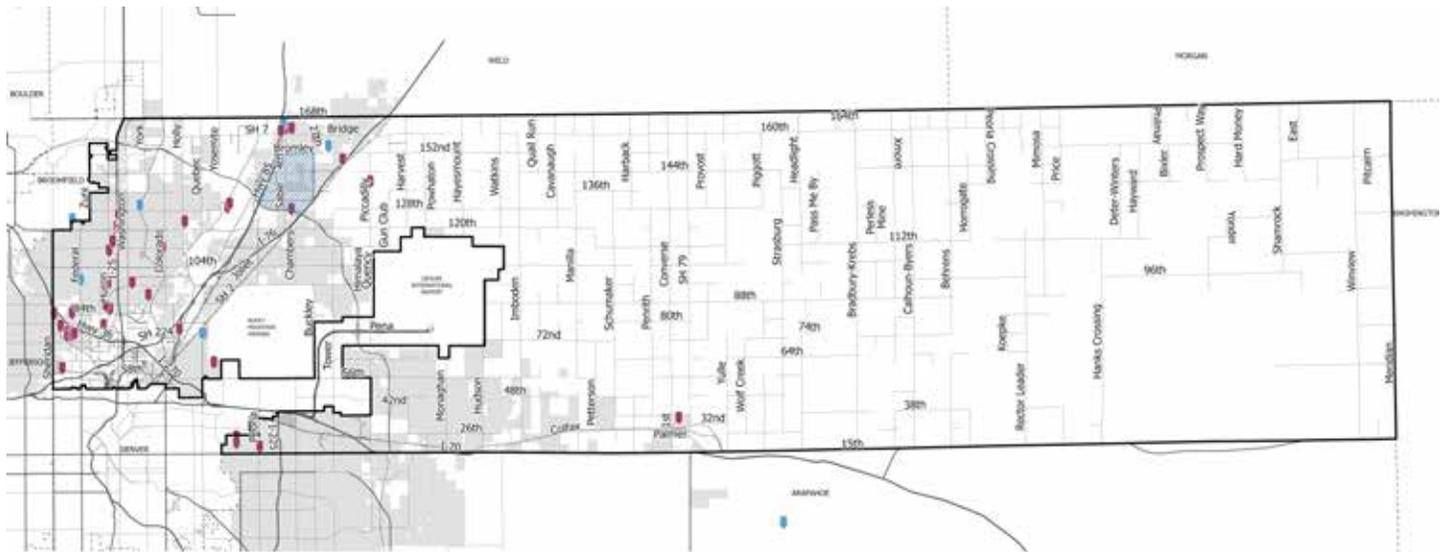


HISTORIAL ASSETS AS CULTURAL HERITAGE

from their original location in Brighton to the current park location.

The county also has a rich inventory of roadways that have historic value – some designated and some noted for future status in previous documents, such as the Riverdale Road Corridor Plan (2005). Rail corridors and former industrial mining sites may also have distinctive characteristics the County wishes to capture through visual and written storytelling, as sites in these areas are mitigated and/or adaptively reused.

The land use pattern noted in the Future Land Use Map (see Chapter 2) can ensure that compatibility and preservation go hand in hand as the county grows.



1 | Cultural and Historic Places

Legend

49th Fest	Adams County MAP Exhibit	Anythink Park Mack	Arts on Parade	Brighton Music Choir and Orchestra, Inc.	Colorado Sanitary Canning Factory	Denver Club Fest	Fall Festival Racecar	Harris Park School	Metzger Farm	Palmetto Art Club	South Westminster Arts Group	Thomson Arts and Culture Division	Union High School
A Child's Song	Adams County Regional Park	Anythink Wright Farms	Adams Festival	Brighton Office of Arts and Culture	Commerce City Culture Council	Deliver Trenchay Shelter # 04	Festival of Lights Parade	Harvest Fest	Mid-Winter Bhangra Festival	Performance Arts Complex at Penrose Charter School	St. Stephen's Lutheran Church	Thomson Arts, Sciences, and Humanities Council (TASHCC)	Westminster Historical Society
Air River Gallery	Adams County Visual Arts Commission	Anythink York Street	Best of Spring Bazaar	Bronckley Farm / Kitzuma-Hillman Farm	Concept Colorado	Dick's Sporting Goods Park	First Presbyterian Church (Brighton)	Holiday Bazaar	Music in the Park Concert Series	Preso Fest	Summerfest	Westminster University (Bellevue College)	William J. O'Grady House
Adams County Courthouse	Adams County Visual Arts Commission (ACVAC)	Art Stop on the Go	Best of Rockies	Broderick House	County Christmas Bazaar	E.B. Rains Jr. Memorial Park	Fitzsimons General Hospital	Village Arts and Crafts Fair	NAMF Events	Pueblo Valley Players	TASHCO Events	Thomson Community Band	Wilson House (Confidential Project)
Adams County Fair	Anythink Brighton Library	Art from the Heart	Bosley House	Brighton Community Orchestra Festival Concert	Carpenter Park Fields	Estabke Farmers Co-Operative Elevator Company	Food Truck Carnival	Homespun	North Metro Arts Alliance	Riverview Cemetery	The Armory	Thomson Community Orchestra, Inc.	Winterfest
Adams County Historical Society and Museum	Anythink Hunn Street	Art in the Park	Brighton Cultural Arts Commission	City Strings in Adams County	Cultural Strategic Plan for the Brighton Cultural Influence Area	Eco-Fair	Fourth of July in Thornton	July Fourth Festival	Northglenn Arts & Humanities Foundation	Robo Market Community Arts Center	The uART of Brighton	Thomson Harvest Fest	Thomson Winterfest
	Anythink Library	Artist Crafter Foodie Fair	Brighton High School	Colorado Educational Theatre	DL Parsons Theatre	Englebrecht Farm	Granville Fuller House	M.J. Lantz Hubstout Home	Northglenn Youth Theatre	Savory Savory Mushroom Farm Water Tower	Thomson Arts & Culture Center	Thomson Fest	SpendidValley
		Arts and Culture Symposium				Eye to Art Program		Man Street Creatives (MSC)					

Figure 7-2: Cultural & historic places

GOALS, POLICIES, AND STRATEGIES

Goal CH 1: Ensure agriculture is supported with adequate allocation of area for future land uses and zoning, preservation practices, economic development, access and distribution, and technological innovations.

Policy CH 1.1: *Support the preservation of historic agricultural land uses.*

- **Strategy CH 1.1.01:** Support higher density development to infill areas and those within urban service boundaries, along with areas serviced by water and sewer to reduce development pressure on agricultural lands.

- **Strategy CH 1.1.02:** Support an agritourism economy and elevate it as a cultural asset.
- **Strategy CH 1.1.03:** Work to preserve existing agricultural land, farms, and facilities that grow food for the local community and support the expansion of productive agricultural lands, farms, and facilities.

Policy CH 1.2: *Explore and encourage innovative practices agricultural.*

- **Strategy CH 1.2.01:** Continue strengthening relationships with sustainable agricultural associations and organizations to ensure Adams County is at the forefront of innovative techniques in agriculture.



GOALS, POLICIES & STRATEGIES

- **Strategy CH 1.2.02:** Provide educational opportunities through regional partnerships to learn about best practices in sustainable agriculture to address a dwindling water supply.
- **Strategy CH 1.2.03:** Encourage regenerative agriculture practices.
- **Strategy CH 1.2.04:** Explore agrivoltaics and other renewable energy techniques applied to farms.
- **Strategy CH 1.2.05:** Support innovation in year-round, sustainable, local food production.

Policy CH 1.3: *Assess food deserts and gaps in fresh, healthy foods throughout the County (See COH 5.1.05).*



- **Strategy CH 1.3.01:** Continue strengthening Adams County's regional public health and nonprofit partnerships to promote healthy eating and active living (HEAL).
- **Strategy CH 1.3.02:** Evaluate, report, and encourage economic development strategies to tackle food desert concerns throughout the County (See COH 5.1.05).
- **Strategy CH 1.3.03:** Encourage strengthening of local food distribution channels and promote innovations in the industry to do so.

Goal CH 2: Enrich the cultural arts in Adams County that bolster livability and support the county as a vibrant destination.

Policy CH 2.1: *Create culture nodes and artful opportunities in Adams County.*

- **Strategy CH 2.1.01:** Support public art and wayfinding elements as a placemaking and cultural celebration tool in all plans (neighborhood, subarea, master, transportation, parks, sustainability, etc.).
- **Strategy CH 2.1.02:** Encourage new and adaptive reuse projects to incorporate art within their building design and surroundings.

- **Strategy CH 2.1.03:** Explore existing County assets for cultural art facilities and artist needs.
- **Strategy CH 2.1.04:** Support creative industries and employment by encouraging businesses, venues, and arts organizations to establish in Adams County.
- **Strategy CH 2.1.05:** Support efforts within communities to collaborate on positioning cultural arts as a destination.
- **Strategy CH 2.1.06:** Support food-based businesses and events to celebrate and support diverse cultures and our farming resources.
- **Strategy CH 2.1.07:** Ensure the continuation of abundant cultural arts and education programs at Riverdale Regional Park. Continue to support the Adams County Fair as a meaningful experience for residents and visitors.
- **Strategy CH 2.1.08:** Use Adams County’s parks, open spaces, and interconnected trail system for public art collections, community installations and events, and artisan-crafted spaces.

Goal CH 3: Maintain representative history and cultural assets that support a sense of identity in Adams County.

- **Policy CH 3.1:** *Conserve, support, and celebrate historic resources in Adams County.*

- **Strategy CH 3.1.01:** Encourage and strengthen relationships with historic preservation agencies, jurisdictions, and nonprofits, such as Colorado’s State Historic Preservation Office (SHPO).
- **Strategy CH 3.1.02:** Explore identifying and surveying historic structures and encourage reinvestment and/or adaptive reuse of historic structures.
- **Strategy CH 3.1.03:** Evaluate parks, open space, trails, and associated structures within the unincorporated county that may qualify for historic preservation status.



GOALS, POLICIES & STRATEGIES

- **Strategy CH 3.1.04:** Support inclusion of historically marginalized communities in the recognition and preservation of Adams County's historic and cultural resources.
- **Strategy CH 3.1.05:** Explore the possibility to establish a historic preservation program with a focus on historic assets on County properties and potentially other areas in the county.

Policy CH 3.2: *Preserve the historic character of Adams County's along designated roads and highways.*

- **Strategy CH 3.2.01:** Evaluate and potentially update existing studies like the Riverdale Road Corridor Study and align future land uses along Riverdale Road that are compatible with Riverdale Regional Park activities and applicable plans.

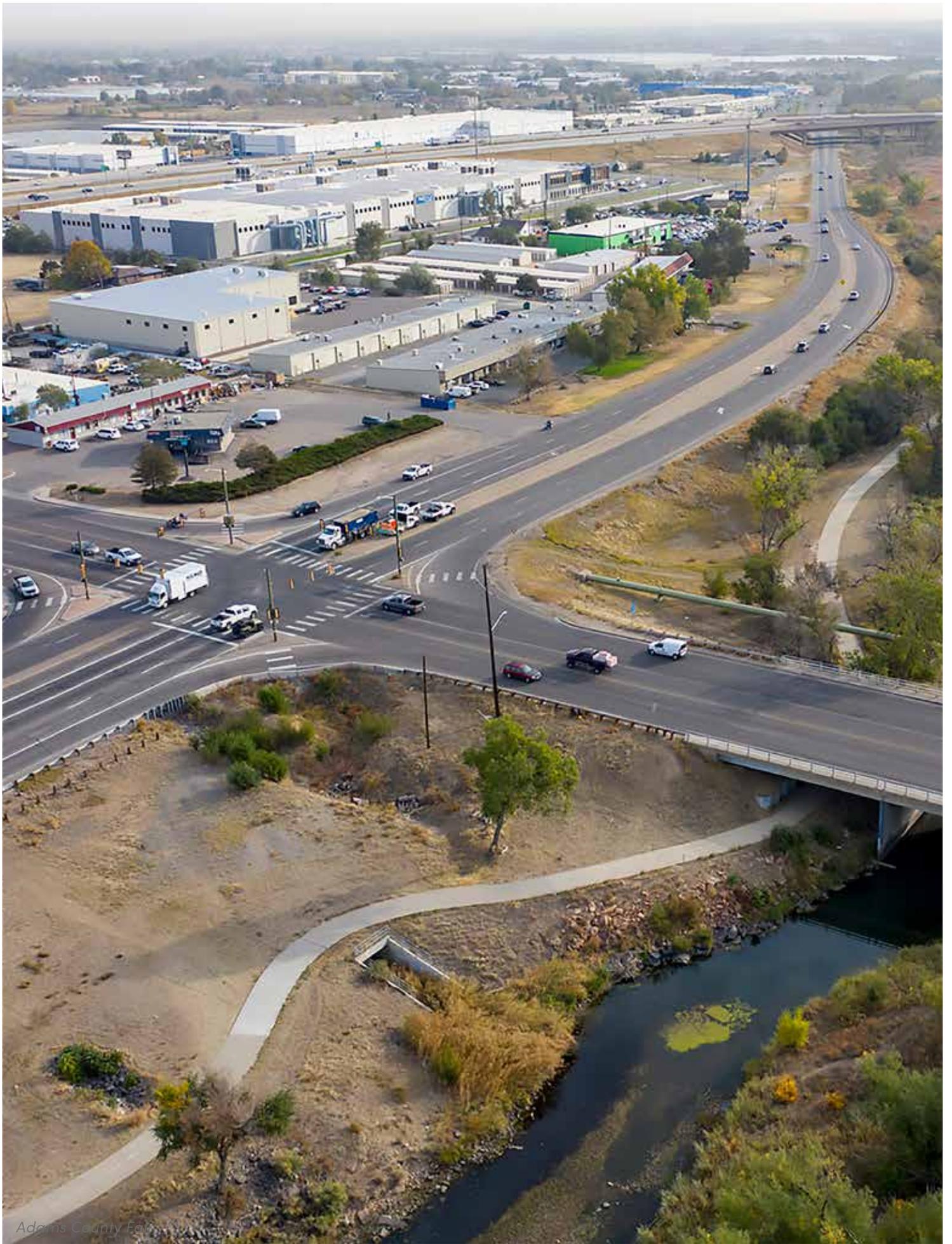
- **Strategy CH 3.2.02:** Explore opportunities to preserve historical character along designated roads in coordination with the Transportation Master Plan and Parks, Open Space, and Trails Plan.
- **Strategy CH 3.2.03:** Explore enhancements through economic investment, visual arts, and urban design along designated corridors or districts.

Policy CH 3.3: *Encourage community and neighborhood plans to explore and account for their cultural heritage when master planning.*

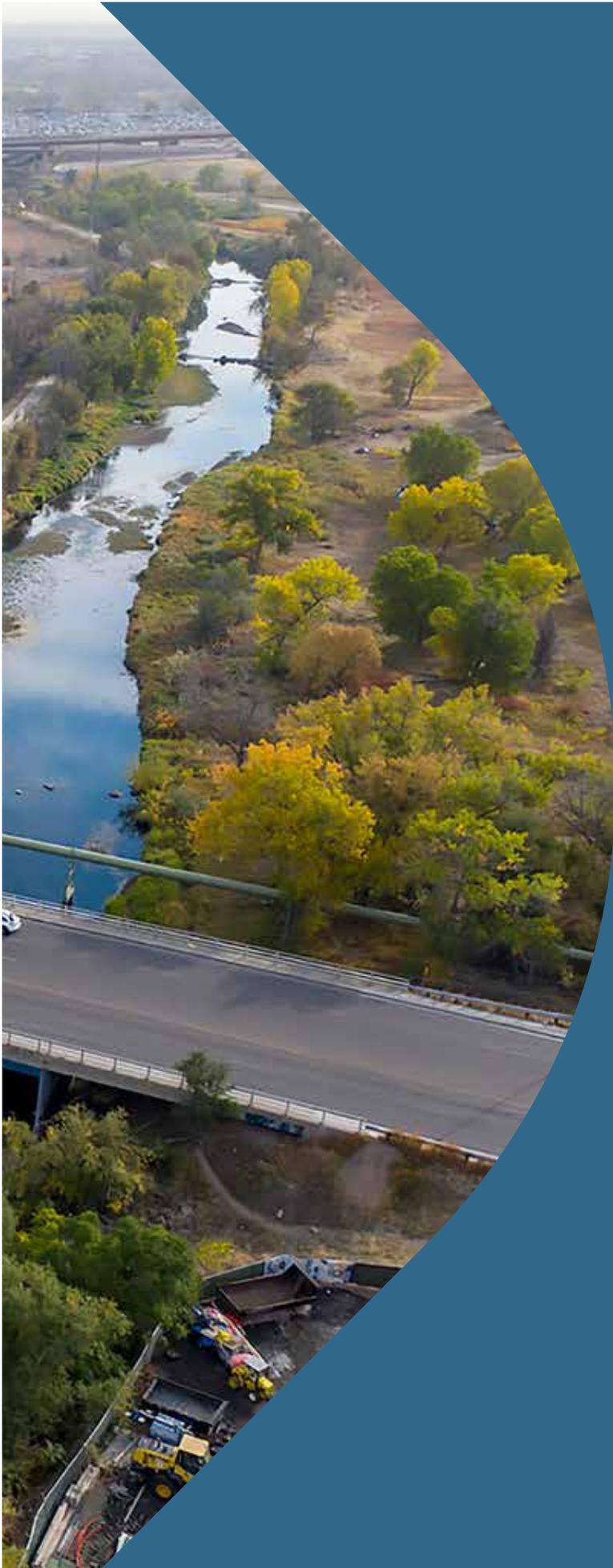
- **Strategy CH 3.3.01:** Ensure the history of place within Adams County's neighborhood and parks planning is documented at the time of subarea, master planning, or amending an existing plan.
- **Strategy CH 3.3.02:** Explore various techniques such as wayfinding signage, public art, and other programming elements to identify and recognize Organized Neighborhood Groups and/or census tracts within the unincorporated county.



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CHAPTER 8



Five Strategic Corridors & Subareas

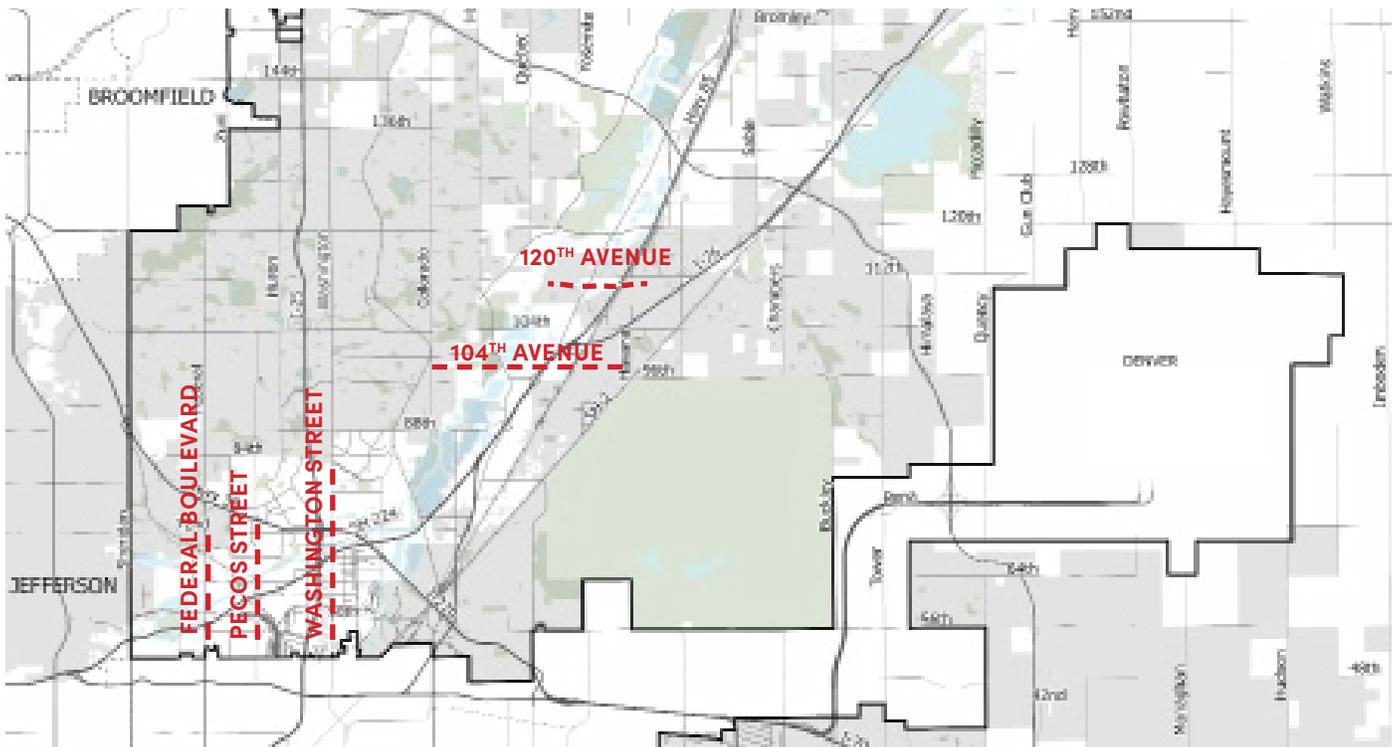
OVERVIEW

Adams County has a broad and diverse geography, which varies from urban and transit oriented areas to rural areas with large agricultural development. Adams County’s population growth is expected to grow largely in the southwestern portion but with increases in the eastern areas of Bennett and Strasburg. The County has identified these areas of future growth as Strategic Corridors and Subareas and will plan for specific planning efforts.

To highlight specific opportunities for focused improvements in key geographic areas, Advancing Adams

selected five strategic corridors that were analyzed in greater detail as a part of the planning process—Federal Boulevard, Washington Street, Pecos Street, 104th Avenue, and 120th Avenue. The Advancing Adams Existing Conditions and Opportunities Report profiled the current state of the corridors and provided opportunities for future land uses along the corridors.

Each corridor has been subject to a number of considerations and planning efforts since the 2012 Imagine Adams Plan. Those Key Considerations are described in detail for each corridor and show



Data Source: Adams County, DRCOG, Design Workshop

LEGEND

- - - Corridor Locations
- Parks and Open Space
- Adams County Boundary
- Roads
- Municipal Area
- Lakes and Streams
- Railroads

NOT TO SCALE

Figure 8-1: Corridor Overview Map

the importance of improving the strategic corridors to achieve the County's planning goals. The corridors were analyzed based upon past planning efforts, current zoning and future land-uses, transitions, urban development patterns, and environmental justice outcomes and equity considerations. Once the analysis of the corridor's existing conditions was complete, existing development patterns were identified. This chapter highlights the relevant aspects of past plans, reaffirms the vision for each corridor, updates and coordinates the policy with the TMP and POST plans, and details next steps for future planning and

implementation efforts. Each corridor has been subject to a number of considerations and planning efforts since the 2012 Imagine Adams Plan. Those Key Considerations are described in detail for each corridor and show the importance of improving the strategic corridors to achieve the County's planning goals.



COMMON CORRIDOR GOAL

Goal CSP 1: Enhance five strategic corridors in cooperation with multiple jurisdictions to provide improved connectivity that considers multiple modes and integrates with the parks and trails networks, orderly transitions across jurisdictional boundaries, infrastructure and uses, and corridors that provide opportunities for safe travel and vibrant communities.

The following are strategies that apply broadly to the strategic corridors:

Strategy CSP 1.1: Enhance transit furnishings and amenities when possible along the corridor, especially at higher frequency bus stops or commuter hubs.

Strategy CSP 1.2: Foster partnerships with local jurisdictions and stakeholders to better understand travel patterns and needs, utilize opportunities, monitor health and performance, and reduce undesired outcomes.

Strategy CSP 1.3: Coordinate with jurisdictions and property owners to establish consistent design elements to contribute to a more cohesive physical character along a corridor. Elements may include, but are not limited to:

- Consistent public lighting at the traffic and pedestrian scale.
- Contiguous sidewalks with uniform curb ramps that meet ADA requirements.
- Building and parking placement.
- Curb-cuts and site access point spacing.
- Outdoor storage and retail displays.
- Landscaping in relation to the pedestrian realm.
- Site furnishings like benches and transit shelters.
- Way-finding and public signage to reinforce a unified district or distinctive place.

Strategy CSP 1.4: Monitor goals, policies, and strategies within the Advancing Adams plans and evaluate them when considering updates and implementation.

Strategy CSP 1.5: Continuously review implementation of planned improvements outlined in the Advancing Adams plans and develop and coordinate additional investment in the corridors.

FEDERAL BOULEVARD

Applicable Subarea Plans: Southwest Area Framework Plan (2005), Clear Creek Valley TOD Plan (2009), Federal Boulevard Framework Plan (2014), Making Connections (2016)

DESCRIPTION OF THE CORRIDOR:

The Federal Boulevard corridor extends from 52nd Avenue to the Little Dry Creek Trail and overpass over the RTD (Regional Transportation District) B-Line commuter rail tracks. The corridor serves as a gateway to unincorporated Adams County from Denver to the south and Westminster to the north. There is a mix of commercial, industrial, and residential uses along the corridor. The predominant pattern, however, is auto-oriented commercial properties. Frequent curb-cuts, disconnected sidewalks, and parking primarily between the building and the street detract from the comfort and safety of pedestrians. High vehicle speeds and volumes makes the corridor less suitable for bicyclists. Westminster, Federal Heights, and Adams County completed a Multi-Modal Transportation Study in December 2021 to evaluate investments in infrastructure and safety along the corridor in advance of additional CDOT (Colorado Department of Transportation) planning and construction on Federal.

Federal has transportation options including the Clear Creek Federal Station (G Line), the Westminster Station (B Line), and the higher

frequency 31 bus that traverses from Denver to Adams County. The corridor connects to two regional trails, the Clear Creek Trail in the middle section and Little Dry Creek Trail on the northern portion of the corridor. Both trails provide access to the RTD transit stations, as well as, other strategic corridors and regional destinations.

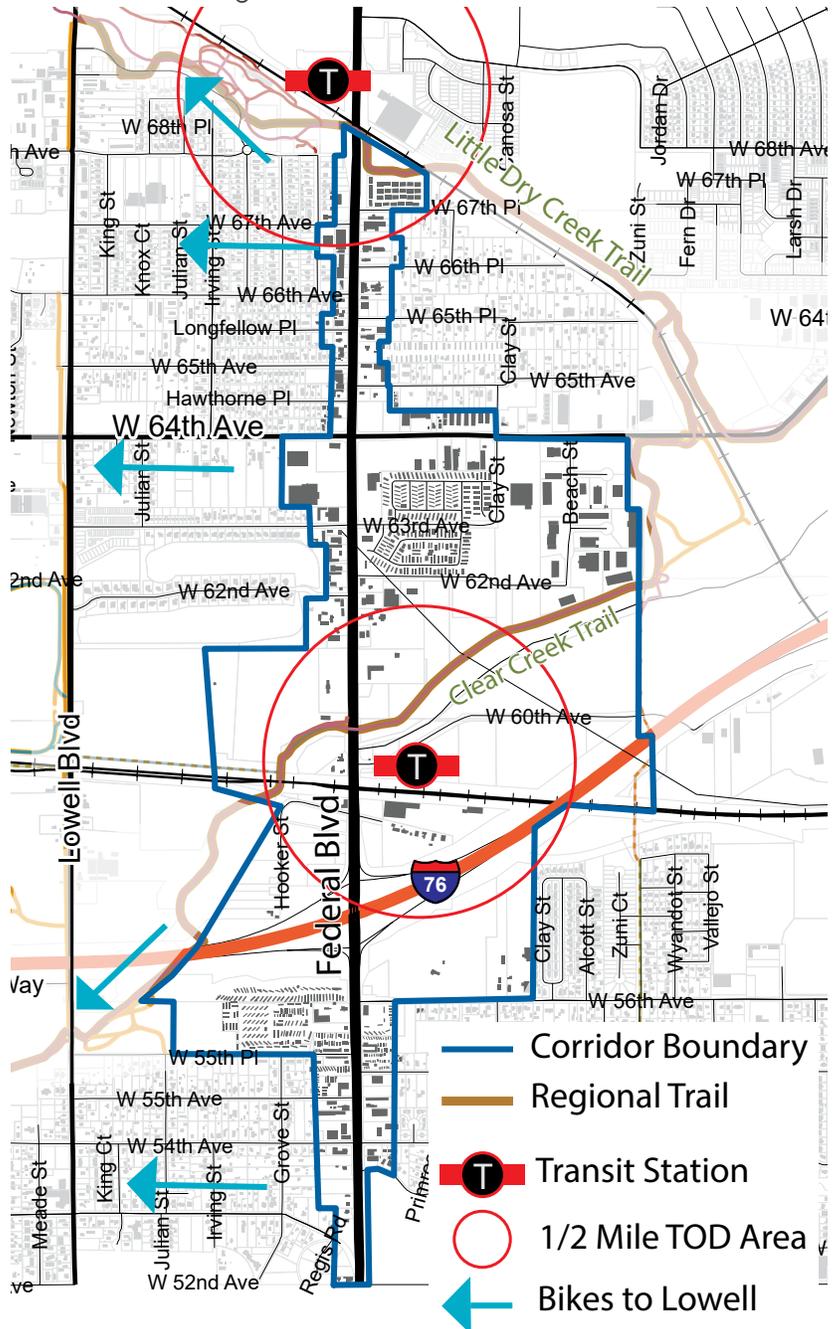


Figure 8-2: Federal Boulevard

FEDERAL BOULEVARD

While past planning envisioned transit-oriented development with higher residential densities around the Federal Station, the vision has not been realized. New construction has been limited by environmental contamination on 'brownfield sites' from past and current uses, and also floodplain and floodway considerations. The strengthening the corridor's transportation connections and safety along with promoting a diverse mix of uses can transform Federal into a central business hub for Adams County.

KEY CONSIDERATIONS SINCE 2012 IMAGINE ADAMS PLAN:

1. Adoption of the Transit Oriented Development (TOD) zone district applicable to properties within ½ mile of the Federal Station (2013). However, only one application for TOD is currently pending.
2. Adoption of the Federal Blvd. Framework Plan (2014).
3. Completion of the Westminster Station at 70th Ave. and Federal (2016). Westminster has completed a Station Area Master Plan and annexation of the station area.
4. Adams County adopts the Southwest Adams County Making Connections plan (2018) which establishes a vision for the corridor and projects for implementing the vision.
5. Adoption of the Mixed Use (MU) zone district (2021). However, no

properties have rezoned to MU to date.

6. The Federal Blvd. Multimodal Transportation Study (2021) was completed to guide infrastructure and corridor amenities when CDOT repaves the corridor. The study establishes next steps for environmental studies and construction for further capital improvements.

FEDERAL BOULEVARD CORRIDOR VISION:

A corridor that supports a strong pedestrian environment, bicycle movement connected to the corridor, and design that enables a mixed use community that includes retail, employment, entertainment, and housing with safe and comfortable access to the light rail station, bus stops, and trails.

Strategy CSP 2.1 Work with applicable property owners (within 1/2 mile radius of station area or those with eligible future-land uses) to inform of opportunities to rezone and develop or redevelop under the TOD and MU zone districts.

Strategy CSP 2.2 Encourage, educate, and coordinate with property owners and stakeholders to on remediation process for contaminated brownfield sites to expand development potential to realize county goals. Continue the ongoing work to understand and address brownfields along this corridor to ensure developers have a full picture of the mitigation measures needed to build on a brownfield, particularly historic landfills.

Strategy CSP 2.3: Maintain existing residential uses and provide improved bike/ped and transit connections as articulated in the Transportation Master Plan and preserve diverse housing types, such as mobile home parks, along the corridor where beneficial to those residents.

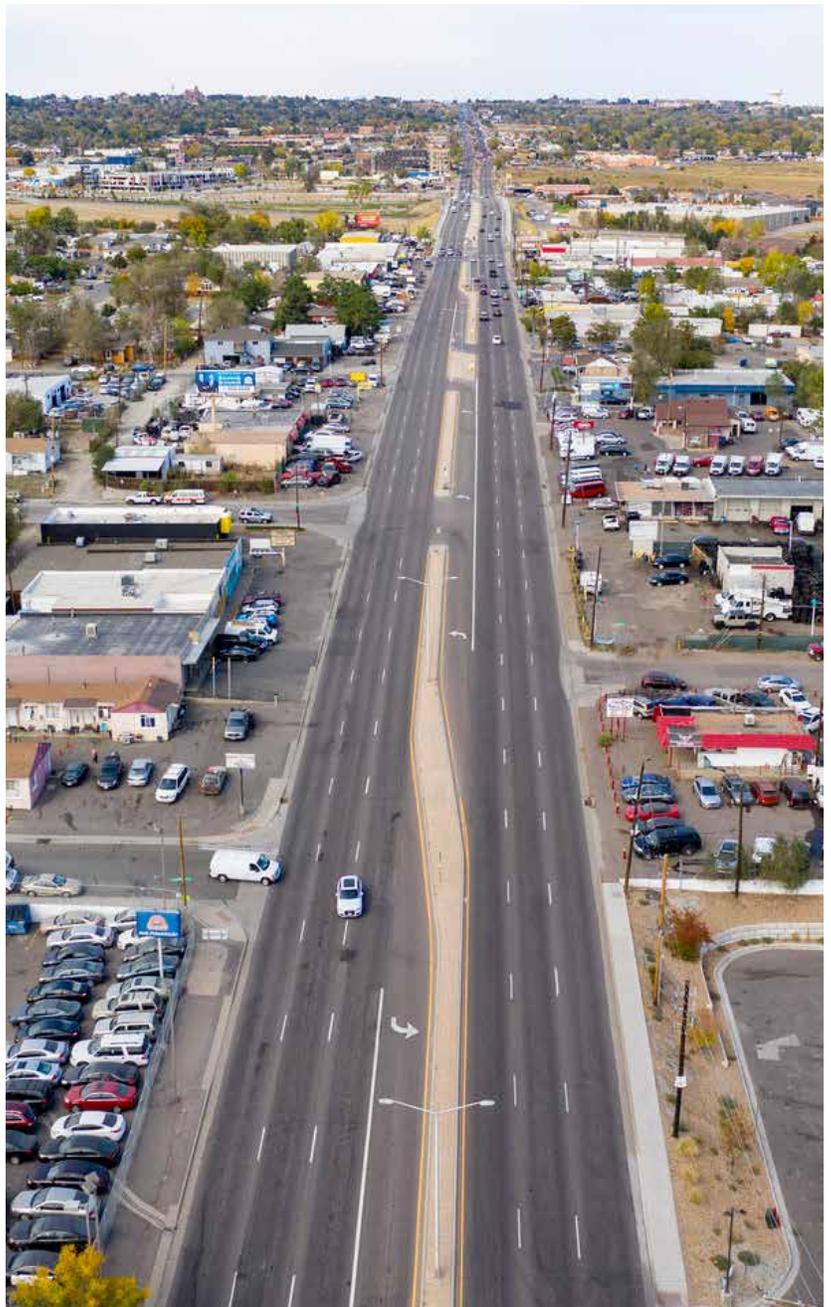
Strategy CSP 2.4: Evaluate commercial development standards, including potential overlays, to improve the visual appearance and quality of development along this and other major corridors in the southwest area and evaluate regulations addressing landscaping, streetscape requirements, sign controls, and access management standards.

Strategy CSP 2.5: Encourage clean, light, and employee based industrial uses on industrial zoned properties to reduce environmental impacts and ensure compatibility with future development of the station area.

Strategy CSP 2.6: Explore alternative financing mechanisms as a means of funding recommended improvements, including Tax Increment Financing (TIFs), local improvement districts, etc.

Strategy CSP 2.7: Continue to collaborate with Mile High Flood Control District regarding channelization and modification of the Clear Creek floodway.

Strategy CSP 2.8: Continue community and stakeholder engagement in future planning processes as outlined in the Federal Blvd. Multimodal Transportation Study (2021).



PECOS STREET

Applicable Subarea Plans: Southwest Area Framework Plan (2005), Clear Creek Valley TOD Plan (2009), Making Connections (2016)

DESCRIPTION OF THE CORRIDOR:

The Pecos Street corridor extends from the southern border with Denver at 52nd Ave. to Highway 36 to the north. The corridor can be divided into three character areas: The Southern Gateway (52nd Ave. to 56th Ave.),

Pecos Junction Influence Area (56th Ave. to 64th Ave.), and the Northern Mixed-Use Connection (64th Ave. to Highway 36). The corridor hosts a mix of uses ranging from commercial, industrial, and residential which poses both opportunity and conflict for abutting properties and the transportation network.

KEY CONSIDERATIONS SINCE 2012 IMAGINE ADAMS PLAN:

1. Adoption of the Transit Oriented Development (TOD) zone district applicable to properties within 1/2 mile of the Pecos Station (2013). However, no properties have rezoned to TOD to date.
2. Adams County adopts the Southwest Adams County Making Connections plan (2018) which reiterates the vision established by the Clear Creek TOD Plan Vision and projects to implement corridor improvements to Pecos St.
3. Catalytic industrial developments such as Pecos Logistics Park that utilize the industrial character and zoning and strengthen the employment base in the area.
4. Development of the Midtown master planned community establishes a pattern of mixed use, walkable design.

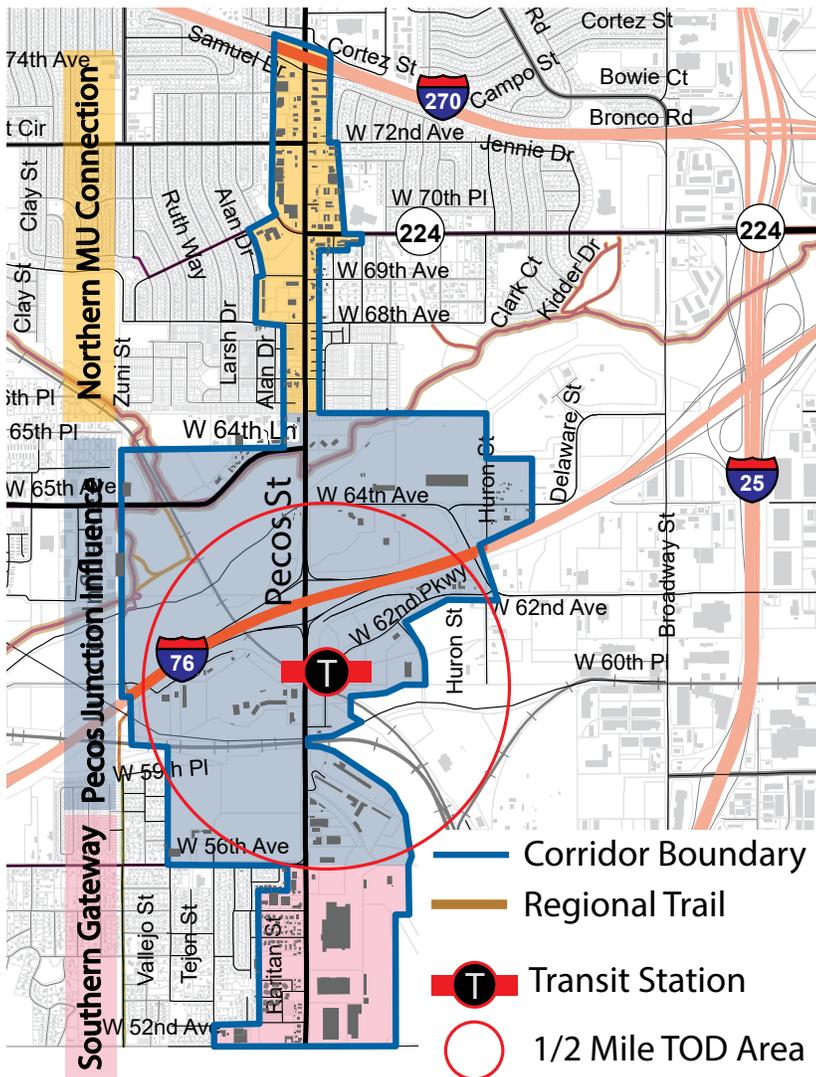


Figure 8-3: Pecos Street

PECOS STREET CORRIDOR VISION:

A gateway corridor into Adams County that utilizes the investments in transit, transportation, and mobility to reinforce employment opportunities, transit-supportive commercial and industrial development, environmental stewardship, and urban design while serving the distinct industrial, mixed-use, and residential characters along the corridor.

Strategy CSP 3.1: Consider initiating a more detailed planning evaluation of the corridor to refine the vision and strategies that address the different character areas.

Strategy CSP 3.2: Improve transitions between industrial, commercial, and residential land use adjacencies through updated performance standards, land-use buffers, and coordinating with property owners on operations and plans.

Strategy CSP 3.3: Coordinate with property owners on the corridor to identify opportunities to rezone to mixed-use or TOD to align development with the Future Land-Use map.

Strategy CSP 3.4: Continue the ongoing work to evaluate and address brownfields along this corridor to ensure developers have a full understanding of the mitigation measures needed to build on a brownfield, particularly historic landfills.

Strategy CSP 3.5: Improve connections, as articulated in the Transportation Master Plan and POST Plan, especially ones that connect to Pecos Junction along 64th Ave., the 62nd Ave. overpass and 62nd Ave, and connections from Pecos St.

Strategy CSP 3.6: Expand public art for this district at key locations, such as at transit stops, and as part of property redevelopment to enhance placemaking.

Strategy CSP 3.7: Coordinate capital improvements and corridor planning on Pecos St. with potential subarea planning for Perl Mack and Utah Junction areas (as identified in the Southwest Adams County Framework Plan).

Strategy CSP 3.8: Evaluate commercial opportunities which provide community benefit but can also align with in higher industrial areas.



WASHINGTON STREET

DESCRIPTION OF THE CORRIDOR:

Washington St. is the longest corridor under consideration extending from 52nd Ave. to the south and 88th Ave. to the north. Washington is a principal arterial that is intersected by I-76, I-270, and Highway 224 and runs parallel with access to I-25. Similar to Pecos St., the corridor has a range of uses including industrial, commercial, and residential. The corridor can be divided into four character areas: Industrial Transition (52nd Ave. to the rail-road crossing between 58th Ave. and 62nd Ave.), Industrial Core (from the railroad crossing between 58th Ave. and 62nd Ave. to I-76), the South Welby Area (portions of the Welby Subarea Plan from I-76 to 78th Ave.), and the Thornton Transition Area (78th Ave. to 88th Ave.). Clean, indoor industrial uses are encouraged in the South Welby Area while discouraging residential. Mixed-use development along with higher density residential is encouraged in the northern section of the Welby area along the corridor while discouraging or prohibiting industrial uses. The transportation network is suited to better accommodate the various user needs with freight and commercial users to the south and a greater multi-modal focus through the Welby section into Thornton. The corridor also intersects with key trail connections with Clear Creek Trail and Niver Creek Trail along Coronado Parkway. The trails

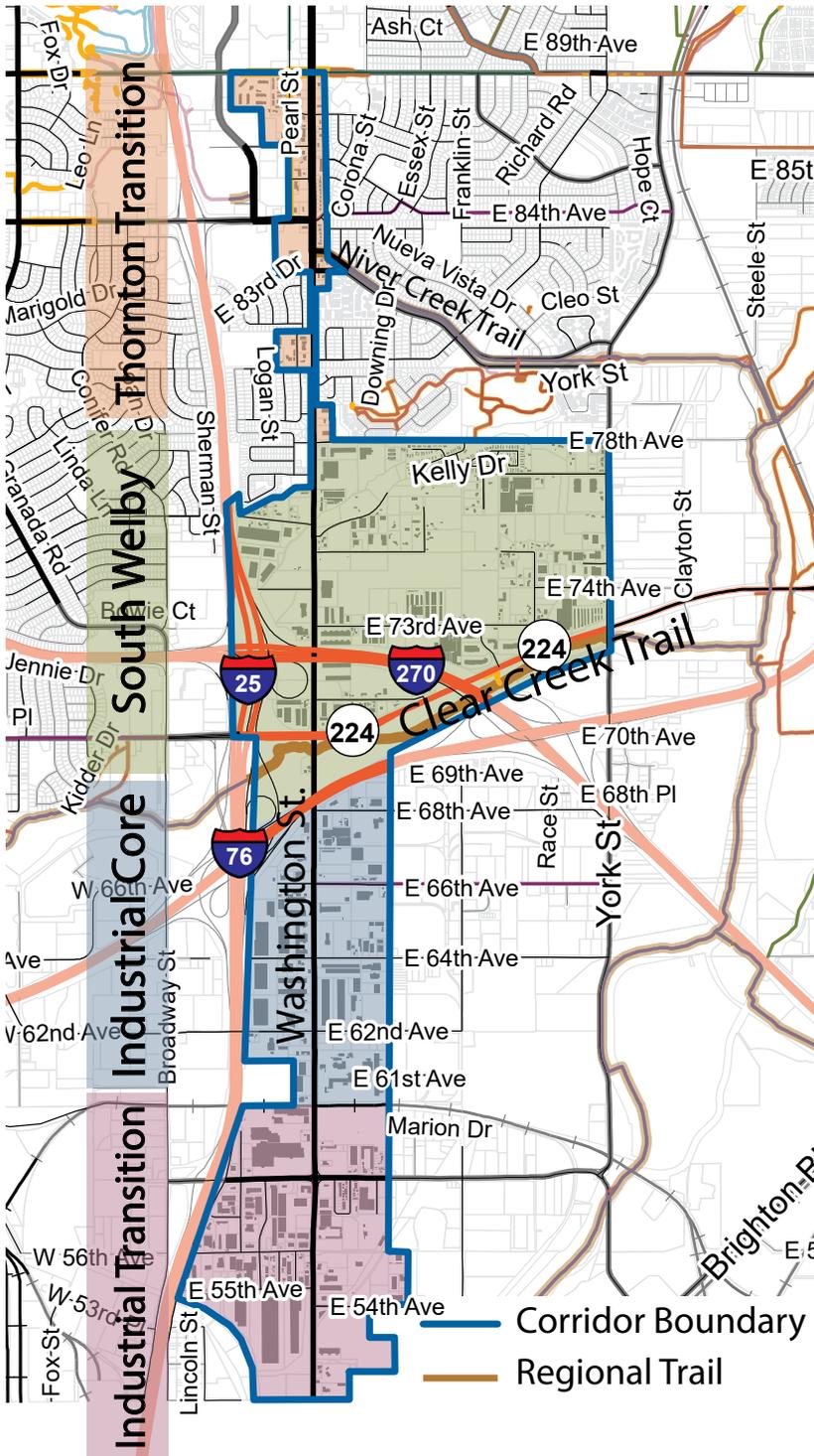


Figure 8-4: Washington Street

provide access to local park and neighborhood assets as well as regional destinations.

KEY CONSIDERATIONS SINCE 2012 IMAGINE ADAMS PLAN:

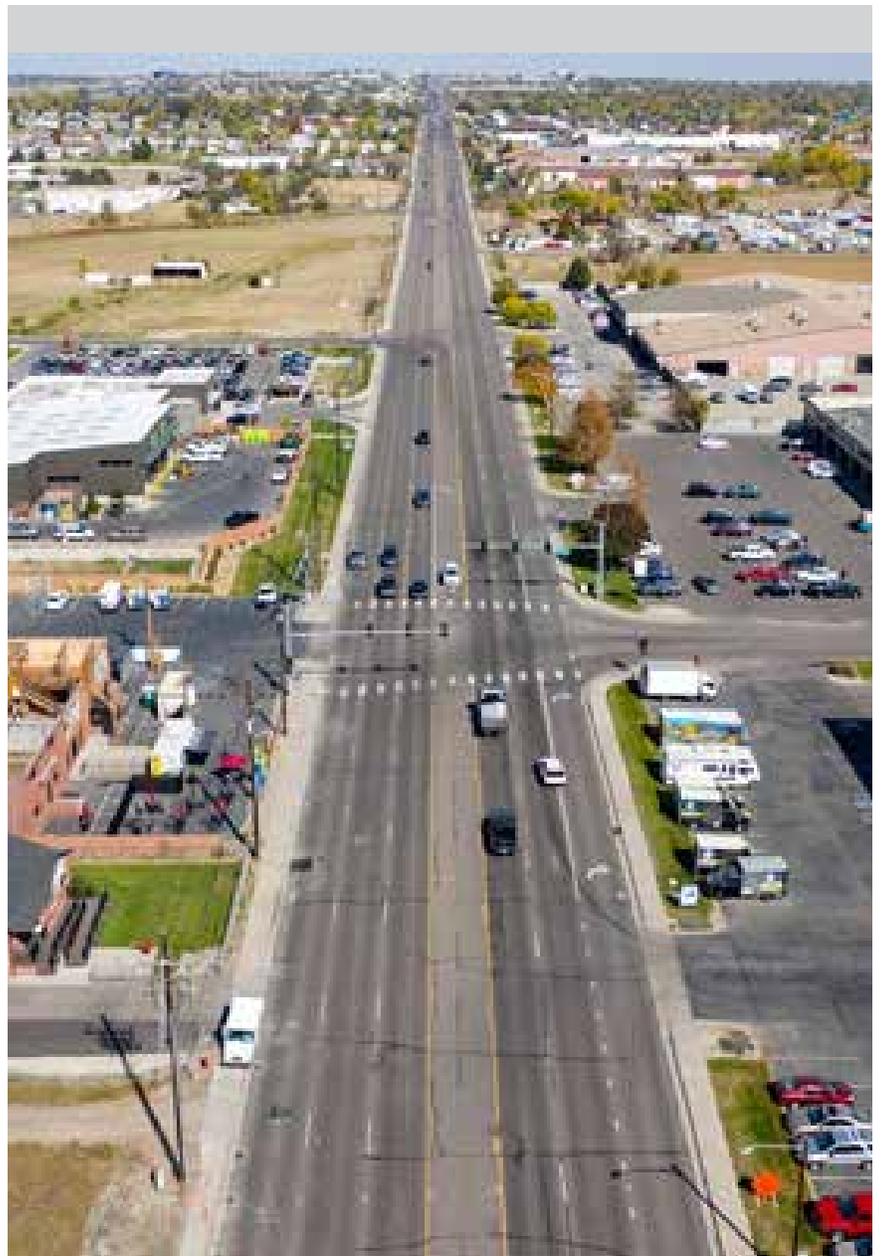
1. Thornton adopted the South Thornton Urban Renewal Area (URA) plan (2012) which includes properties south of 88th Ave. on Washington St.
2. Adams County adopted the Welby plan (2014) which considers potential mixed-use neighborhood development along Washington St.
3. Since adoption of the Welby plan, several properties have rezoned from agriculture to industrial in the southern area of Welby which has expanded employment opportunities while also adding some stress to the local road network.
4. Adoption of the Mixed Use (MU) zone district (2021). However, no properties have rezoned to MU to date.

WASHINGTON STREET CORRIDOR VISION:

A corridor that maintains opportunities for employment, industry, and mobility with planned transitions and connections that serve the character and needs of those living, working, and traveling through the corridor.

Strategy CSP 4.1: Maintain opportunities for industrial uses along the corridor where appropriate, especially in the Industrial Transition, Industrial Core, and South Welby areas.

Strategy CSP 4.2: Coordinate roadway infrastructure enhancements, such as lane modifications for a 'road-diet' between 73rd Ave. and 78th Ave. depicted in the TMP, with broader placemaking efforts in the Welby area and north along the corridor.



WASHINGTON STREET

Strategy CSP 4.3: Continue to review the FLUM, zoning, and vision established by sub-area plans to evaluate new proposed residential uses and other uses that conflict with and may be negatively impacted by permitted industrial operations that align with their future land-use designation.

Strategy CSP 4.4: Encourage assemblage of smaller lots in the area to increase opportunities for new development over time.

Strategy CSP 4.5: Explore opportunities to enhance access to food access and services, creative industries, and supporting uses along the Welby area of the corridor.

Strategy CSP 4.6: Coordinate with property owners on the corridor to identify opportunities to rezone to

mixed-use to align development with the Future Land-Use map.

Strategy CSP 4.7: Enhance trail connections along the corridor.

Strategy CSP 4.8: Explore additional planning opportunities for the Industrial Transition and Industrial Core parts of the corridor (identified as North Washington Industrial area in the Southwest Adams County Framework Plan).

Strategy CSP 4.9: Continue to discourage industrial uses in the North Welby and Thornton Transition area along the corridor from 78th to 88th Ave.

EAST 104TH AVENUE

Applicable Subarea Plans: Riverdale Road Corridor Plan (2005)

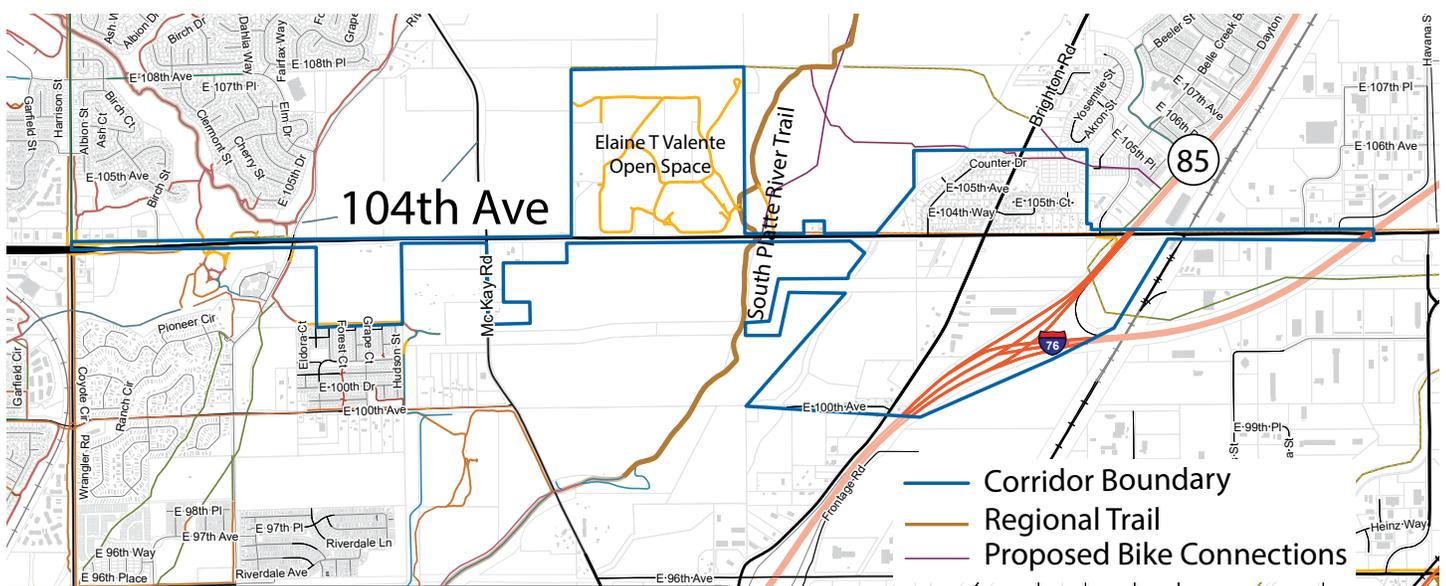
DESCRIPTION OF THE CORRIDOR:

The length of the East 104th Street corridor area falls between Colorado Boulevard to the west and I-76 to the east and intersects both Thornton and Commerce City. The corridor is comprised mostly of agricultural areas, with some residential and industrial land uses within the unincorporated portions. 104th is served by the RTD 104L Bus with varying frequency from 30 minutes to an hour with gaps in service during the middle of the day. Connection to bus stops would benefit from both consistent sidewalks and furnishings. The corridor is strategically significant for vehicles as a key east-west corridor with the intersecting north-

south vehicle connections with I-76, Highway 85, Brighton Road, Riverdale Road, and Colorado Blvd. For bicycles and pedestrians, transportation options are limited despite the new Front Range Trail and the South Platte River Trail. The lack of sidewalk connections and fragmented transitions between jurisdictions on the corridor contribute to a poor multi-modal environment and cohesive sense of character.

KEY CONSIDERATIONS SINCE 2012 IMAGINE ADAMS PLAN:

1. Planned trail connection between 104th Ave. and the Colorado Front Range Trail, also commonly known as the South Platte River Trail in Adams County.
2. Pressure on the corridor due to continued development to the east.



EAST 104TH AVENUE

EAST 104TH AVE. CORRIDOR VISION:

A coordinated corridor that better meets the needs of people linking with and traveling through the 104th Ave. with collaboration between jurisdictions, connected infrastructure, and compatible design.

Strategy CSP 5.1: Seek to build upon the corridor's rural and park-like character as redevelopment and roadway improvements occur over time, with the safety and comfort of pedestrians and bicyclists considered a high priority.

Strategy CSP 5.2: Foster partnerships with adjacent municipalities on a land use vision for this corridor.

Strategy CSP 5.3: Coordinate with County departments to develop a variety of progressive stormwater facilities and restoration projects in this area, including a nature playground concept at the intersection of the South Platte River.



EAST 120TH AVENUE

Applicable Subarea Plans: Riverdale Road Corridor Plan (2005)

DESCRIPTION OF THE CORRIDOR:

East 120th Street stretches between Riverdale Road to the west and Peoria Street to the east. Unlike 104th Ave., the East 120th Street corridor is comprised of primarily unincorporated areas with some intersection with Brighton and Commerce City to the eastern portion. The main entrance to the Riverdale Regional Park is on 120th Ave. and Riverdale Road. Access to the South Platte regional trail intersects the corridor. The street faces increased vehicle congestion due to its use as one of the few east-west connections over the South Platte. In the future, access from 124th Ave. to US 85 will be discontinued, which will result in

increased demand and pressure on 120th Ave for the access at US 85.

KEY CONSIDERATIONS SINCE 2012 IMAGINE ADAMS PLAN:

1. Planned discontinued access to U.S. 85 from 124th Ave.
2. Riverdale Regional Park Master Plan (2018)
3. Improved trail connections to the South Platte River Trail

EAST 120TH AVE. CORRIDOR VISION:

A corridor that provides efficient east-west access, serving as the entrance to Riverdale Regional Park and the extensive trail system in the area and utilizes multiple strategies to reduce congestion and remove barriers to multi-modal connections along the corridor.

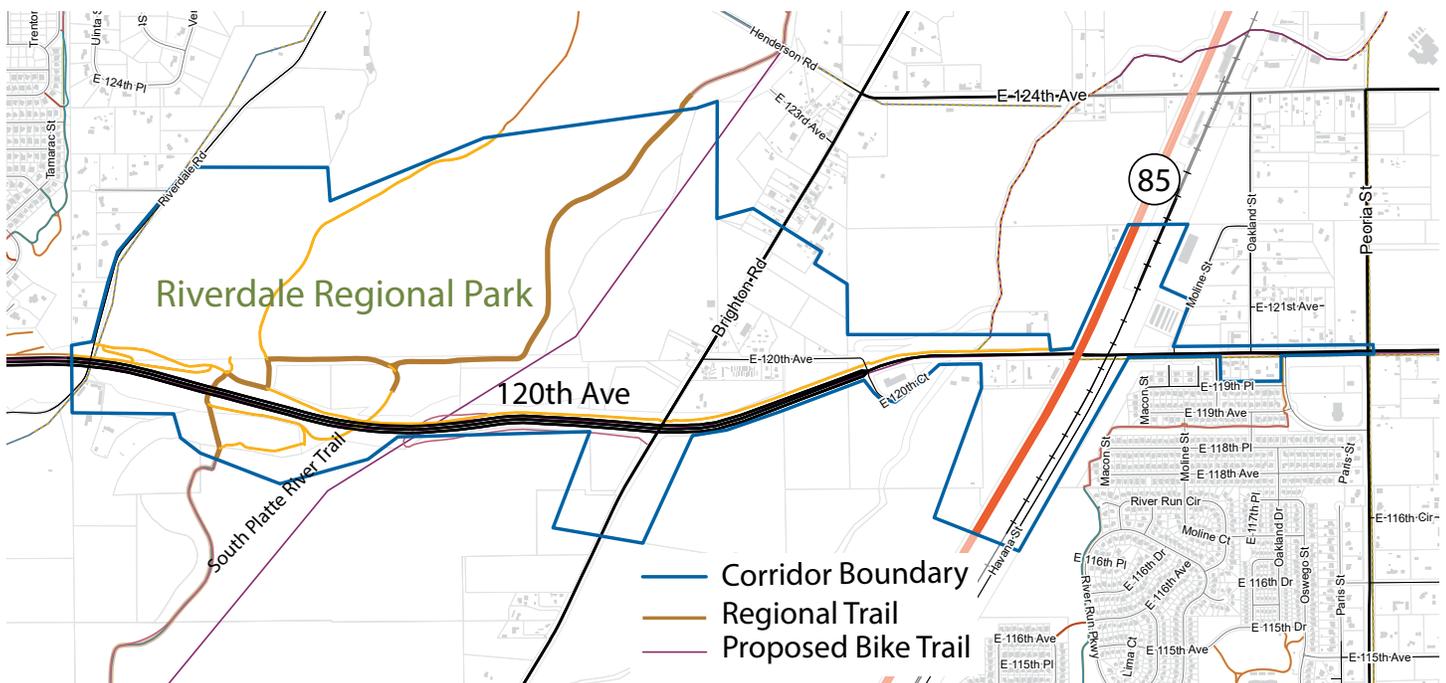


Figure 8-6: 120th Avenue

EAST 120TH AVENUE

Strategy CSP 6.1: Improve at-grade multi-use trail crossings across railroad tracks.

Strategy CSP 6.2: Emphasize Riverdale Regional Park as a destination from local and regional trails.

Strategy CSP 6.3: Foster partnerships with adjacent municipalities to determine a unified vision for the roadway.

Strategy CSP 6.4: Develop a loop trail to be a connector portal for access to a variety of regional trail systems and destinations.

Strategy CSP 6.5: Build resilience into the ecosystem through stormwater BMPs and restoration projects, which can be introduced at the crossing of the Platte River.

Strategy CSP 6.6: Continue to review supportive land-uses around the Riverdale Regional Park and corridor improvements to maintain the desired character for the corridor and park.



SUBAREAS WITH PLANS

There have been several county-wide and subarea plans adopted prior to and after the Imagine Adams 2012 comprehensive plan. Some plans were recently adopted and are well aligned with this comprehensive plan, such as the Colorado Air and Space Port (CASP) subarea plan in 2021 and Square Lake subarea plan in 2022, while other older plans, such as the 2002 Strasburg Plan and 2008 Berkeley Neighborhood Plan have not been updated. Some plans adopted since 2012 need updates to align with Advancing Adams and the pace of change facing those areas (2014 Welby Subarea Plan and the 2014 Federal Blvd. Framework Plan). The following seeks to summarize the various plans, address and update certain policies in those plans, and establish next steps for additional strategic plans for a well-planned county.

PLAN NAME: STRASBURG PLAN

KEY TAKEAWAYS FROM PLAN:

The Strasburg Plan was developed by Adams County and Arapahoe County to help preserve the small town and agricultural identity of the Strasburg area. The emphasis within the plan lies on properly regulating growth, limiting sprawl, and designing a new activity center that will bring jobs and services to residents.

POLICY AND STRATEGIES TO ALIGN PLAN WITH ADVANCING ADAMS:

1. Evaluate existing population and households and encourage appropriate measures to attract and sustain services and employment opportunities while maintaining the small town and agricultural character.
2. Evaluate and promote connections to enhance walking and biking, especially when connecting to open space and trails.
3. Consider designating an urban growth boundary to limit sprawl to reinforce the 20-minute community in Strasburg.
4. Evaluate uses and opportunities to reinforce a vibrant 'Main Street' character where appropriate.

NEXT STEPS:

Coordinate with Arapahoe County to initiate a plan update. Consider expanding the scope and focus to plan for other communities in eastern Adams County and Arapahoe County.

PLAN NAME: BERKELEY NEIGHBORHOOD PLAN

KEY TAKEAWAYS FROM PLAN:

The Berkeley Neighborhood Plan is a mixed-use neighborhood located in the southwest corner of Adams County. During the planning process, concerns were raised regarding older housing stock, decreased home ownership, changing demographics, a

SUBAREAS WITH PLANS

small selection of students from Regis Jesuit University negatively impacting the neighborhood, and the unkempt appearance of certain parts of the neighborhood. The plan sought to address housing, land-uses, safety and enforcement, and neighborhood conditions.

POLICY AND STRATEGIES TO ALIGN PLAN WITH ADVANCING ADAMS:

1. Evaluate and improve transit and multi-modal connections in the neighborhood.
2. Review opportunities for cultural and social interaction between Berkeley residents and Regis University.
3. Evaluate public safety and foster prospects relationships between the community and safety agencies.

NEXT STEPS:

Re-evaluate the Berkeley Neighborhood Plan in coordination with other corridor and planning efforts, engage with stakeholders, and update the plan when appropriate.

PLAN NAME: WELBY SUBAREA PLAN

KEY TAKEAWAYS FROM PLAN:

The plan seeks to create a livable neighborhood and supportive corridors through seven strategic goals, economic development; environment; history and culture; infrastructure; public

safety; recreation, open space, and agriculture; and vibrant neighborhoods.

The plan established three focus areas: North Welby, East Welby, and South Welby. North Welby focused on the residential nature of the area and improving the sense of community. South Welby addressed the mixing of agricultural heritage, industrial uses, and residential areas. South Welby focused on the continued transition to industrial uses and supporting employment opportunities with an industrial base. East Welby is comprised of primarily agricultural and some industrial zoned properties and lacks street connectivity with the west side of Welby. There is great potential here for future development, especially with two future commuter rail station areas (E. 72nd & E. 88th Avenues) on the North Metro commuter rail line about a ½ mile away. In addition, two important water bodies, Clear Creek and the South Platte River, make up its southern and eastern borders, respectively.

POLICY AND STRATEGIES TO ALIGN PLAN WITH ADVANCING ADAMS:

1. Continue to coordinate with neighborhood groups, stakeholders, and commercial and industrial users on the Welby character and uses.
2. Encourage property owners to explore mixed-use development opportunities to align “Mixed

Use Neighborhood” character identified in the Welby Plan with the newly available Mixed-Use zone district.

3. Explore additional opportunities to reinforce a Welby identity for neighborhood cohesion and economic development.
4. Coordinate with the POST Plan and Welby Plan to enhance recreational amenities and trail connections in the neighborhood.
5. Evaluate additional planning, transit-oriented development, and connections to the Thornton 88th light rail station.
6. Continue to monitor land-uses and transportation pressures in the plan area.
7. Evaluate strategies to reinforce the cultural heritage as highlighted in the Welby Plan, especially through incorporating local art.

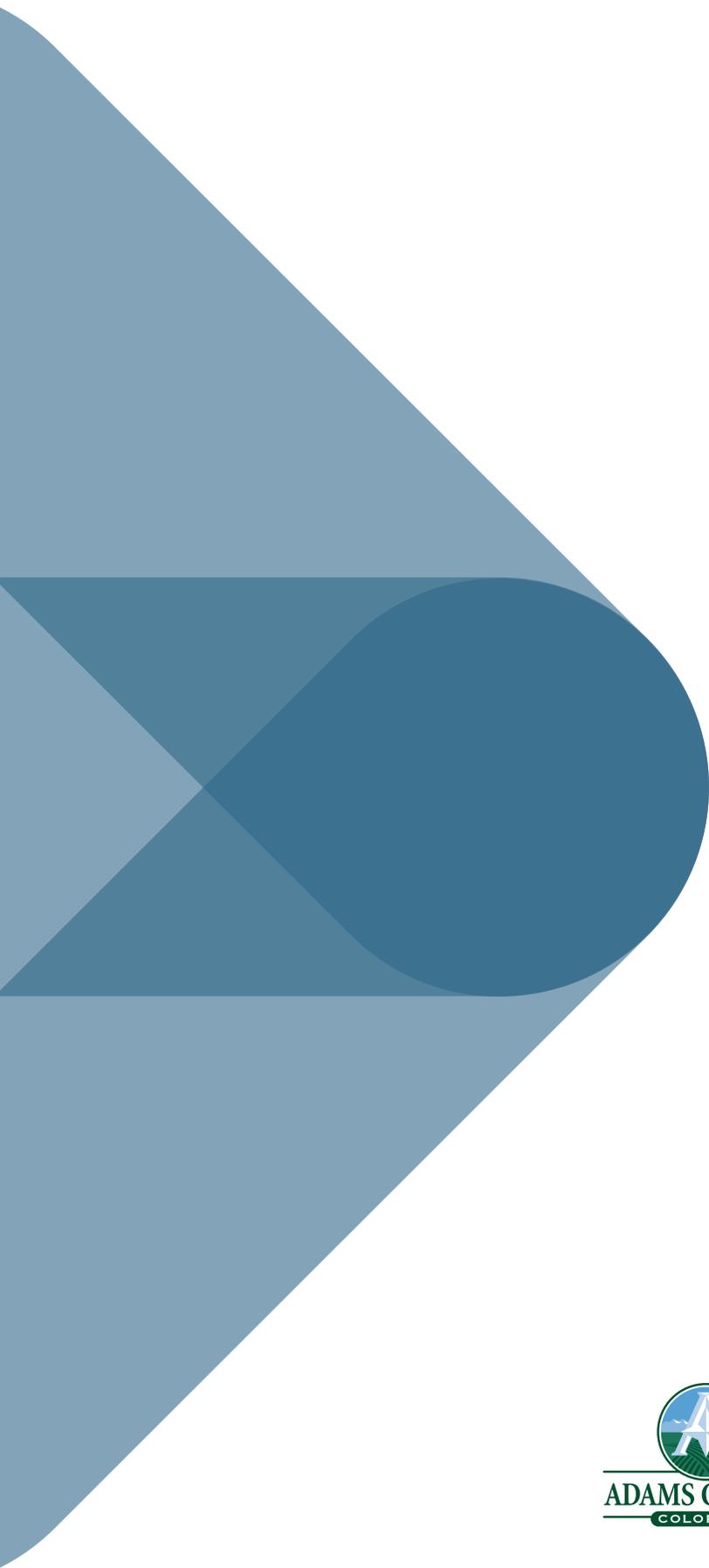
NEXT STEPS:

Engage with stakeholders regarding updating the Welby Plan and update the plan when appropriate.

ADDITIONAL AREAS OF FOCUS

The county may consider additional planning efforts for existing plans and areas in the county without more specific subarea plans. Potential areas of focus may include, but are not limited to:

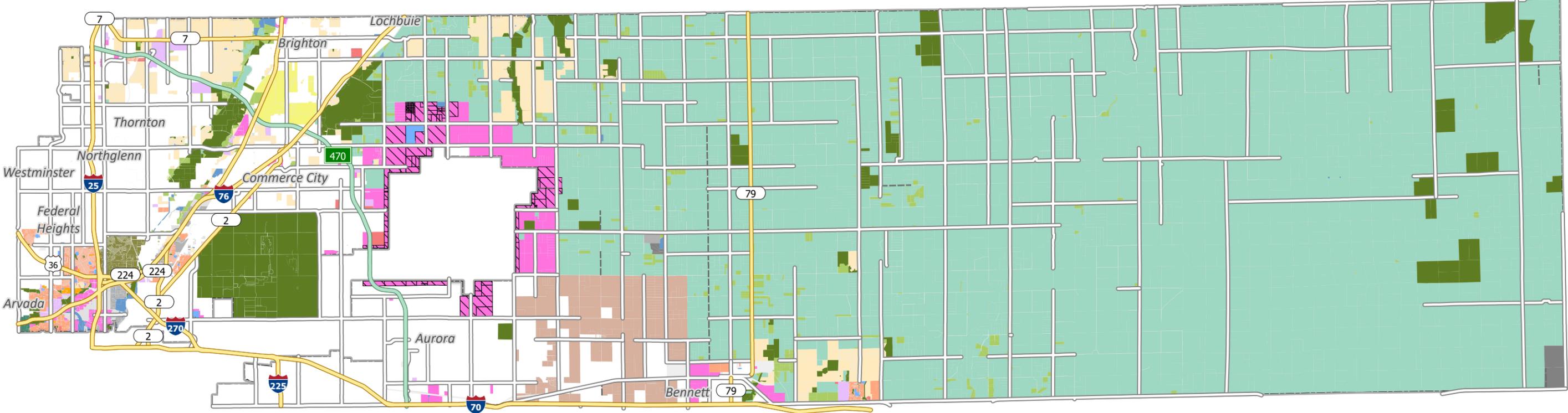
- The Airport Environs (1990) plan.
- Station areas within ½ mile of a RTD station, not including Federal Station and Pecos Junction Station.
- Lowell Blvd./Westminster area
- Perl Mack and Utah Junction



ADVANCING **ADAMS**
PLANNING FOR A SHARED FUTURE



Exhibit 2.2: Draft Future Land Use Map
 An interactive version can be found at
www.AdvancingAdams.com



Advancing Adams Future Land Use

- | | | | |
|---|---|--|--|
|  Agriculture Large Scale |  Industrial Medium |  Parks Open Space |  Public |
|  Agriculture Small Scale |  Institutional |  Plan - CASP |  Residential High |
|  Commercial |  Mixed Use |  Plan - Splendid Valley |  Residential Low |
|  Industrial High |  Mixed Use Commercial |  Plan - Square Lakes |  Residential Medium |
|  Industrial Low |  Mixed Use Commercial* |  Plan - Welby | |

Appendix A: Existing Conditions Report

Existing Conditions and Opportunities Report



ADVANCING **ADAMS**
PLANNING FOR A SHARED FUTURE





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EXECUTIVE SUMMARY



Washington Street South of 70th Ave

The following section serves as a brief introduction to this report. The executive summary covers highlights from different sections within the document.

EXECUTIVE SUMMARY

After nearly ten years, Adams County is embarking on an ambitious plan to update three pivotal long-range documents through the Advancing Adams effort including the Comprehensive Plan, Transportation Master Plan (TMP) and the Parks, Open Space and Trails Master Plan (POST). Completed in coordination with the Advancing Adams planning teams, County staff, community and stakeholders, as well as previous planning efforts, this Existing Conditions Report represents the first step in laying the groundwork for the Adams County Comprehensive Plan update.

WHAT IS A COMPREHENSIVE PLAN?

The Adams County Comprehensive Plan is a long-range plan that considers the next 20 years. The

Plan provides overarching guidance for the future of a community in terms of population growth, land use patterns, conservation and economic considerations. Developed in partnership with the community at-large, the Comprehensive Plan captures the vision of the people and outlines policies, programs and projects that will move the County toward their shared goals.

WHY AN EXISTING CONDITIONS REPORT?

The Existing Conditions Report provides information that reflects a snapshot in time in Adams County. The report reviews key demographics, employment and job information, environmental and sustainability considerations, and information about current land uses and the built environment.

The Existing Conditions Report effectively concludes Phase One of the planning process as it provides a foundational understanding of the County and serves as an effective launch point into Phase Two, when the Comprehensive Plan is formally crafted in terms of a visionary and operational document. The Comprehensive Plan will guide growth and the future of the County in terms of policies, recommendations, programs, projects and implementation information.

The Comprehensive Plan Existing Conditions Report captures information and preliminary analysis in four main areas including:

- **Plan Overview** – an introductory section that describes the plan purpose, plan values, planning process and a foundational understanding of the County’s demographics and growth projections;
- **Taking a Look at Adams County** – a topical investigation of Adams County considering five main themes including Community and Housing, Natural Environment, Built Environment and Connections, Economic Development and Cultural Heritage;
- **Five Strategic Corridors** – a section devoted to an existing conditions assessment of five corridors, including Federal Boulevard, Pecos Street, Washington Street, East 104th Avenue and East 120th Avenue from a land use perspective;
- **Looking Forward** – this final section provides an overview of work that will be completed in Phase Two of the planning process and introduces land use frameworks such as the 20-Minute

ADVANCING ADAMS PLANNING FOR A SHARED FUTURE



Figure 1: Advancing Adams Planning for a Shared Future

A FOCUS ON UNINCORPORATED ADAMS COUNTY

Existing conditions reports often consider and illustrate conditions surrounding municipalities and counties. This Existing Conditions Report document and the Phase 2 Comprehensive Plan are intended to focus on the unincorporated areas of Adams County and not intended to provide direction for municipalities.

Community and the Adams County Transect.

WHAT ARE THE KEY TAKEAWAYS?

Adams County has a rich history and is embarking on a Comprehensive Planning effort at a critical time. Demographics are changing, housing opportunities are continuing to tighten, and climate change is impacting the community. There are also significant opportunities to move forward toward the County’s vision to be the “most inclusive county in the Country.” Some of the key existing conditions that are outlined in this Report will provide the basis for the next steps in the Comprehensive Plan including:

COMMUNITY AND HOUSING

- The Adams County population is expected to increase by 220,000 people by 2040, maintaining an

average growth rate of 1.6 percent. The average household size is three people, which is slightly higher than the state average of 2.52.

- Based on the most recent population projections from the State Demographer's office, the County will need, on average, an additional 3,371 units annually through 2040 in order to maintain the current average household size.
- The current housing stock consists primarily of single-family detached homes, which accounts for 62.4 percent of housing units; this housing type is what is typically being developed today. There are additional opportunities for housing type diversity to be added to the stock to support the growing population.
- Adams County has the highest percentage of population that speak a language other than English in the region, at nearly 2 percent.

NATURAL ENVIRONMENT

- The County lies in the South Platte River basin, and while some water is stored in local reservoirs, much of the County's water comes from reservoirs in other river basins including the Colorado River Basin on the Western Slope.
- While there has been increased fragmentation of natural habitat due to development, there is a strong potential to link habitat into defined corridors that would allow freedom of migration and support native populations of flora and fauna.
- By 2050, it is projected that Adams County will see an increase in average temperatures by 2.5 to five degrees Fahrenheit, have more consecutive days over 95 degrees Fahrenheit in the summer months, and experience longer and more severe droughts.

- The power supplied to Adams County is becoming less carbon-intensive at a relatively rapid pace. Xcel Energy, which served approximately 160,000 premises in 2019 for both electric and gas, has committed to reaching 80 percent carbon-free electricity by 2030, and 100 percent carbon-free electricity by 2050.

BUILT ENVIRONMENT AND CONNECTIONS

- The western and most populous portion of the County primarily features a suburban-style development pattern with limited walkable and mixed-use type destinations.
- Equity, sustainability and livability can all be addressed by strategically identifying geographic areas of increased density that also provide quality access to employment centers, essential services and amenities.
- Industrial land uses are essential to the economic vibrancy of Adams County, however, compatible land use adjacencies must be considered.

ECONOMIC DEVELOPMENT

- The unemployment rate in Adams County, without accounting for COVID-19 impacts, is relatively low at 7.3 percent.
- The distribution of employment in Adams County is mostly white collar, which accounts for 54.4 percent of total employment, followed by blue collar and services, which make up 27.4 and 18.2 percent respectively.
- Adams County's key and emerging industries are aerospace, aviation, bio/life sciences, food/agribusiness/ beverage, and manufacturing.
- While 84 percent of Adams County residents have a high-school degree or higher, only 25

percent have a bachelor's degree or higher. This represents a less educated population compared to the State, where 40 percent of the population has a bachelor's degree or higher.

CULTURAL HERITAGE

- Riverdale Regional Park and Fairgrounds plays a pivotal role as a destination that hosts events and supports culture and heritage in Adams County.
- With some modifications, a framework like Transfer of Development Rights could play a larger role in supporting the existing agriculture and farming heritage through land conservation for the purposes of agriculture. The land use strategy of Transfer of Development Rights is a major pillar of the Adams County District Plan.
- Placemaking and public art can be leveraged as a tool to celebrate culture and heritage in Adams County, especially in the western and most populous portions of the County.

CORRIDORS

- The five strategic corridor areas are Federal Boulevard, Pecos Street, Washington Street, East 104th Avenue and East 120th Avenue. The corridors were selected according to the following criteria: be a principal or arterial roadway, have unincorporated lands, be subject to a study or upcoming improvements, fall within an Opportunity Zone, be identified for capital improvements, have redevelopment potential and proximity to multi-modal transit opportunities.

NEXT STEPS

Phase Two of the Comprehensive Plan process consists of three main steps which includes:

- Confirming land use frameworks that align with the values of the community and evaluating growth scenarios;
- Determining policies, recommendations, programs and projects;
- Developing an action plan with implementation and ongoing reporting guidance.

The Comprehensive Plan process is expected to conclude with a formally adopted plan in December 2021.

PLAN OVERVIEW



Pecos Street Between US-36 and 70th Ave

This section includes:

- Plan Purpose
- Plan Values
- Planning Process
- Plan Vision
- Introduction to Adams County

PLAN PURPOSE

The Adams County Comprehensive Plan defines a bold vision that will guide future growth aligned with the community's values. Additionally, the Comprehensive Plan will lay the foundation for two concurrent planning efforts, the Transportation Master Plan (TMP) and Parks, Open Space and Trails (POST) Master Plan, as well as all other upcoming long-range plans.

The Advancing Adams Process is divided into two phases. Phase 1 focuses on an understanding of existing conditions in Adams County. This document provides a summary of these existing conditions, and lays the

groundwork for the Comprehensive Plan.

Phase 2 of the Comprehensive Planning effort will begin in April 2021 and will document a series of policies and recommendations that will shape the future of Adams County.

The Comprehensive Plan for Adams County will answer three critical questions: What? Why? How?

The "What?" are the actionable and measurable policies and recommendations that will shape the future of Adams County. These will be drafted according to topical areas and organized under aspirational goals and objectives. This content will

be drafted in Phase 1 and refined with client and community collaboration in Phase 2.

The "Why?" are the core values from which each of the policies and recommendations can be justified. The values were established by Adams County leadership with input from residents.

The "How?" is related to implementation. This portion of

the planning work will largely be completed during Phase 2 of this planning process, after many of the policies and recommendations are established and confirmed with the Adams County community.



Figure 2: Purpose of Comprehensive Plan

WHAT WILL ADAMS COUNTY BE LIKE IN THE YEAR 2040?

THE ADAMS COUNTY COMPREHENSIVE PLAN WILL PROVIDE A VISION FOR THE FUTURE AND GUIDANCE ON HOW THE VISION CAN BE ACHIEVED.

PLAN VISION

The Comprehensive Plan serves as a policy and operations tool that guides the County toward the vision of being the most innovative and inclusive County in America for all families and businesses. The plan will be a broad and implementable document that addresses future development and code needs, including technical zoning or development standards requirements, as well as overarching policies/statements about engaging the community, addressing economic development, equity and sustainability in all its forms.

PLAN VALUES

As part of the initial work on Advancing Adams, three initial core value lenses have emerged. These will ultimately guide the final Comprehensive Plan, Transportation Master Plan (TMP), and Parks, Open Space and Trails Plan (POST), but are included in the Existing Conditions Report as they can guide how the data is viewed. Each analysis step, recommendation and policy will be evaluated for alignment while embracing a holistic and metrics-based approach, using these values.

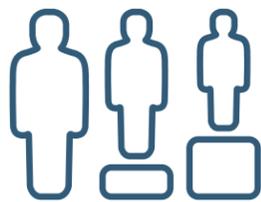
1. Equity: The vibrance and strength of a community emerges from diversity and equity. Equity can be measured through distribution of resources, affordability and access to services and experiences, as well as balancing land uses with environmental justice. Adams County will celebrate and leverage a diverse community through

equitable land planning as the region continues to grow in population and various ethnicities and identities.

2. Sustainability: By committing to build smarter and retrofitting existing development to include new technologies and efficiency, all while embracing a holistic and metrics based approach, sustainability will be part of Adams County's identity.

3. Livability: Adams County has numerous multimodal and walkable districts that support a human-scaled, comfortable and memorable experience. This plan will help to further enhance livability through the thoughtful integration of artful placemaking strategies and urban design best practices that celebrate the culture of Adams County and further contribute to livability.

EQUITY



Equity: Just and fair inclusion into a society in which all can participate, prosper, and reach their full potential.

SUSTAINABILITY



Sustainability: The practice of creating and maintaining conditions to meet the needs of the present without compromising the ability to meet the same needs elsewhere or in the future.

LIVABILITY



Livability: sum of the factors that add up to a community's quality of life—including the built and natural environments, economic prosperity, social stability and equity, educational opportunity, and cultural, entertainment and recreation possibilities.

Figure 3: Core Value Lenses



ADVANCING ADAMS
COMPREHENSIVE PLAN



ADVANCING ADAMS
PARKS, OPEN SPACE & TRAILS



ADVANCING ADAMS
TRANSPORTATION

Figure 4: Advancing Adams; The Three Plan Updates

PLANNING PROCESS

Advancing Adams: Planning for a Shared Future is a planning effort that includes the update of three plans simultaneously:

- **Comprehensive Plan**
- **Transportation Master Plan (TMP)**
- **Parks, Open Space & Trails Master Plan (POST)**

This trio of updates will create a coordinated vision, comprehensive set of policy goals, recommendations and strategies that work together to encourage sensitive development, robust economic development, a connected and efficient multimodal transportation network, and parks, open space and trails that are used by all residents all the time. Planned thoughtfully, these updates will help to ensure Adams County will remain “the most innovative and inclusive county in America.” Advancing Adams will lead to a safer, resilient, more equitable and more prosperous county. We will integrate equity,

sustainability and livability into each plan to ensure residents of today and future generations will benefit from a shared vision to Advance Adams.

COMPREHENSIVE PLAN OVERVIEW

The Comprehensive Plan will serve as an overarching policy and operations tool to guide our County toward the vision of being “the most innovative and inclusive county in America for all families and businesses.” It will set the tone for improving all aspects of quality of life. The plan will be an overarching and implementable document that addresses future development and land use needs, engaging the entire community, addressing economic development, equity and sustainability.

This is the “big picture” plan that lays the groundwork and provides direction for the TMP and POST updates. At the same time, work on these two plans will also help inform goals and recommendations for the Comprehensive Plan. The integration

of the TMP and Comprehensive Plan acknowledges the connection between land use and transportation. The Comprehensive Plan sets a vision for an equitable, vital, and sustainable County through future development and code needs. These policies, standards, and zoning will shape, and are shaped, by existing and future transportation infrastructure, programs, and policies. Specifically, along five strategic corridors, these plans are closely integrated in order to create a comfortable and functional character and user experience that is developed holistically.

This is the plan that will help us “holistically improve quality of life.”

TRANSPORTATION MASTER PLAN OVERVIEW

The Transportation Master Plan (TMP) will set the foundation to drive county short and long-term transportation and transit investments. Through the planning process, projects, programs and policies will be identified that help create a successful multimodal transportation network for people of all ages and abilities. It will be a network that is connected, efficient, comfortable, easy to navigate and convenient. Creating an attractive transportation system will ensure Adams County remains one of the top places to live, work and play in the Denver metro region.

This is the plan that will “get us moving”.

PARKS, OPEN SPACE & TRAILS MASTER PLAN OVERVIEW

Adams County’s parks, open spaces and trails are fantastic amenities for residents and wildlife alike. The Great Outdoors of Colorado are one of the main reasons people come here to live. The Parks, Open Space & Trails Master Plan (POST) will provide recommendations to ensure equitable access to parks, open space and trails. It will point to strategies that help preserve and enhance important wildlife habitat and corridors, natural and scenic resources and agricultural lands, lay the framework for expanding trail connections and providing a richer variety of recreational opportunities for everyone.

The Transportation Master Plan is working closely with the POST Plan in both the process and Plan product. Specifically, these plans are collaborating on the trail network. The TMP is focused on providing access to key destinations and trails through on-street facilities and filling in gaps in the trail network where they primarily serve as transportation. The POST Plan is focused on trails where they primarily serve as recreation.

This is the plan that will help us all “enjoy the outdoors”.

PUBLIC ENGAGEMENT OVERVIEW

Advancing Adams is inspired and informed by residents, stakeholders and County and City staff. Moving

forward together, these groups shared their concerns, visions and goals for the County as a whole, for its transportation system and its parks, open space and trails throughout the planning process. Engagement is divided into two distinct phases – Phase 1: Grounding and Phase 2 – Plan for the Future. During Phase 1, the project team prepared a public education campaign to inform residents about the plan updates, listened to community members to get a strong understanding of existing conditions and facilitated activities that allowed residents and stakeholders to analyze and discuss opportunities for the future. Input from these activities informed and helped guide the plan direction.

Taking place in 2020, engagement was directly impacted by the COVID-19 pandemic. Virtual engagement was

used throughout the process and in-person meetings were only held when, and if, appropriate.

SCHEDULE

PHASE 1: GROUNDING (EXISTING CONDITIONS & ANALYSIS OF OPPORTUNITIES)

REACHING OUT

During the entire phase, several outreach methods were used to get the word out to the community and “meet people where they are.” A dedicated project website with an introductory video was launched at the end of November 2020, press releases were provided to local media, flyers were posted in strategic locations in English, Spanish and Burmese, local morning radio programs interviewed key project partners, social media posts were



Figure 5: Advancing Adams Plans Schedule

posted periodically, and email messages were sent to project partners, who in turn shared the information with their networks.

ENSURING INCLUSIVITY

During the Winter of 2020, community group meetings were held to inform those who have not been as involved in these types of planning processes historically about Advancing Adams. These meetings were held in Spanish and English with stakeholders representing community development, housing, economic development organizations, faith-based groups, aging adult advocates, youth representatives, among others. The team also facilitated briefing presentations with various Boards and organizations representing a variety of interests. Key partners included the Community Resource Network, Tri-County Health, Adelante Community Development, local faith organizations, RISE Colorado, Cultivando, Village



Image Credit: Design Workshop

Figure 6: Adams County Engagement Meeting

Exchange Center, and CREA Results. These conversations reached over 2000 underrepresented individuals in Adams County – educating about Advancing Adams and inviting them to get engaged in the process.

Youth engagement was an important component of this process. For Phase 1, the project team shared an interactive youth activity workbook with school districts and youth program partners so that young residents can share their ideas to provide a vision for the future that younger generations will support and champion.

DEEP LISTENING

In December 2020, the project team conducted technical focus groups with staff, regional partners, representational business owners and other stakeholders throughout the County. With over 150 attendees total, these sessions covered topics including Agriculture, Economic Development, Outdoor Recreation and Programming, Housing, Open Space Funding, the Pecos Street corridor, and the Federal Boulevard corridor. Fifteen deep dive individual stakeholder interviews were also conducted to understand the specific concerns of those involved with economic growth, recent development, multi-modal transportation, concurrent planning efforts, sustainability, and recreation.

ENGAGING ALL

In November 2020, the first community-wide bilingual public

survey was posted online utilizing an interactive dashboard which let the public explore the process and existing conditions in depth. Over 1000 people have engaged with the dashboard to date, and this interactive dashboard will remain live to continue educating residents about the existing conditions of the County.

In February 2021, a virtual public meeting was held in English and Spanish to give the public an update on the planning process and provide an opportunity for residents to share their thoughts on plan topic areas with County staff and the project team. Nearly fifty members of the public gave their input via live polling during the meeting and engaged with the project team during the Q&A portion of the meeting. These recordings were then posted online with the second community-wide bilingual public survey.

KEY ENGAGEMENT FINDINGS

Through the variety of outreach and engagement methods mentioned above, the project team was able to receive valuable input to integrate into the existing conditions reports for each of the three plans. While some feedback was specific to each individual plan, other comments were applicable to Advancing Adams as a whole.

Below are some key engagement findings sorted by theme that were heard by multiple stakeholder groups over the last four months.

Today and Tomorrow

When asked what one word best describes Adams County today, popular responses were: growing, diverse, and progressing. These words capture the spirit of Advancing Adams: Planning for a Shared Future as this planning process aims to plan for the growing and diversifying population of the County with innovative recommendations. As the population of Adams County continues to grow, residents and stakeholders feel that the top considerations that should be used in future decision-making include inclusivity, affordability, equity, and resiliency. These are not only reflected in the three value lenses of the plans (Equity, Livability, and Sustainability) but also key ideas addressed in each individual plan.

Community and Housing

A key topic that was raised throughout engagement opportunities was access to housing for all residents of Adams County. Participants identified opportunities to ensure current housing types remain in Adams County, particularly mobile homes, as well as diversifying the housing stock to include more multi-family options.

Additionally, linking housing access with transit access was often identified as a critical aspect of land use planning so that future residents can better utilize transit to commute. From interviews and focus groups to listening sessions, there were consistent comments regarding

incentivizing housing diversity so developers can provide the housing types the County needs, as well as focusing on allowing additional densities around transit services.

From an economic development perspective, there was a clear focus on recognizing displacement and gentrification impacts, in addition to homelessness, and working to address those at a policy level in the Comprehensive Plan. The risk of displacement was identified in a Housing focus group as the number one issue in relation to housing the anticipated population increases over the next 20 years.

To learn more about the existing conditions for this topic, refer to page 60.

Natural Environment

Overall, access to water resources was identified as an important consideration for the Comprehensive

Plan to evaluate through land use scenarios that will be developed in Phase 2. This topic was specifically raised in focus groups and interviews for Agriculture, Housing, and Economic Development, as well as during the Virtual Public Meeting. Additionally, natural resources and wildlife protection were identified in the first public survey as a high priority to address in the Advancing Adams process. Resiliency and sustainability were also identified in the Public Open House meetings as two of the top considerations the County should use in future decision-making processes.

The Natural Environment was identified in the first public survey as one of the top themes that needs to be addressed by the Comprehensive Plan. This was also a topic that came up throughout the engagement as being of critical importance. Given that the County is currently in the process of updating the County-wide Sustainability Plan, the Comprehensive Plan team interviewed the Sustainability Plan team to understand progress and opportunities to coordinate work as the process moves into Phase 2. The most important coordination topics include land management in terms of new development, promoting compact development and mixed uses, multimodal transportation networks, air quality and emissions, renewable energy sources, standards for industrial land uses and environmental justice and sustainable agriculture.



Figure 7: Big Dry Creek Trail

Participants often identified riparian areas and other critical habitats as notable features to protect in Adams County, and suggested opportunities to combine their preservation with recreational opportunities.

To learn more about the existing conditions for this topic, refer to page 74.

Built Environment and Connections

Some of the ideas discussed later in this document address the 20-minute community and an Adams County transect. Participants were asked at a high level about these ideas to understand if the Comprehensive Plan framework is headed in the right direction. A majority of participants, across all engagement opportunities, were supportive of the idea to implement the 20-minute community for western portions of Adams County. Some participants desired more information before making a decision, which will be a key aspect of outreach and analysis in Phase 2 of the Advancing Adams work.

Importantly, the 20-minute community focuses on ways to provide more equitable access to amenities and services in the County through connected networks and increased density. Participants in the overall Advancing Adams process identified elements that could be considered for inclusion as the project enters Phase 2, including seeking opportunities for trails to provide both a recreation and transportation purpose, connecting

services through roads, sidewalks, bike paths, and trails, and providing safe access to places for pedestrians and bicyclists. Providing equitable access to recreation and parks is a priority for many. Some frequent suggestions about how this could be achieved include expanding program options, working with partners, and addressing the quantity and quality of facilities in all areas.

Additionally, opportunities to improve infrastructure were identified, including broadband access.

To learn more about the existing conditions for this topic, refer to page 100.

Economic Development

Fostering economic growth was a theme that crossed much of the engagement. There is a recognition that Adams County's economy is diverse and that diversity – from agriculture to technology – should be



Figure 8: Farm in Adams County

supported. The access Adams County provides to rail, air, and interstates was identified in a number of interviews and focus groups as critical for attracting and retaining businesses.

Participants recognized that the Colorado Air and Space Port (CASP) is a unique asset in Adams County. The area is currently the subject of an ongoing subarea planning effort with two critical aspects for ongoing coordination with the Comprehensive Plan including alignment with future land use planning and overall economic development strategies.

Participants also identified the importance of maintaining historic agricultural lands and businesses. Ideas focused on opportunities to incentivize sustainable agricultural practices, supporting Agritourism, and ensuring zoning allows innovative uses (such as corn mazes) while also protecting the use of land for active agriculture farming.

In interviews with developers and businesses along the Federal and Pecos corridors, a focus on connectivity and compatibility was raised. Ensuring access to the interstate for any industrial lands was identified as the number one consideration for those businesses. Additionally, there was a recognition that these corridors may have diverse land uses in the future and that planning for those long-term changes is important. Developers also identified a need for additional incentives for projects that have a

County-wide impact on jobs and the economy especially when costly remediation is required.

Finally, the importance of equitable economic development was raised by participants through ideas such as providing housing near commercial centers, particularly for immigrant communities, implementing policies that support historic neighborhoods like Welby, and as mentioned in the Community and Housing section, actively seeking to minimize impacts of displacement at a County-wide policy level.

To learn more about the existing conditions for this topic, refer to page 112.

Cultural Heritage

Overall, the concept of cultural heritage in Adams County takes the form of several sub-topics including agriculture, historic assets, placemaking and public art, as well as cultural destinations and events.

Agricultural land use is of particular importance on the eastern portions of the County. Agriculture hubs like Historic Splendid Valley, hold particular importance for innovative concepts like food access and security, Agritourism and sustainability practices. The Agriculture Focus Group identified these key trends and provided ideas about how they might be successfully integrated, especially through partnerships.

According to the Agriculture Focus Group, historic assets in the County, as defined by the community at-large and History Colorado could be leveraged and protected through partnerships with the state and municipalities, as well as the potential implementation of a County-wide historic designation program.

Cultural heritage was consistently identified as a way to leverage and create an inclusive and vibrant community. Placemaking elements that contribute to quality urban design and public art, as well as a potential Creative District were identified as potential implementation ideas.

Cultural destinations that reflect agricultural heritage or diversity were identified as relevant examples of ideas that could be integrated into the Adams County Comprehensive Plan either as singular destinations or a district where programming can be offered and community events can also be held. Participants indicated that diversity in Adams County deserves to be celebrated with more cultural festivals, a better focus on local art and music, and recognition of the rich history of the County.

To learn more about the existing conditions for this topic, refer to page 124.

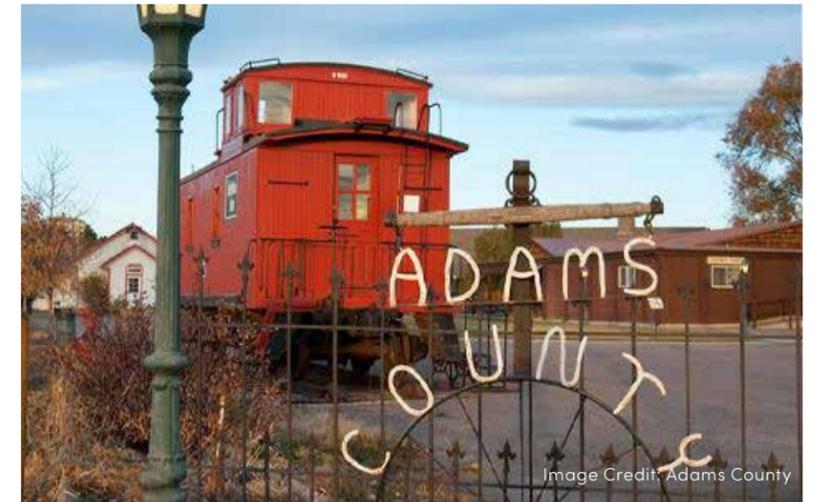


Figure 10: Adams County Museum



Figure 9: Adams County Fair

PLAN VISION

The vision for the 2021 Comprehensive Plan builds upon the County's goals to be the most innovative and inclusive county in America. The Comprehensive Plan will provide the guidance necessary to move forward on a shared vision for the future.

VISION STATEMENT

The proposed vision statement for the Comprehensive Plan is:

“The Comprehensive Plan serves as a policy and operations tool that guides the County toward the vision of being the most innovative and inclusive County in America for all families and businesses. The plan will be a broad and implementable document that addresses future development and code needs, including technical

zoning or development standards requirements, as well as overarching policies/statements about engaging the community, addressing economic development, equity and sustainability in all its forms.”

The statement is derived from initial community input, as well as the needs of the County to have a document that is broadly applicable for long-term planning and visioning as well as zoning and development review.

DRAFT KEY THEMES

This Report is divided into five key thematic areas to weave the existing conditions data together. These themes are anticipated to carry forward into the final Comprehensive Plan. We anticipate the organization of Plan content be housed within five preliminary themes: Community

and Housing, Natural Environment, Built Environment and Connections, Economic Development and Cultural Heritage. These are identified as broad, compelling ideas and topics that are essential for the current Comprehensive Plan to address. These guiding themes will support the plan's recommendations, strategies and action steps.

COMMUNITY AND HOUSING

Adams County is growing, and the needs of future residents from a housing and placemaking perspective must be addressed. The Plan will explore the best locations for residential development and the types of housing units that can best serve the County's residents. Preservation of existing housing is critical, and additional housing growth is best provided where services already exist

to ensure residents have access to the services they need to carry out their daily lives.

NATURAL ENVIRONMENT

As a central component of a holistic view of sustainability, the natural environment will play a significant role. Climate change is an existential threat continuing to worsen with broad ramifications for our residents. Through a combination of adaptation and carbon reduction (mitigation) strategies, Adams County will show leadership and environmental resilience. Additionally, the Plan will take a broad view of environmental functions including biodiversity, the role of water, air quality and consider how health and the natural environment relate in order to address sustainability holistically.



Figure 11: Residential Area Near Midtown



Figure 12: Pelican Ponds



Image Credit: Design Workshop

Figure 14: RTD Station on Federal Boulevard



Image Credit: Design Workshop

Figure 13: Commercial Activity on Pecos Street

BUILT ENVIRONMENT AND CONNECTIONS

New development will happen in Adams County, including new roads, new housing, new commercial, industrial, agricultural development, and new districts. This Plan will consider the best locations for growth and the types of connections that will be needed. New developments will also impact adjacent neighbors' properties; this plan will explore policy recommendations to mitigate those impacts to ensure new development is connected and benefits the broader community. The form this new development takes will be important as well, and the plan will help ensure that new construction is environmentally friendly and supports resident health.

ECONOMIC DEVELOPMENT

Adams County must serve the future population by ensuring that economic growth happens in the right places and economic sectors are diversified enough to provide jobs for a regional workforce with a wide spectrum of skills.

CULTURAL HERITAGE

A strong working class history and agricultural heritage are part of Adams County's regional identity and will continue to be in the future. These assets can be celebrated through public art, events like the Adams County Fair and neighborhood identity that builds placemaking and local pride.



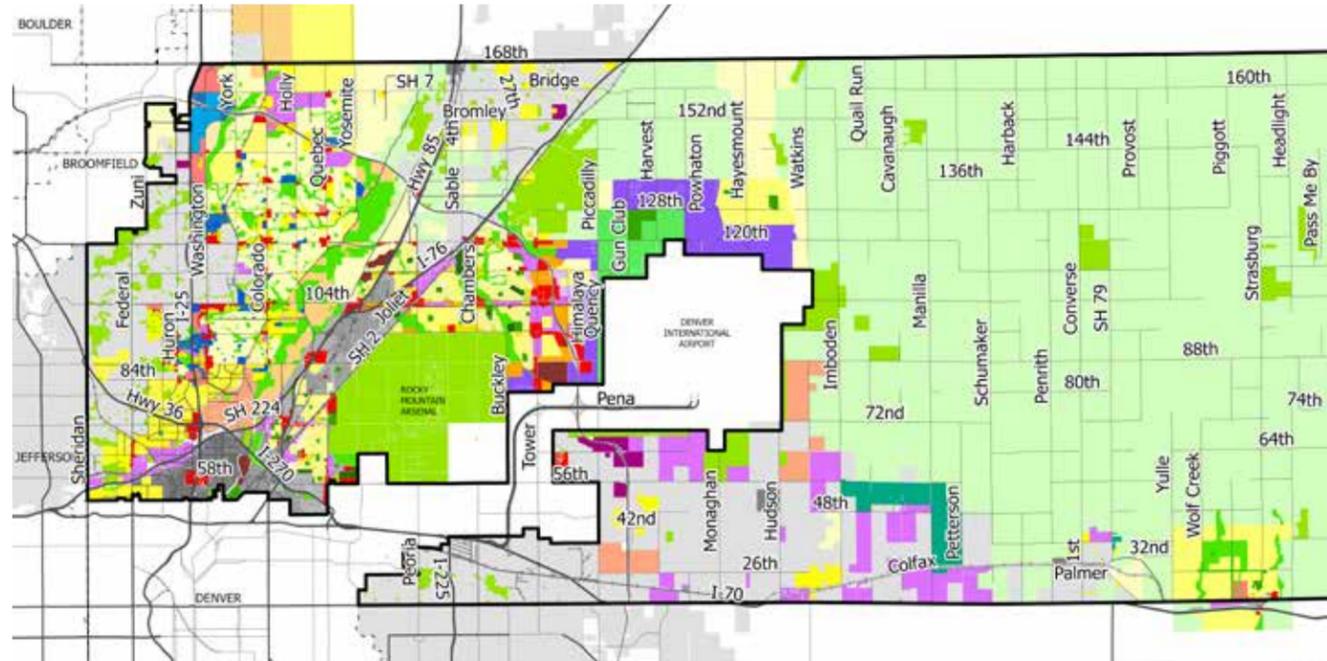
Image Credit: Design Workshop

Figure 15: Public Art at the Rotella Park



Image Credit: Adams County

Figure 16: Adams County Fair



Data Source: Adams County 2012 Comprehensive Plan, DRCOG

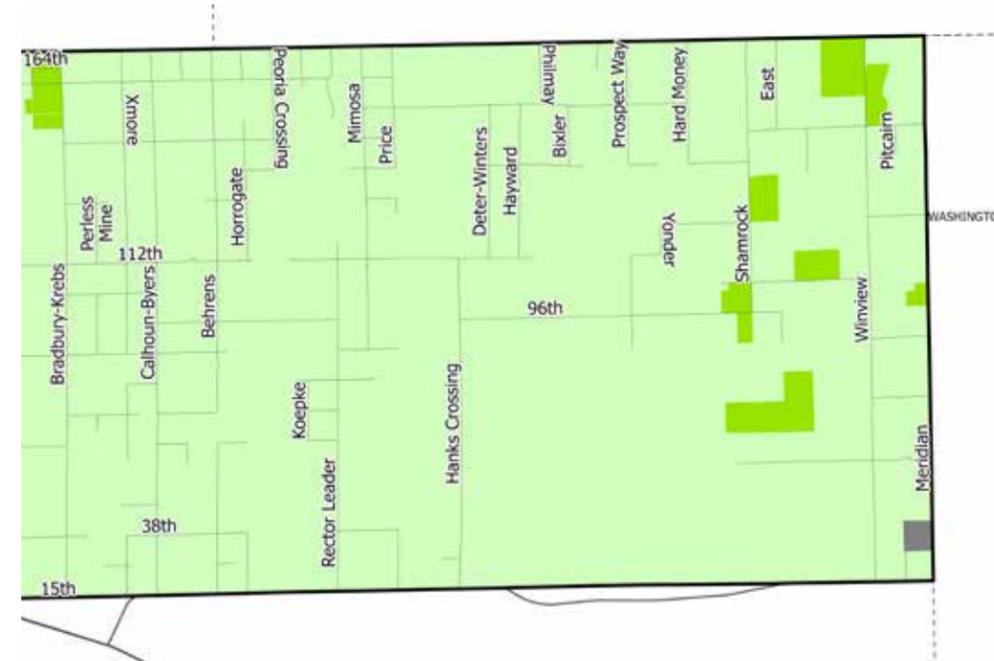
LEGEND

- Agriculture
- Commercial
- Mixed Use/ Employment
- Low Intensity Mixed Use
- Activity Center
- Industrial
- Parks and Open Space
- Public
- Estate Residential
- Urban Residential
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

INTRODUCTION TO ADAMS COUNTY

The Advancing Adams Comprehensive Plan will set forth a visionary path for the future of Adams County over the next 20 years. In order to do that effectively, a high-level initial understanding of the baseline existing conditions is documented here. The Comprehensive Plan will synthesize “who and what is Adams County?” and “what is the best future for Adams County that serves everyone?” to deliver on the County’s goals of a broad, guiding policy document that is understood and implemented throughout the County.

Three baseline topics are documented in this section: Past Planning Efforts, Geography and Demographics.



NOT TO SCALE

PREVIOUS PLANS SUMMERY

Since the 2012 Comprehensive Plan was completed, Adams County has completed many planning efforts. These have included sub-area plans such as the Welby area plan in 2014 and the ongoing plan for the Colorado Air and Space Port, as well as topic specific plans like the 2018 Balanced Housing Plan. These efforts provide critical guidance to the Comprehensive Plan and Advancing Adams will build off the analyses and recommendations in these planning efforts. This section highlights some of the key planning efforts that are most relevant to the Comprehensive Plan effort.

2014 WELBY: WHERE DEEP ROOTS GROW. A COMMUNITY PLAN FOR FUTURE DEVELOPMENT

The Welby area is approximately four (4) square miles and is generally located north of I-76, east of I-25, south of 88th Avenue, and west of the South Platte River. The Welby Plan (Where Deep Roots Grow, a Community Plan for Future Development) focuses on the history of the area and identifies opportunities to support its unique uses and location. “Welby’s beginnings were very much tied to its rich lands supporting many years of robust agricultural production and later truck farms. With time, however, this production was not as viable and with the construction of the Valley Highway (I-25) in 1958 and later I-76, industrial uses began emerging in the area. The transition

from agriculture to industrial was the beginning of major changes to the community, especially to its infrastructure and lack of amenities (e.g. grocery store, recreation center, etc.) for residents. The Welby Plan represents the product of hard work and innovative ideas on how to build on and transform existing assets, reinvest, and maintain a vibrant community that attracts investments from both inside and outside of Welby.” (Page 1 of Plan)

The Welby Plan provides details on how to build on and transform the existing conditions, as well as reinvest in and maintain the vibrant community that attracts investments from both inside and outside of Welby. The plan seeks to create lively corridors and neighborhoods through seven strategic goals: economic development; environment; history and culture; infrastructure; public safety; recreation, open space, and agriculture; and vibrant neighborhoods.

2014 THE FEDERAL BOULEVARD FRAMEWORK PLAN

In anticipation of the two new rail transit stations planned for Federal Boulevard, Federal Station on the Gold Line and Westminster Station, the Federal Boulevard Framework Plan was developed in order to manage growth on the corridor that is expected to occur as a result of the transit improvements. The study area is a 2.25 mile segment of Federal Boulevard between 52nd Avenue and

72nd Avenue. Plan recommendations included: using a variety of zoning mechanisms to facilitate different types of development; improving the balance between different transportation modes so that vehicular access is maintained while pedestrian and bicycle connectivity is enhanced; and aligning east-west streets that cross Federal Boulevard to create more direct paths of travel.

This plan was created to thoughtfully manage the growth and redevelopment that is anticipated from the infrastructure developments in southwest Adams County. The plan focuses on urban design and streetscape environments, bicycle and pedestrian safety, market feasibility, and engagement of the many communities along the corridor. The findings helped set 20 recommendations to be considered in future developments.

2015 SUSTAINABLE ADAMS COUNTY 2030 PLAN

The Sustainable Adams County 2030 plan was created to guide the County’s efforts in the coming years towards a more socially, environmentally, and fiscally sustainable standing. The Plan identifies four cornerstones of sustainability and sixteen goals to encourage broad impact and implementation. The four cornerstones are Responsible and Innovative Regional Leadership, Waste Management and Reduction, Conservation of Energy and

Resources, and Respect for Adams County’s Heritage. The County is currently working on an update to this plan, seeking to further progress sustainability in all its forms within the County.

2016 SOUTHWEST ADAMS COUNTY MAKING CONNECTIONS PLANNING AND IMPLEMENTATION PLAN

The Making Connections Plan focuses on “formulating a sound and rational basis for guiding development, redevelopment and supporting infrastructure for 13,177 acres of unincorporated Southwest Adams County.” (page 4) The plan identifies and prioritizes opportunities for multi-jurisdictional and public-private partnerships and investment.

It is important to note that “Southwest Adams County includes a larger ‘Triangle of Opportunity’ formed by the Welby Station on the planned N Line just inside the City of Thornton to the northeast, the National Western Center Station of the A Line just inside Denver to the south, and the Sheridan Station of the G Line just inside the City of Arvada to the west... Both the larger and smaller Triangles of Opportunity create significant investment opportunities for Southwest Adams County.” (page 3) This makes the area, as the plan phrases it, “poised for investment.”

The Making Connections Plan serves as a guiding tool for development, redevelopment and supporting infrastructure for the unincorporated

land in southwest Adams County. “The Plan focuses on economic return on investment while being strategic and equitable for the existing community, neighborhoods, and businesses.” (page 4)

2016 ADAMS COUNTY / BRIGHTON DISTRICT PLAN

“Adams County and the City of Brighton partnered to draft the District Plan to study the feasibility of preserving farmland in southern Brighton that remains valuable for food production, while allowing for a range of development opportunities that consider the most efficient and sustainable use of the land. This plan helps decision-makers guide investment in the area for compatible residential, commercial, and industrial development, as well as farmland conservation, and local food and agritourism promotion.” (page 11) The District Plan is driven by the need to preserve the identity and heritage of Brighton. As the area’s farming heritage and local food economy are being affected by the development, the plan seeks to help decision-makers guide investments in the area that are better tailored for all stakeholders effected.

2017 DRCOG METRO VISION PLAN

The Metro Vision Plan is a regional plan adopted by the Denver Regional Council of Government (DRCOG) to address the common issues beyond the jurisdictional boundaries of the counties and municipalities of the

Denver region. This plan serves as a tool to promote regional cooperation and advise local jurisdictions. The plan is guided by five principles and aims to tackle a plethora of topics shared by the region, including development; connectivity; natural and built environments; health, inclusiveness, and livability; and the economy. Metro Vision is mindful of the challenges and opportunities in the region. As such, the plan incorporates common performance measures for most challenges, as well as sections that highlight their importance, previous successes in tackling them, and a special “making progress together” section.

2018 BALANCED HOUSING PLAN

The County commissioned a Housing Needs Assessment (HNA) to create a thorough economic and demographic description of the County. The findings were presented to various stakeholders who provided valuable input and possible solutions. This input also helped build the framework for developing the County’s Balanced Housing Plan (BHP). The BHP’s purpose is “to take the information collected from the HNA and stakeholder input, and present defined goals and outcomes through a multifaceted and collaborative approach.” (page 7)

“Over the last decade Adams County has experienced a wide range of economic and demographic transitions.” (page 7) These transitions made the County a desirable

destination for many seeking an inclusive community that provides plenty of lifestyle opportunities. In addition to that, Adams County’s housing climate and geographic location have also contributed to its population growth – fifth largest and second fastest in the region. This growth alongside the housing stock demands has “pushed housing prices to a point where many residents struggle to either find attainable housing or maintain their housing.” (page 7)

This plan addresses the housing challenges in Adams County and seeks to build a platform that will allow all areas of the County to support a spectrum of housing types to meet the needs of the County’s diverse and growing population.

2018 CLEAR CREEK CORRIDOR PLAN

Clear Creek runs approximately seven miles through southwest Adams County from Sheridan Boulevard to the South Platte River Confluence. Adams County currently owns approximately 178 acres of open space adjacent to Clear Creek. A regional trail and several trail access points have been developed through this corridor, but currently few other amenities are located along the corridor. The Clear Creek Corridor Plan provides a basis for future improvement projects that will provide a variety of recreational amenities while protecting and enhancing the natural systems in the Clear Creek

corridor. The goals of the plan include improving safety, making trail connections to surrounding neighborhoods and new transit areas, providing amenities that are lacking in the surrounding neighborhoods, improving habitat and ecological systems, and identifying locations for bank stabilization and restoration projects.

2018 RIVERDALE REGIONAL PARK MASTER PLAN

The Adams County Parks, Open Space & Cultural Arts Department worked to update the Riverdale Regional Park Master Plan. The park serves as a respite for people, contains an abundance of wildlife, provides a variety of recreational opportunities, and houses the Adams County Fairgrounds, Adams County Museum, and two 18-hole golf courses. Today, Adams County is trying to meet and balance the needs of the Regional Park clientele and visitors while looking to the future. A comprehensive master plan will ensure stewardship of natural resources, meet recreational demands of a growing regional population, as well as study the continued marketability and financial viability of the improvements to the regional facility.

2020 HAZARD MITIGATION PLAN

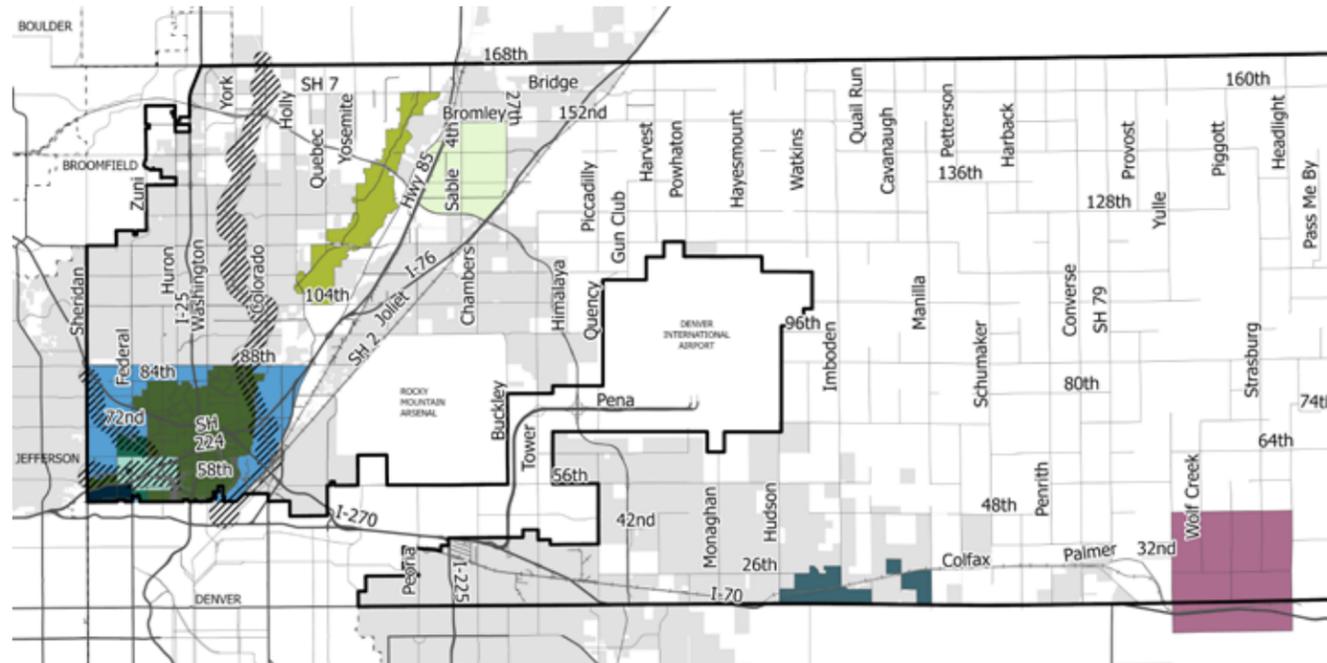
Adopted in November of 2020, the Hazard Mitigation Plan broadly addresses opportunities to reduce or eliminate long-term risks related to disasters and hazard events. The plan

includes a risk assessment for different hazard types, and identified potential mitigation strategies to minimize risks to people and property. The plan, completed in partnership with the Town of Bennett, City of Brighton, City of Commerce City, and Denver Water, outlines a Mitigation Action Plan for each. The Plan identifies thunderstorms, tornado/damaging wind, and winter weather as hazards of high significance. The Plan is “meant to be a living document that guides and integrates mitigation activities throughout the County.” (Page 1-2)

2021 COLORADO AIR AND SPACE PORT (CASP) SUB AREA PLAN

The Colorado Air and Space Port (CASP) was originally built in 1984 as the Front Range Airport to increase air cargo and general aviation business. In 2018, it was designated as Colorado’s first spaceport and the name changed to CASP. CASP is located on 3,100 acres of land, and provides opportunities to support business and technological advancement. It will serve as America’s hub for commercial space transportation, research and development. In order to deliver on the promise of CASP, a sub area planning effort is currently underway to identify a vision for the area and guide future development. While it is not currently located near significant residential areas, development around CASP is increasing, and the

MAP 2: SUBAREA PLANS MAP



Data Source: Adams County, CDPHE, DRCOG

NOT TO SCALE

LEGEND

- | | |
|------------------------------------|-----------------------|
| TOD and Rail Station Area | Adams County Boundary |
| Berkley Neighborhood | Railroads |
| Clear Creek Transit Village Vision | Roads |
| Clear Creek Valley TOD | Municipal Boundaries |
| Federal Boulevard Framework Plan | |
| Riverdale Road | |
| SW Framework | |
| Strasburg FLU | |
| The District | |
| Watkins Comp | |
| Welby Subarea Plan | |
| Making Connections | |

plan seeks to provide guidance for future land uses and infrastructure.

2021 SQUARE LAKE SUB AREA PLAN

Adams County and the City of Arvada are currently collaborating on a plan for the Square Lake area for the County, located between W. 60th Avenue on the north to W. 52nd Avenue on the south, and between Tennyson Street on the east to Sheridan Boulevard on the west. The area includes important rail resources, including the G-Line and commercial rail, as well as opportunities for new development on underutilized and vacant parcels.

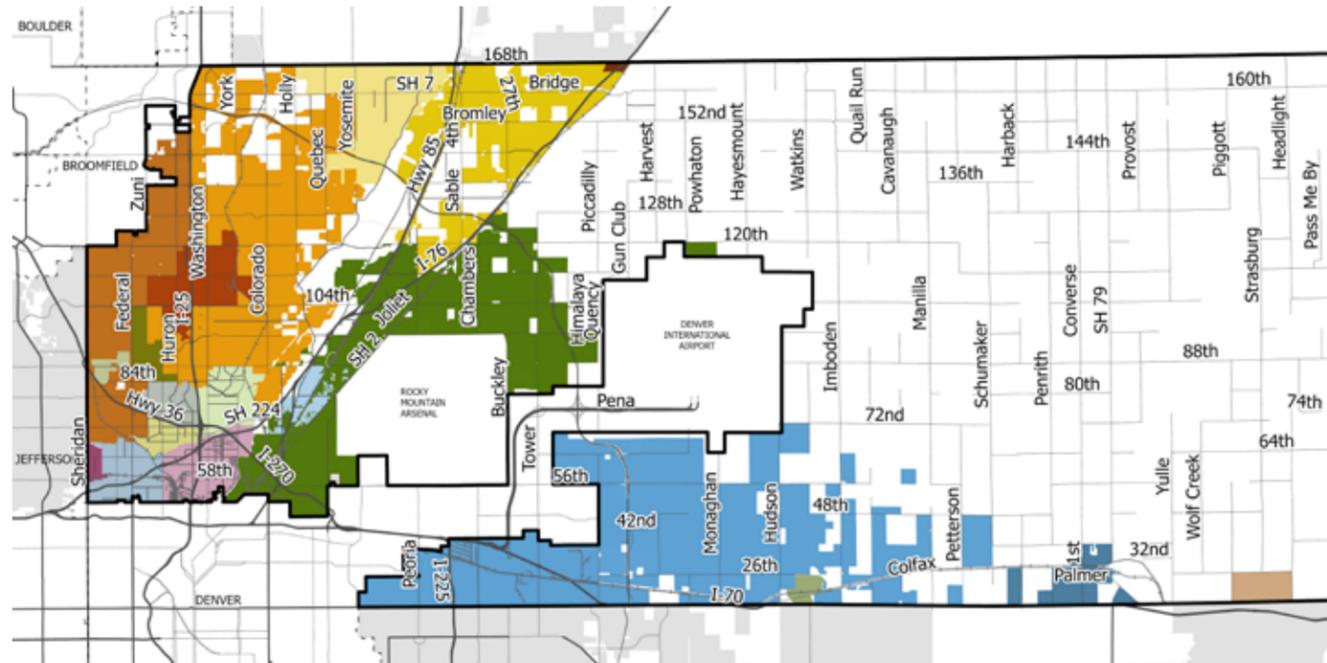
OTHER ONGOING PLANNING EFFORTS

In addition to these completed or active planning efforts, the County is exploring the creation of a County-wide Water Plan that would address how water is used throughout the County. While the County is not a direct water provider, its authority over land use decisions impacts where and how water is used. Phase 2 of the Comprehensive Plan will explore land use scenarios and the incorporation of water planning principles.

PLANNING EFFORTS SINCE 2012

- 2014 WELBY: WHERE DEEP ROOTS GROW. A COMMUNITY PLAN FOR FUTURE DEVELOPMENT
- 2014 THE FEDERAL BOULEVARD FRAMEWORK PLAN AND HEALTH IMPACT ASSESSMENT
- 2015 SUSTAINABLE ADAMS COUNTY 2030 PLAN (IN THE PROCESS OF BEING UPDATED)
- 2016 SOUTHWEST ADAMS COUNTY – MAKING CONNECTIONS – PLANNING AND IMPLEMENTATION PLAN
- 2016 ADAMS COUNTY / BRIGHTON DISTRICT PLAN
- 2017 DRCOG METRO VISION
- 2018 ADAMS COUNTY BALANCED HOUSING PLAN
- 2018 CLEAR CREEK CORRIDOR MASTER PLAN
- 2018 RIVERDALE REGIONAL PARK MASTER PLAN
- 2020 HAZARD MITIGATION PLAN
- 2021 COLORADO AIR AND SPACE PORT (CASP) SUB AREA PLAN (ANTICIPATED COMPLETION IN 2021)
- 2021 SQUARE LAKE SUB AREA PLAN (ANTICIPATED COMPLETION IN 2021)

MAP 3: MUNICIPALITIES AND PLACES



Data Source: Adams County, CDPHE, DRCOG

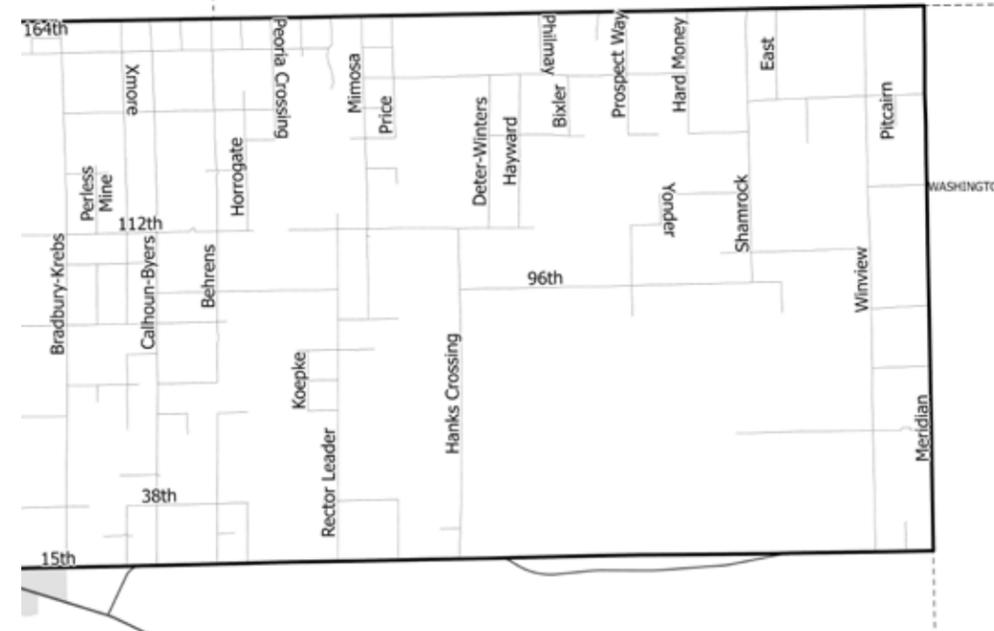
LEGEND

- City Boundaries
- Census Designated Places
- Arvada
- Aurora
- Bennett
- Brighton
- Commerce City
- Federal Heights
- Lochbuie
- Northglenn
- Thornton
- Westminster
- Berkley
- Derby
- North Washington
- Shaw Heights
- Sherrelwood
- Strasburg
- Todd Creek
- Twin Lakes
- Watkins
- Welby
- Adams County Boundary
- Roads
- Municipal Boundaries
- Railroads

GEOGRAPHY OVERVIEW

Adams County, Colorado (1,182 square miles) is located in the northeast quadrant of the state with the Denver metropolitan areas defining the western portion of the County and agricultural rural areas in the east. Denver International Airport is not located within the County boundary, but the County surrounds the airport almost entirely on the western portion, northeast of Denver.

Adams County abuts seven adjacent counties (clockwise from northwest corner): Broomfield City and County, Weld County, Morgan County, Washington County, Arapahoe County, Denver City and Jefferson County.

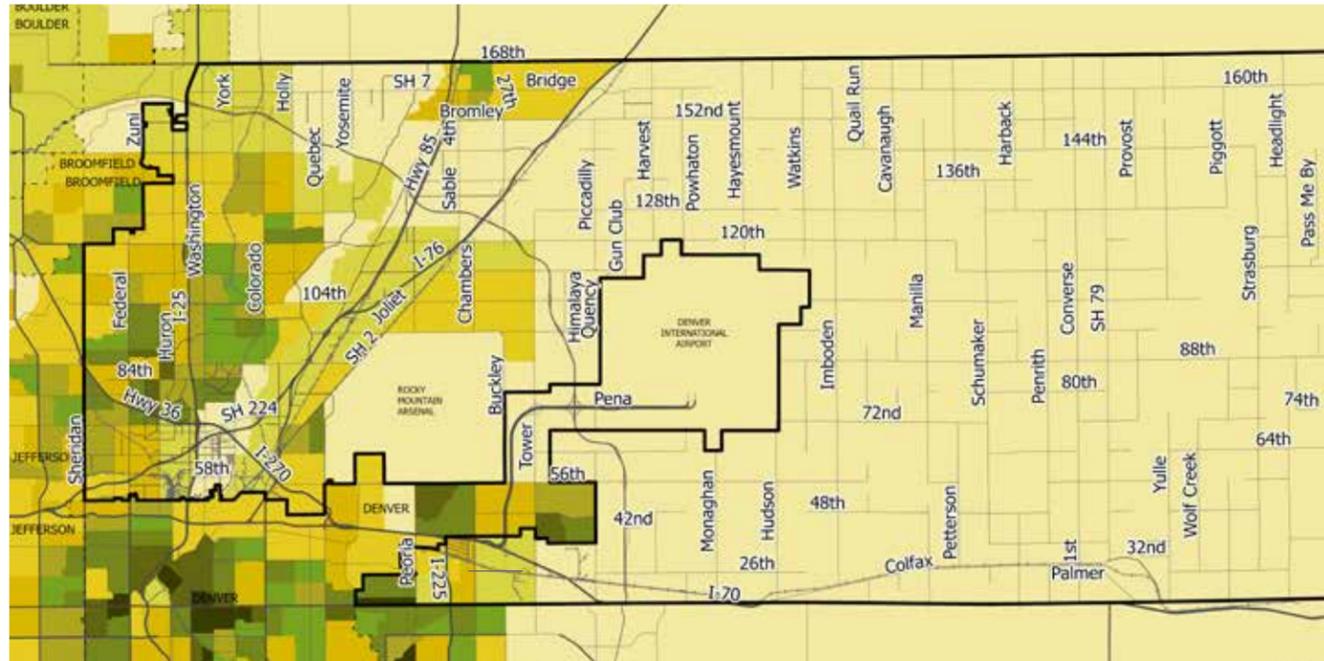


NOT TO SCALE

Table 1: Communities and Jurisdictions in Adams County

COMMUNITY NAME	TYPE	LOCATION IN MULTIPLE COUNTIES
Arvada	City	Jefferson
Aurora	City	Arapahoe and Douglas
Bennett	Town	Arapahoe
Berkley	Census-designated place	
Brighton (County seat)	City	Weld
Commerce City	City	
Derby	Census-designated place	
Federal Heights	City	
Lochbuie	Statutory Town	Weld
Northglenn	City	Weld
North Washington	Census-designated place	
Shaw Heights	Census-designated place	
Sherrelwood	Census-designated place	
Strasburg	Census-designated place	Arapahoe
Thornton	City	Weld
Todd Creek	Census-designated place	
Twin Lakes	Census-designated place	
Watkins	Census-designated place	Arapahoe
Welby	Census-designated place	
Westminster	City	Jefferson

MAP 4: POPULATION DENSITY BY CENSUS TRACT



Data Source: Adams County, ESRI - ACS 2020, DRCOG

LEGEND

2020 Population Density



NOT TO SCALE

DEMOGRAPHICS

Population and Households

According to data from the state demographer, the population of Adams County in 2020 was expected to be 528,857, which is approximately 16.4 percent higher than 2010, or a growth rate of 1.6 annually. Growth is projected to remain steady over the next five years at 1.8 percent annually (8.9 percent overall) reaching a population of 580,775 by 2025.

The population of unincorporated Adams County in 2020 was 100,558. That number has grown by around 16 percent since 2010.¹

¹ ESRI demographic data. This data includes current-year estimates and 5-year projections of U.S. demographic data. Esri develops the annual demographic datasets using a variety of sources, beginning with the latest base, then adding a mixture of administrative records and private sources to capture changes.

Population growth is expected to occur most significantly and rapidly in the westernmost portions of Adams County that are closer to Denver and other urban centers.

Within the high-growth areas, growth is projected to be concentrated along the Platte River Corridor, most notably on the northern portion.

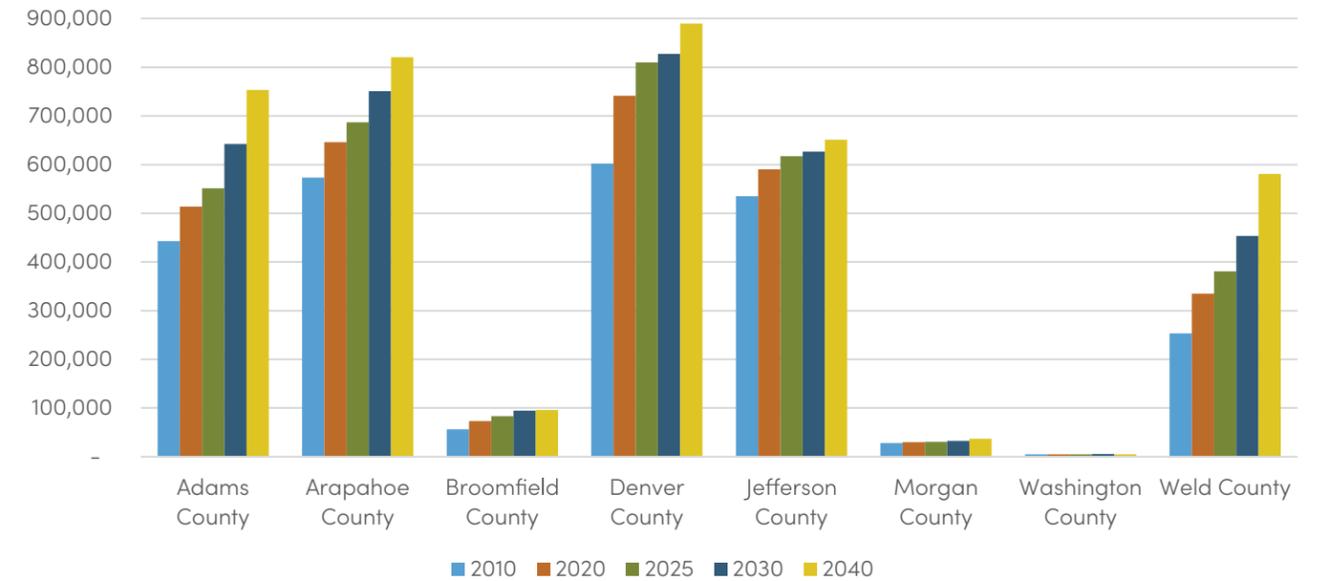
Brighton and Commerce City are expected to be the highest growth municipalities in the County. Although not represented in the available ESRI data, insight into County growth with the Aurora Highlands development would cause Aurora to be added to the list of high growth municipalities.

Table 2: Growth Comparisons to Adjacent Counties

	POPULATION				PERCENTAGE CHANGE	
	2010	2020	2030	2040	2010-2020	2020-2040
Adams	443,711	528,857	637,554	748,318	19.2%	41.5%
Arapahoe	574,819	664,990	738,737	805,299	15.7%	21.1%
Boulder	295,605	330,975	363,507	395,397	12.0%	19.5%
Broomfield	56,107	72,825	94,053	97,976	29.8%	34.5%
Denver	604,879	737,855	824,805	887,132	22.0%	20.2%
Douglas	287,124	354,332	408,792	448,475	23.4%	26.6%
Jefferson	535,651	586,065	625,644	650,289	9.4%	11.0%
Colorado	5,050,332	5,842,076	6,686,512	7,460,600	15.7%	27.7%

Source: State Demographer, 2020

Figure 17: Population Growth (20-Year Horizon)



Source:
 - 2010, 2020, and 2025 Population Data Retrieved from ESRI. 2020 Data
 - 2030 and 2040 population data retrieved from the Colorado Department of Local Affairs. 2020 Data

DID YOU KNOW?

528,857

ADAMS COUNTY'S
POPULATION
TODAY (2020)

748,318

ADAMS COUNTY'S
POPULATION IN
THE FUTURE (2040)

1.6%

ANNUAL
POPULATION
GROWTH
IN ADAMS
COUNTY



1.6%

ANNUAL
POPULATION
GROWTH IN
COLORADO
STATE

Data from Colorado State Demographer's Office, 2019

Adams County has 177,002 total households, which has grown by about 15.1 percent since 2010 (1.5 percent annually), almost the same rate as the population growth. Household growth is also expected to remain steady over the next five years (1.4 percent annually) and continue on the same trajectory as population growth reaches 189,510 households by 2025.

Average household size has grown slightly from 2.85 in 2010 to 2.88 in 2020 and is expected to grow to 2.89 by 2025.

Family households account for 70 percent of total households and are expected to remain roughly the same over the next five years.

Table 3: Households (20-year Horizon)

	HOUSEHOLDS				PERCENTAGE CHANGE	
	2010	2020	2030	2040	2010-2020	2020-2040
Adams County	154,154	177,002	232,567	278,033	14.8%	57.1%
Arapahoe County	224,494	251,512	298,146	328,991	12.0%	30.8%
Broomfield County	21,542	28,277	37,133	39,536	31.3%	39.8%
Denver County	264,050	324,602	379,955	417,278	22.9%	28.6%
Jefferson County	218,376	239,637	262,077	273,455	9.7%	14.1%
Morgan County	10,295	10,890	11,526	12,933	5.8%	18.8%
Washington County	1,978	2,033	1,989	1,973	2.8%	-3.0%
Weld County	89,610	117,943	161,044	209,763	31.6%	77.9%

Source:
- 2010, 2020, and 2025 Population Data Retrieved from ESRI. 2020 Data
- 2030 and 2040 population data retrieved from the Colorado Department of Local Affairs. 2020 Data

Age

The median age in Adams County is 34.1, which is up from 32.4 in 2010 and expected to continue growing slowly over the next five years.

Age distribution is skewed toward adults between the age of 25 and 44, accounting for the largest age segment at 29.6 percent of the population.

The County also has a larger portion of children (less than 14 years of age) than the state average, representing 23 percent of the population. This can be attributed to a larger number of young families.

The 65+ age group accounts for 11.3 percent and is expected to grow the fastest of any age segment, accounting for 12.4 percent of the population by 2025.

Table 4: Median Age

	MEDIAN AGE
Adams County	34.1
Arapahoe County	37.3
Broomfield County	37.9
Denver County	35.4
Jefferson County	42.2
Morgan County	37
Washington County	46.1
Weld County	34.8

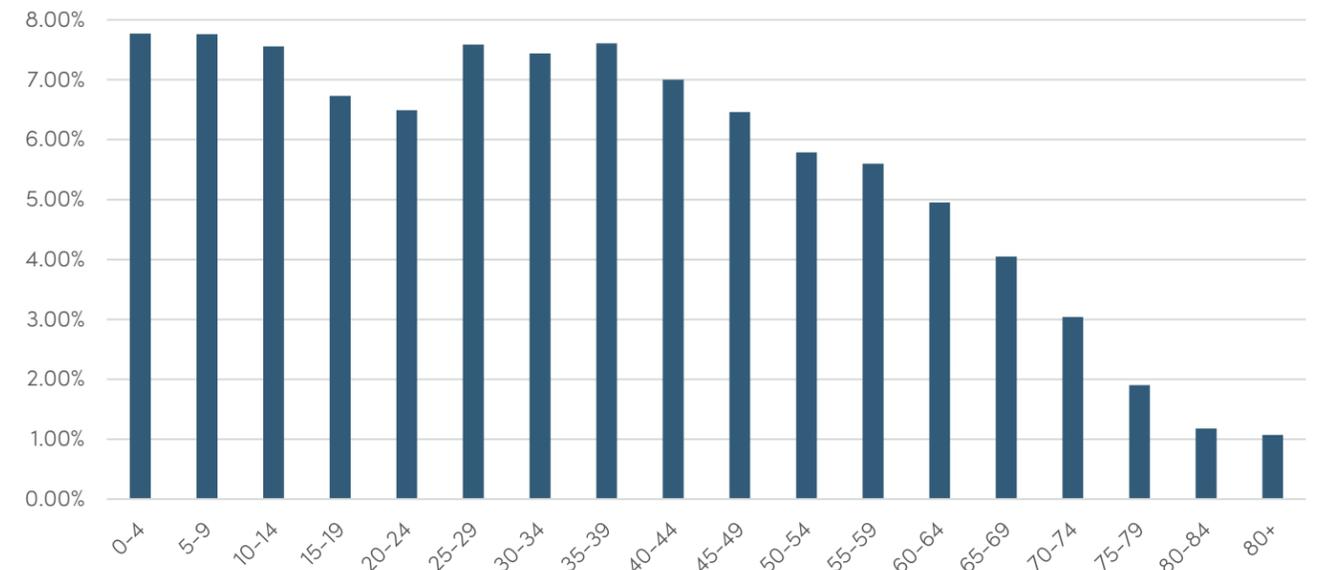
Source: Esri, 2020

DID YOU KNOW?

AGE

Adams County residents are younger than the surrounding areas with a large segment of young families with children.

Figure 18: Age Distribution in Adams County (2020)

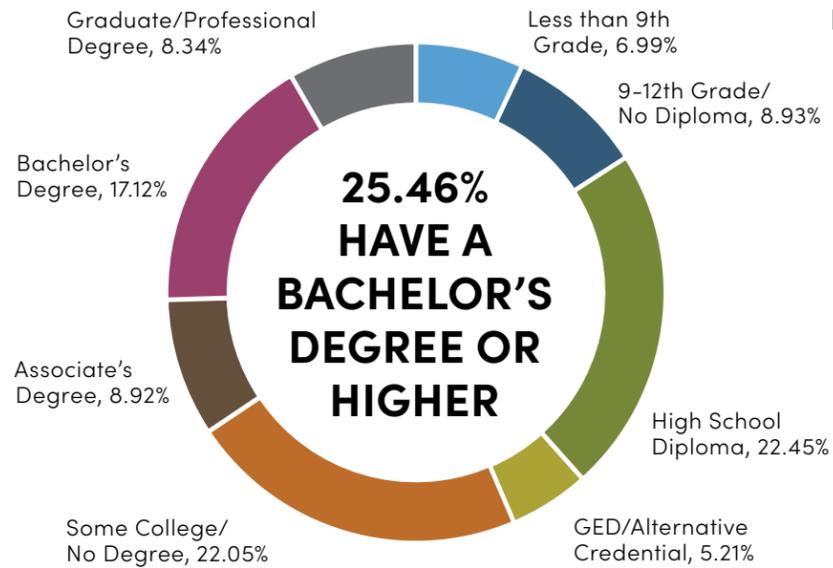


Source: Esri, 2020

Education

While 84 percent of Adams County residents have a high-school degree or higher, only 25 percent have a bachelor's degree or higher. This represents a less educated population compared to the State, where 40 percent of the population has a bachelor's degree or higher.

Figure 19: Education Attainment in Adams County



Source: Esri, 2020

Table 5: Education Attainment, County Comparison

	LESS THAN 9TH GRADE	9-12TH GRADE/ NO DIPLOMA	HIGH SCHOOL DIPLOMA	GED/ ALTERNATIVE CREDENTIAL	SOME COLLEGE/ NO DEGREE	ASSOCIATE'S DEGREE	BACHELOR'S DEGREE	GRADUATE/ PROFESSIONAL DEGREE
Adams County	6.99%	8.93%	22.45%	5.21%	22.05%	8.92%	17.12%	8.34%
Arapahoe County	2.95%	4.05%	16.55%	3.15%	20.16%	8.58%	28.32%	16.23%
Broomfield County	1.36%	1.52%	11.52%	2.20%	17.17%	8.48%	35.99%	21.76%
Denver County	5.63%	6.12%	12.72%	3.39%	16.24%	5.35%	30.48%	20.07%
Jefferson County	1.49%	3.65%	16.13%	3.40%	20.92%	7.96%	28.90%	17.54%
Morgan County	9.08%	9.67%	24.33%	6.19%	22.20%	9.35%	12.06%	7.12%
Washington County	1.73%	5.55%	26.70%	4.78%	32.64%	11.47%	12.73%	4.40%
Weld County	4.65%	6.47%	22.01%	4.61%	24.24%	9.31%	19.58%	9.13%

Source: Esri, 2020

Race and Ethnicity

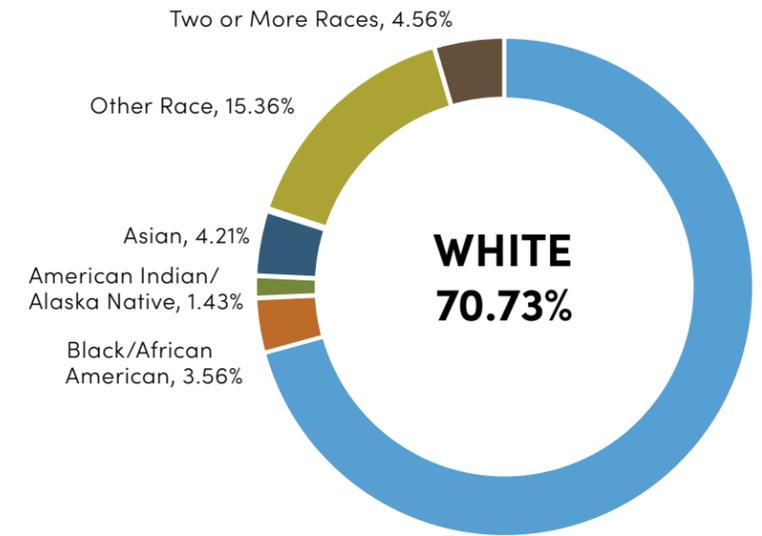
Adams County residents are predominantly white with 70 percent of the population reporting being white alone.

Other races make up for a small percentage of the population with Black, American Indian and Asians accounting for 3.6 percent, 1.4 percent, and 4.2 percent respectively.

However, with 15.4 percent of the population reporting as "some other race alone" and 4.6 percent reporting as "two or more races," the County has a significant number of non-white residents that is expected to continue growing.

The current Diversity Index is 73.8 and Adams County is expected to become more diverse over the next five years, reaching a diversity index of 75.1 by 2025.

Figure 20: Race in Adams County



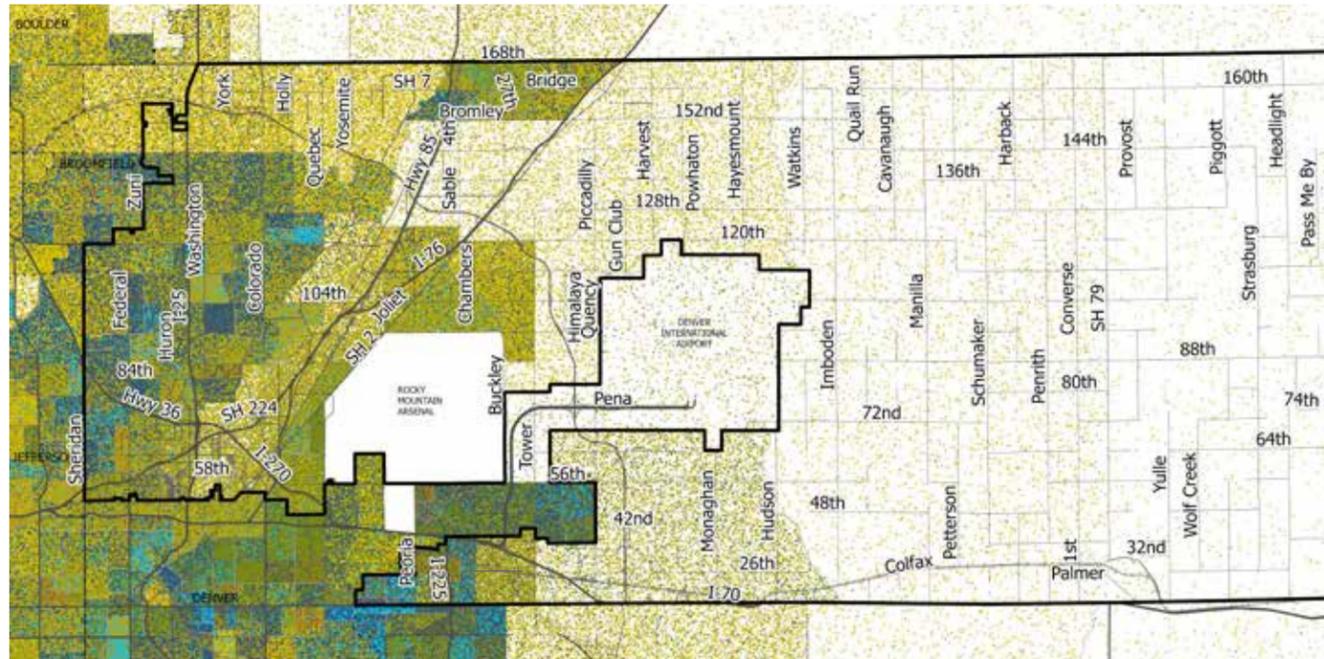
Source: Esri, 2020

Table 6: Race, County Comparison

	WHITE	BLACK/ AFRICAN AMERICAN	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	PACIFIC ISLANDER	OTHER RACE	TWO OR MORE RACES
Adams County	70.73%	3.56%	1.43%	4.21%	0.15%	15.36%	4.56%
Arapahoe County	69.79%	10.75%	0.78%	6.44%	0.25%	7.10%	4.89%
Broomfield County	84.17%	1.46%	0.61%	6.50%	0.11%	3.64%	3.50%
Denver County	66.68%	10.21%	1.28%	4.55%	0.20%	12.16%	4.92%
Jefferson County	87.17%	1.30%	0.89%	2.95%	0.09%	4.41%	3.19%
Morgan County	76.93%	3.43%	1.22%	0.69%	0.12%	14.83%	2.78%
Washington County	93.43%	1.21%	0.14%	0.30%	0.06%	2.75%	2.11%
Weld County	78.57%	1.57%	1.03%	2.04%	0.13%	12.80%	3.86%

Source: Esri, 2020

MAP 5: POPULATION BY RACE/ETHNICITY BY CENSUS TRACT



Data Source: Adams County, CDPHE, ESRI - ACS 2020, DRCOG

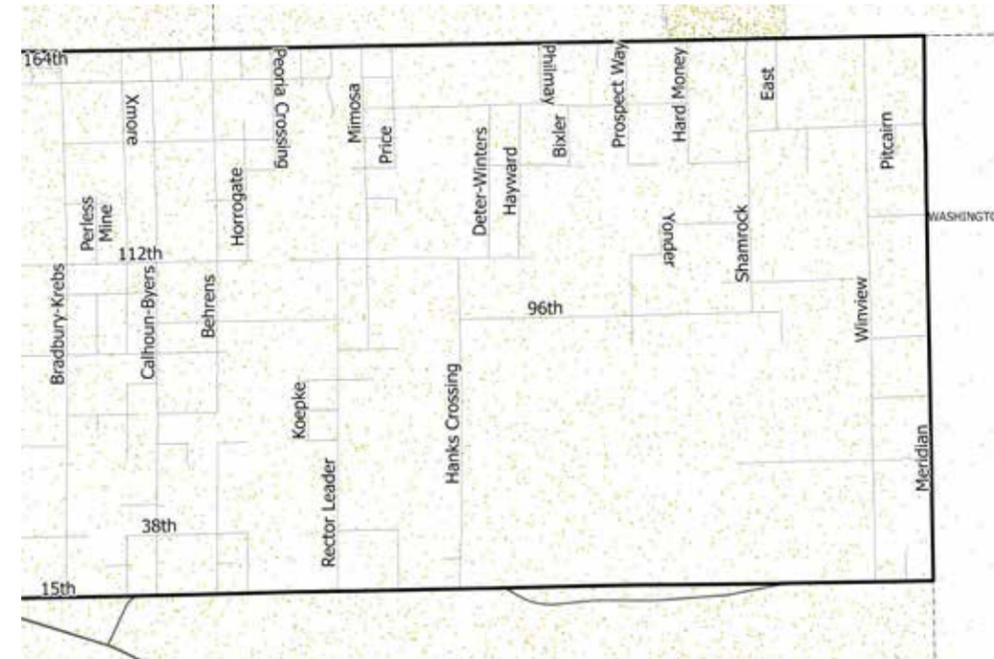
LEGEND

2018 Population By Race/Ethnicity. 1 Dot = 1 Person By Tract

- White (Non Hispanic)
- Hispanic
- Black (Non Hispanic)
- Native American (Non Hispanic)
- Asian (Non Hispanic)
- Native Hawaiian and Pacific Islander (Non Hispanic)
- Other (Non Hispanic)

A diversity index is used to understand the racial and ethnic make up of a specific geography. The Diversity Index is based on the Census block group level and ranges from 0 (no diversity) to 100 (complete diversity). As described by ESRI, when using this data "if an area's entire population belongs to one race group and one ethnic group, then an area has zero diversity. An area's diversity index increases to 100 when the population is evenly divided into two or more race/ethnic groups."

In Adams County, nearly 40 percent of the population identifies as Hispanic, and it is expected to increase in the future. The US Office of Management and Budget (OMB) defines "Hispanic or Latino" as "a person of Cuban, Mexican, Puerto Rican, South or Central American, or other Spanish culture or origin regardless of race."



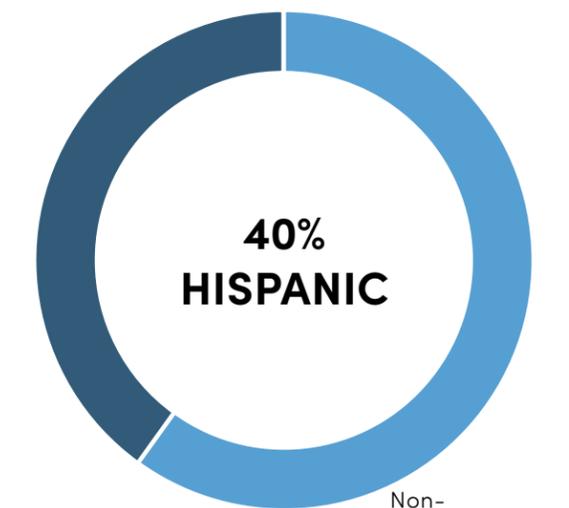
NOT TO SCALE

Table 7: Hispanic Population, County Comparison

	HISPANIC POPULATION
Adams County	40.05%
Arapahoe County	19.23%
Broomfield County	12.42%
Denver County	32.50%
Jefferson County	15.16%
Morgan County	35.86%
Washington County	10.51%
Weld County	33.66%

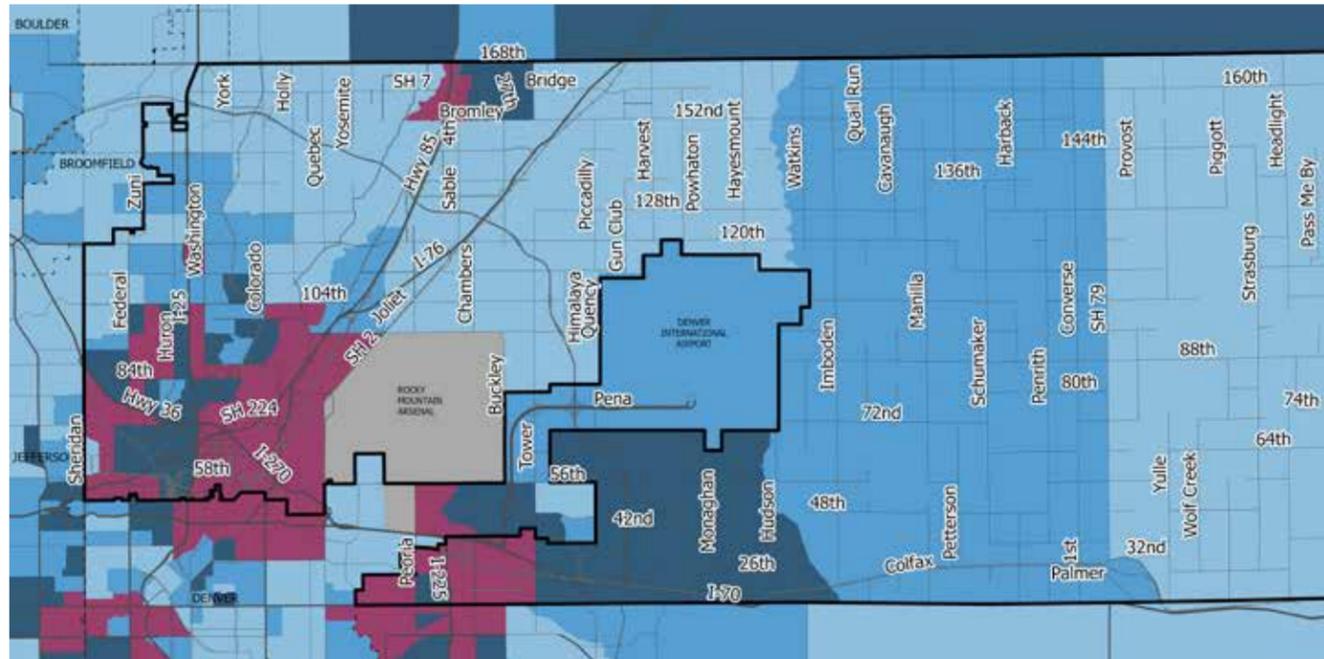
Source: Esri, 2020

Figure 21: Adams County Hispanic Population



Source: Esri, 2020

MAP 6: CDC VULNERABILITY BY CENSUS TRACT



Data Source: Adams County, CDPHE, CDC, DRCOG

Vulnerability and At-Risk Populations in Adams County

Within Adams County, the Centers for Disease Control provides insight into vulnerability at the census-tract level, as seen in Map 5. Additionally, the County can be compared to other surrounding Counties through a tabulation of at-risk population data as seen in Table 8.

What is CDC Vulnerability Data?

The Centers for Disease Control (CDC) assembled composite data to document levels of vulnerability for populations at the census-tract level. The index uses 15 variables that are defined by the U.S. Census. Although the index was developed to assist in disaster planning, the criteria used to determine vulnerable populations is relevant for the Comprehensive Plan

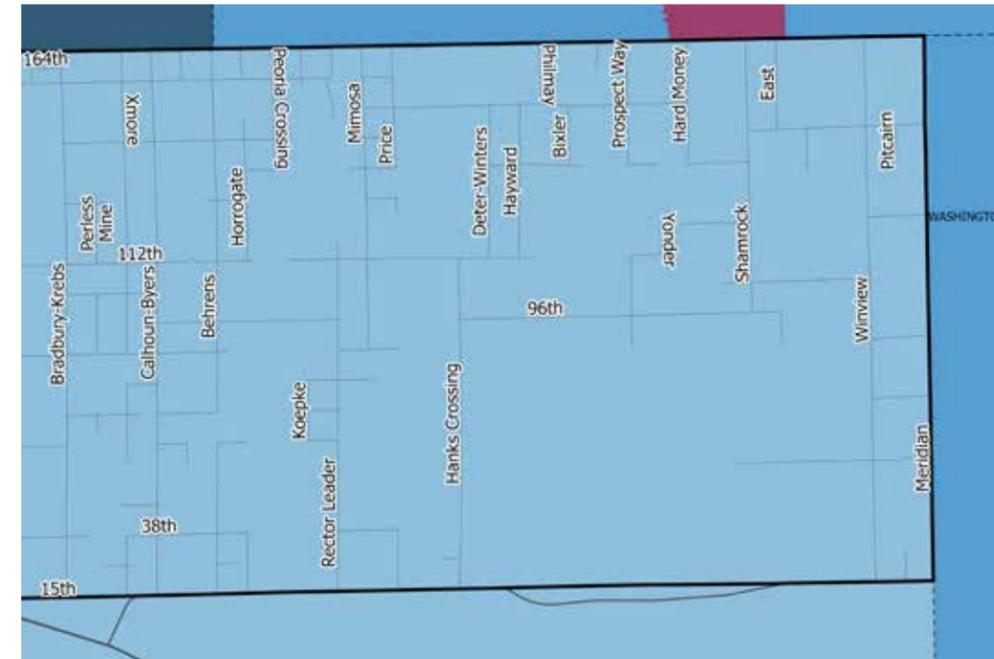
effort in that it can indicate the at-risk population and census tracts that represent a population that may be vulnerable for housing displacement and have a significant amount of overlap with environmental justice indicators. Four themes and social factors are used to generate the index listed below.

Socioeconomic status:

- below poverty
- unemployed
- income
- no high school diploma

Household composition and disability:

- aged 65 or older
- aged 17 and younger
- older than age five with a disability
- single-parent households



LEGEND

Overall SVI - Tracts



NOT TO SCALE

Minority status and language:

- minority
- speak English "less than well"

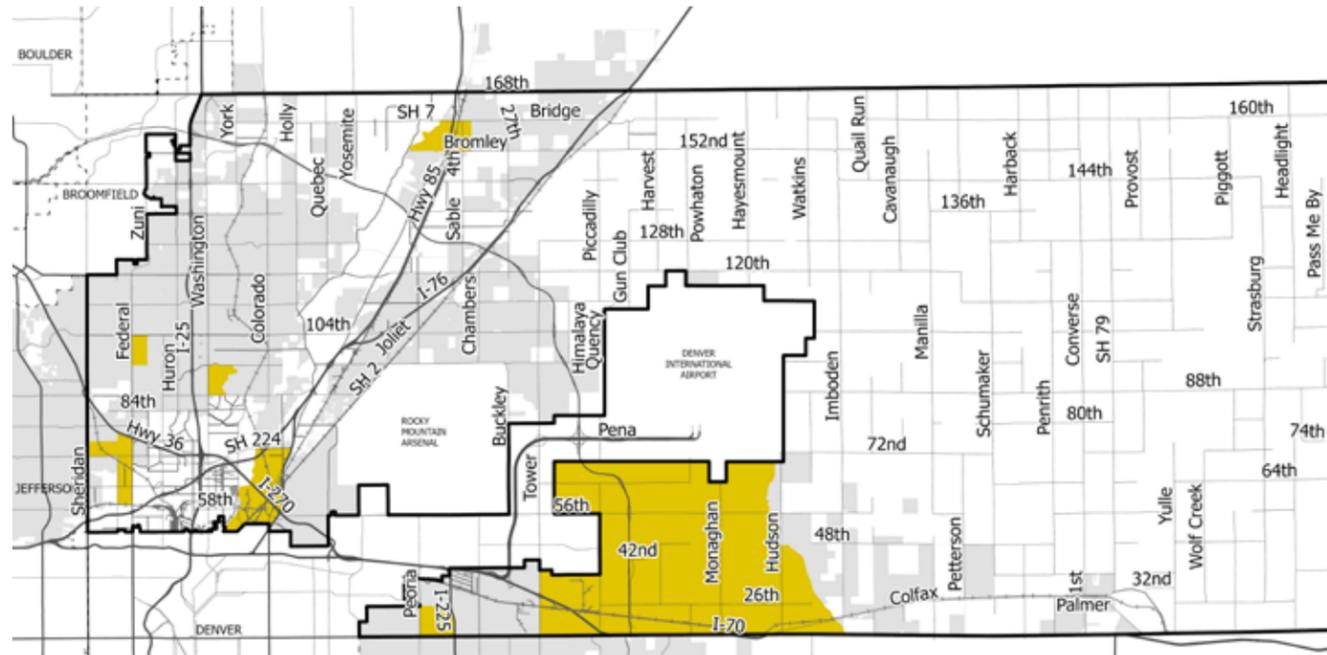
Housing type and transportation:

- multi-unit structures
- mobile homes
- crowding
- no vehicle
- group quarters

Table 8: At-Risk Population, County Comparison (2018)

	TOTAL HOUSEHOLDS DEFINED AS AT RISK	HOUSEHOLDS WITH 1+ PERSONS WITH A DISABILITY	HOUSEHOLDS RECEIVING FOOD STAMPS/ SNAP	HOUSEHOLDS BELOW THE POVERTY LEVEL	OWNER HOUSEHOLDS WITH NO VEHICLES	POP 18-64 SPEAK ONLY A LANGUAGE OTHER THAN ENGLISH
Adams County	42.26%	22.47%	9.18%	9.33%	1.27%	1.93%
Arapahoe County	33.44%	18.02%	6.45%	8.00%	0.96%	0.93%
Broomfield County	26.57%	16.85%	2.94%	5.78%	0.99%	0.46%
Denver County	37.88%	16.86%	8.12%	11.71%	1.18%	1.61%
Jefferson County	31.61%	19.02%	4.38%	7.18%	1.03%	0.29%
Morgan County	49.38%	25.87%	12.62%	10.31%	0.58%	1.60%
Washington County	42.79%	22.38%	7.23%	10.77%	2.41%	0.10%
Weld County	37.19%	19.94%	7.29%	8.84%	1.12%	0.83%

Source: Esri, 2018



There are nine Opportunity Zones in Adams County, which are discussed in more detail in the Economic Development and Five Strategic Corridor portions of this document. Note that all of the County's nine Opportunity Zones are located in census tracts that are either classified as medium-high vulnerability or high vulnerability according to CDC data. One of the criteria for consideration for the Opportunity Zone program is low income, among other factors.

What is the at-risk population?

As a comparison to the CDC data, ESRI defines at-risk population as:

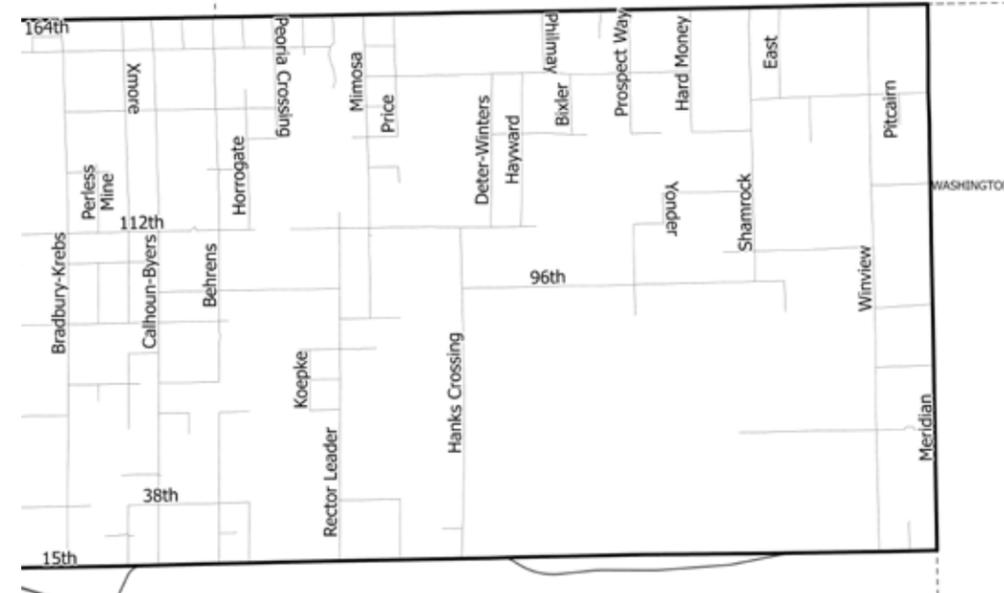
- Households with one or more persons with a disability
- Households receiving food stamps/ SNAP benefits
- Households below the poverty level

- Owner households with no vehicles
- Percent of the population 18 to 64 that do not speak English

The Adams County at-risk population is relatively high compared to adjacent counties at 42 percent. Washington County's at-risk population is about the same and Morgan County is higher at 49 percent. Adjacent counties with a smaller at-risk population include Arapahoe, Broomfield, Denver, Jefferson and Weld. Another data point to note is that compared to other adjacent counties, Adams County has the highest percentage of population that speak a language other than English. This data could align with the high rate of Hispanic residents in Adams County.

LEGEND

- Opportunity Zones
- Municipal Areas
- Adams County Boundary
- Railroads
- Roads



Potential COVID-19 Impacts

While it is expected that the COVID-19 pandemic has increased the number of at-risk households, 10 percent of households currently receive food stamps and 10 percent of households are below the poverty line in Adams County, compared to eight percent and 11 percent respectively in the State of Colorado. Additionally, unemployment numbers are expected to increase. At the start of 2020 unemployment was 7.3 percent, and by May of 2020 that had increased to 15%. COVID-19 impacts are likely to be significant across the Country and in Adams County. While the impacts are still being understood, as more data becomes available it will be incorporated into the final Comprehensive Plan.

Median Household income

Adams County’s Median Household Income (MHI) of \$70,282 tracks closely with that of the State of Colorado. Although still slightly lower than the state’s MHI of \$73,219, the County’s household income growth has outpaced the state over the past decade.

Table 11: Income distribution by Household, shows a large portion of low to middle income households. About 12 percent (12.2 percent) of households earn less than \$25,000 annually which is a smaller percentage of households than the state at 14.8 percent. About 20 percent (20.6 percent) of households earn between \$35,000 and \$50,000 annually. About 35 percent (35.1 percent) of households earn \$50,000 to \$100,000 annually representing a larger portion of low to middle-income households compared to the rest of the state at 30 percent. The County has fewer high-income households than the state with 32.1 percent of households earning more than \$100,000 annually compared to 35 percent in Colorado.

Household spending

Median Disposable Income for households in Adams County is \$55,546 and household expenditures average \$76,495 per year.

Housing costs account for the largest portion of average household expenditures at 31.6 percent, followed by food, transportation and pensions/social security at 12 percent, 11.8 percent and 10.7 percent respectively.

Healthcare and entertainment/recreation are the next largest expenditures accounting for 7.2 percent and 4.1 percent of total spending respectively.

Table 9: Median Household Income & Per Capita Income

	MEDIAN HOUSEHOLD INCOME	PER CAPITA INCOME
Adams County	\$70,282	\$30,608
Arapahoe County	\$78,532	\$41,239
Broomfield County	\$95,777	\$47,937
Denver County	\$69,541	\$45,079
Jefferson County	\$87,055	\$45,182
Morgan County	\$51,762	\$23,923
Washington County	\$51,118	\$27,254
Weld County	\$77,497	\$34,036

Source: Esri, 2020

Table 11: Income distribution by Household

HOUSEHOLD INCOME	PERCENTAGE OF HOUSEHOLDS	
	ADAMS COUNTY	COLORADO
<\$15,000	6.3%	7.9%
\$15,000-\$24,999	5.9%	6.9%
\$25,000-\$34,999	7.4%	7.3%
\$35,000-\$49,999	13.2%	11.5%
\$50,000-\$74,999	19.9%	17.3%
\$75,000-\$99,999	15.2%	13.6%
\$100,000-\$149,999	19.1%	17.9%
\$150,000-\$199,999	7.4%	8.5%
\$200,000+	5.6%	9.2%

Source: Esri, 2020

Table 10: Household Spending

COUNTY	AGGREGATE HOUSEHOLD INCOME (MILLIONS)	ANNUAL BUDGET EXPENDITURES (MILLIONS)	% OF ANNUAL BUDGET EXPENDITURES TO AGGREGATE HOUSEHOLD INCOME	RETAIL GOODS EXPENDITURES (MILLIONS)	% OF RETAIL GOODS EXPENDITURES TO AGGREGATE HOUSEHOLD INCOME
Adams	\$15,711	\$13,539	86.2%	\$4,036	25.7%
Arapahoe	\$26,645	\$22,805	85.6%	\$6,752	25.3%
Broomfield	\$3,520	\$2,988	84.9%	\$882	25.1%
Denver	\$33,362	\$28,681	86.0%	\$8,322	24.9%
Jefferson	\$26,653	\$22,628	84.9%	\$6,732	25.3%
Morgan	\$708	\$616	87.0%	\$191	27.0%
Washington	\$135	\$121	89.7%	\$42	31.2%
Weld	\$11,369	\$9,747	85.7%	\$2,937	25.8%

Source: Esri, 2020

TAKING A LOOK AT ADAMS COUNTY



Pecos Street Between US-36
and 70th Ave

This section takes a deeper look into Adams County through five key themes. These themes are:

- Community and Housing
- Natural Environment
- Built Environment and Connections
- Economic Development
- Cultural Heritage

COMMUNITY AND HOUSING

Adams County is growing, in population and diversity. This Plan will address the needs of the future populations by determining the best locations for housing growth and the types of housing units that can best serve them.

COMMUNITY AND HOUSING

HOUSING

Quantity and projected growth

As of 2020, Adams County has 181,504 housing units, which have grown by about 11.3 percent since 2010 (1.13 percent annually). Housing unit growth has lagged slightly behind population and household growth but is expected pick up speed over the next five years - growing by 1.4 percent annually and reaching 193,851 units by 2025. Data based off of Colorado State Demographer's Office does not differentiate housing needs for incorporated vs. unincorporated Adams County.

A very basic method of evaluating housing supply and demand is

to assess housing need based on population growth and household size. The County's average household size has increased from 2.85 in 2010 to 2.88 in 2020. The table below projects the total number of housing units needed in the County in order to maintain the current average household size based on population estimates from the Colorado State Demographer's Office. The County will need an additional 3,371 units per year in order to the maintain current household size through 2040.

Housing mix

The current housing stock consists primarily of single-family detached homes which account for 62.4 percent of housing units.

Table 12: Adams County Projected Housing Needs

	POPULATION EST.	HOUSING UNITS NEEDED	TOTAL UNITS NEEDED AFTER 2020	ANNUAL PRODUCTION NEEDED
2025	580,775	193,592	15,075	3,015
2030	637,554	212,518	34,001	3,400
2035	694,085	231,362	52,845	3,523
2040	748,318	249,439	70,922	3,546

Source: Colorado State Demographer's Office

Table 13: Housing Inventory by Type, County Comparison*

	1 DETACHED UNIT*	1 ATTACHED UNIT*	2 UNITS*	3 OR 4 UNITS*	5 TO 9 UNITS*	10 TO 19 UNITS*	20 TO 49 UNITS*	50 OR MORE UNITS*	MOBILE HOMES	BOAT/RV/VAN/ETC.
Adams County	106,773	12,585	1,397	4,693	7,760	11,979	9,777	5,100	10,900	74
Unincorporated Adams County	23,666	1,765	391	872	801	1,278	1,332	369	2,495	7
Arapahoe County	139,355	25,038	2,007	6,759	14,508	23,019	19,336	15,768	2,518	310
Broomfield County	17,015	1,582	85	709	979	1,632	1,960	2,937	743	5
Denver County	141,639	24,736	8,047	10,012	14,016	26,671	33,480	54,223	1,149	72
Jefferson County	155,836	21,945	2,567	7,751	12,496	15,326	11,917	8,288	2,493	92
Morgan County	8,284	267	233	282	366	469	211	196	1,404	6
Washington County	2,076	38	17	32	33	14	6	0	185	5
Weld County	77,790	3,675	2,324	3,108	4,092	3,369	2,236	1,807	7,729	68

Source: Esri, 2018
* 2018 Housing in Structure

Most multi-family units are in medium to large complexes (10-50 units) and account for nearly 13 percent of the housing stock.

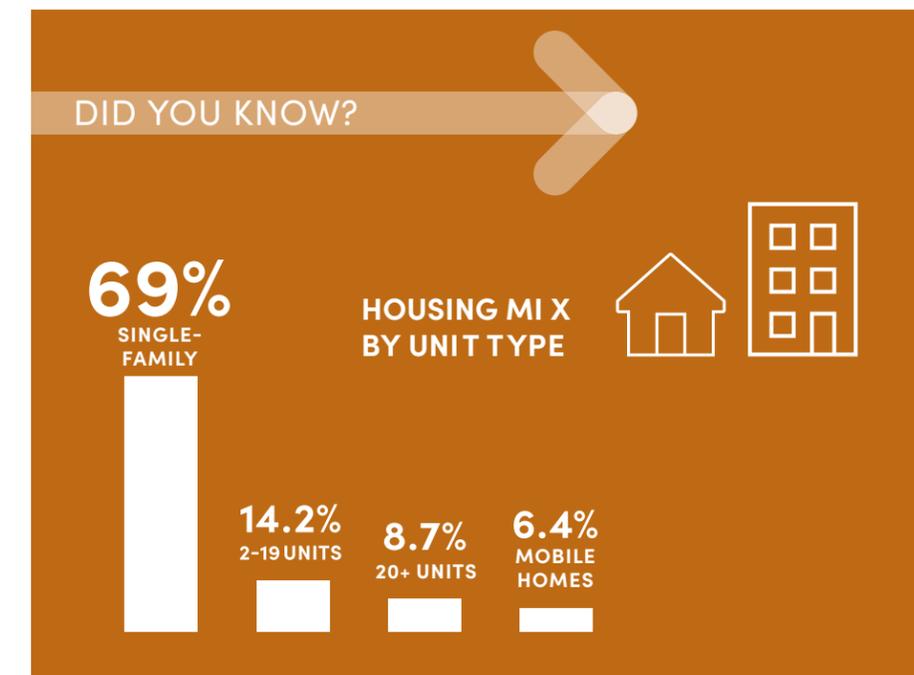
There is also a significant number of mobile homes which account for 6.4 percent of the housing stock. As of mid 2019 there were 21 mobile home parks in unincorporated Adams County.

The housing stock is slightly older with a median year built of 1986, likely attributed to an older supply of single-family detached homes in the County.

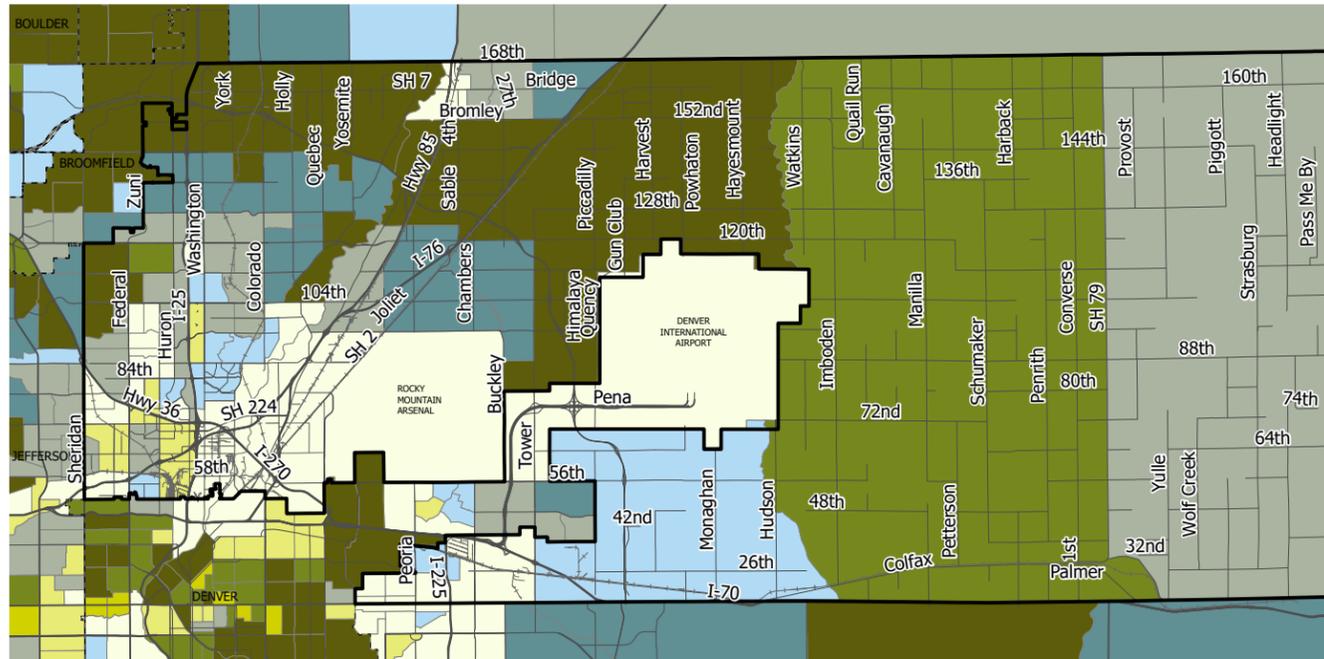
Housing tenure (rent versus own)

Housing tenure is heavily skewed toward owner-occupied units, which represents 63.4 percent of all units. Vacancy has decreased significantly since 2010 from 5.7 percent to 2.5 percent currently. Vacancy is expected to continue decreasing over the next five years as more renter households occupy these units. The impacts of COVID-19 on housing tenure and

vacancy is unknown at this time but economic turmoil impacting employment may have an effect on the County's housing.



MAP 8: HOUSING AFFORDABILITY (OWNERSHIP) AND HOUSEHOLD INCOME BIVARIATE



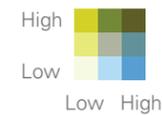
Data Source: Adams County, ESRI - ACS 2020, DRCOG

LEGEND

2020 Median Home Value



2020 Median Household Income



Note: data displayed by census tract

NOT TO SCALE

Housing affordability

Median home value is currently \$340,749 and expected to grow rapidly over the next five years (2.3 percent annually) to reach \$380,749 by 2025.

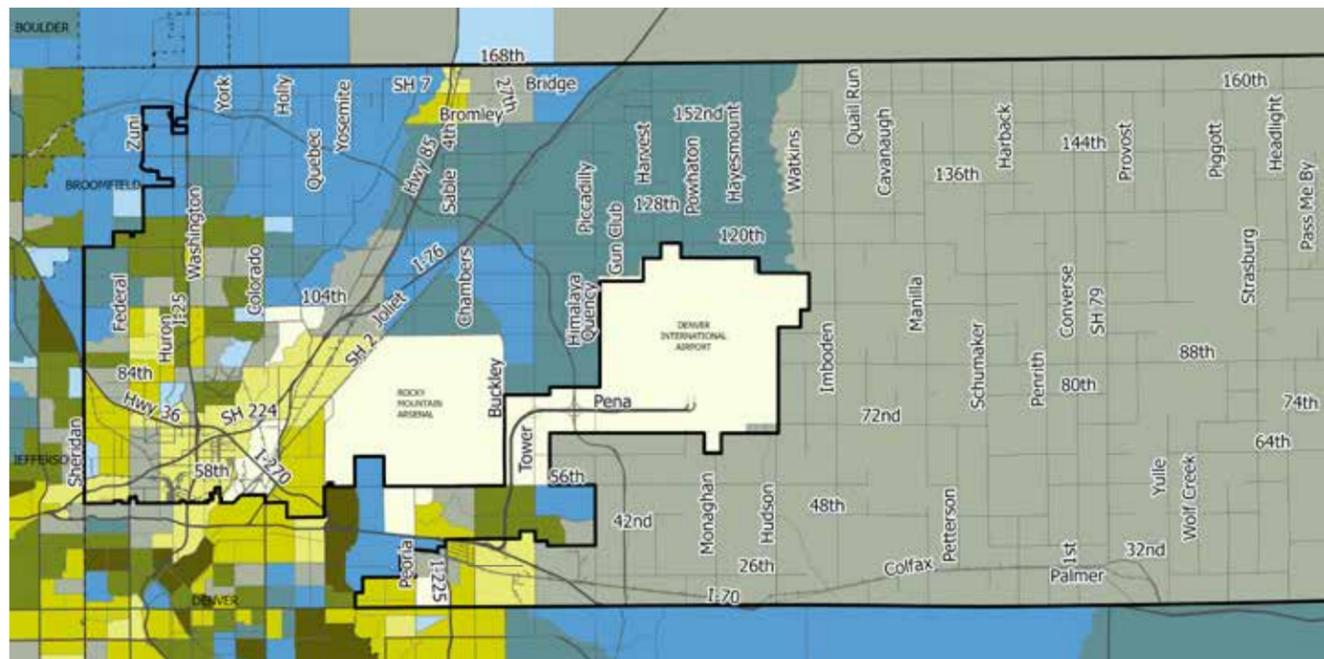
Average rent across all rental housing types is \$1,150 in Adams County which is just slightly higher than the state average of \$1,136.

An affordability index measures a household's ability to afford an item. A value of 100 represents a household earning the median income for the area, with a number over 100 indicating less affordability, and a number under 100 indicating more affordability.

The housing affordability index for Adams County is 120 with a percent of income for mortgage of 20.3 percent. This is slightly higher than the state's affordability index of 115 with a percent of income for mortgage of 21.9 percent.

Despite its proximity to Colorado's center of economic activity, Adams

MAP 9: HOUSING AFFORDABILITY (RENTAL) AND HOUSEHOLD INCOME BIVARIATE



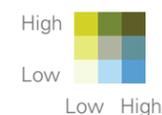
Data Source: Adams County, ESRI - ACS 2020, DRCOG

LEGEND

2020 Median Gross Rent



2020 Median Household Income



Note: data displayed by census tract

NOT TO SCALE

County is tracking relatively closely with statewide affordability indices.

Missing Middle

While overall supply and demand is important, housing supply should also meet the diverse needs and preferences of households within the County. Households in Adams County represent a wide range of incomes, ethnicities, sizes, and other dynamics that are best served by varied housing typologies. While some households may prefer low-density, single-family detached homes, others may prefer smaller, multifamily units with more density. These households are generally willing to sacrifice size for a more walkable, mixed-housing community. As Adams County continues to grow and diversify, the County should prioritize the housing of varying densities, sizes, and price points to provide residents with the widest possible variety of housing choices to reflect their needs and life cycle.

Cities and Counties around the country are suffering from a “missing middle” housing problem where middle housing refers to structures that have more density than one-unit developments but are not as dense as mid-rise unit apartment complexes. Five types of housing units were identified in the 2018 Housing Needs Assessment as being missing middle housing types: one-unit attached, two units, three to four units, and five to nine units. In 2015, these middle housing units accounted for 15.6

percent of housing supply and have grown slightly to account for 16.3 percent today.

Beyond having enough units to house the County’s population, a healthy housing market has supply that is balanced and aligned with the preferences and needs of its households. The 2017 Housing Needs Assessment identified the County’s “missing middle” housing issue as a lack of medium density housing units including condos, townhomes, duplexes, and smaller multi-family dwellings. The study noted that 18.4 percent of the population would prefer these middle housing units but that they only accounted for 15.4 percent of the housing stock.

As of 2019, medium density housing units still only account for 16.4 percent of the County’s housing stock although the demographic segments preferring these units have continued to climb. With millennials, baby boomers, young professionals and new families growing to account for more and more of the County’s population each year, the demand will almost certainly continue to rise. Providing missing middle housing presents an opportunity to increase housing options for a variety of income levels and develop a smaller footprint of land in order to do so. An evaluation

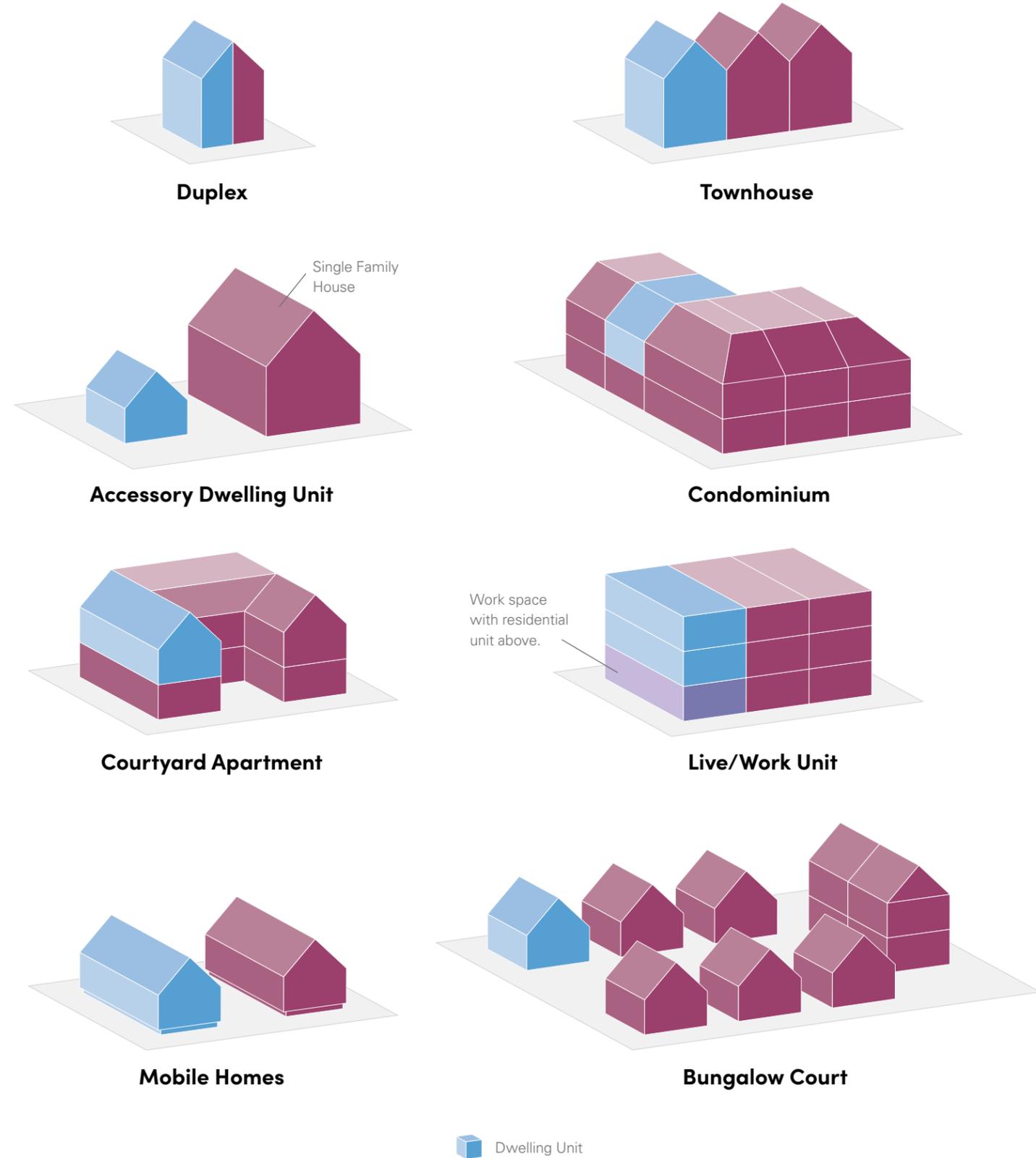


Figure 22: Housing typologies contributing to a diverse housing stock

of allowable housing types by zone district will be performed in Phase 2 in collaboration with community engagement efforts.

Demand for Housing

On a basic level, the 2018 Housing Needs Assessment found that the County does not have enough housing based on population projections and average household size. This trend has only continued. Based on the most recent population projections from the State Demographer’s office, the County will need, on average, an additional 3,371 units annually through 2040 in order to maintain the current average household size.

As of 2015, it was projected that the County would need to add 3,500 to 4,000 units per year in order to maintain an average household size of 2.85. As of 2020, average household size has increased to 2.88 persons per household, decreasing the annual need of new housing to 3,371 units per year.

Housing Costs

In terms of median home values and median gross rents, housing costs in Adams County have continued to outpace income growth. The 2017 Housing Needs Assessment found that median household income growth (24.6 percent) had lagged significantly behind home value growth (32.7 percent) and rent growth (47.4 percent). As a result, the number of cost-burdened households, who pay

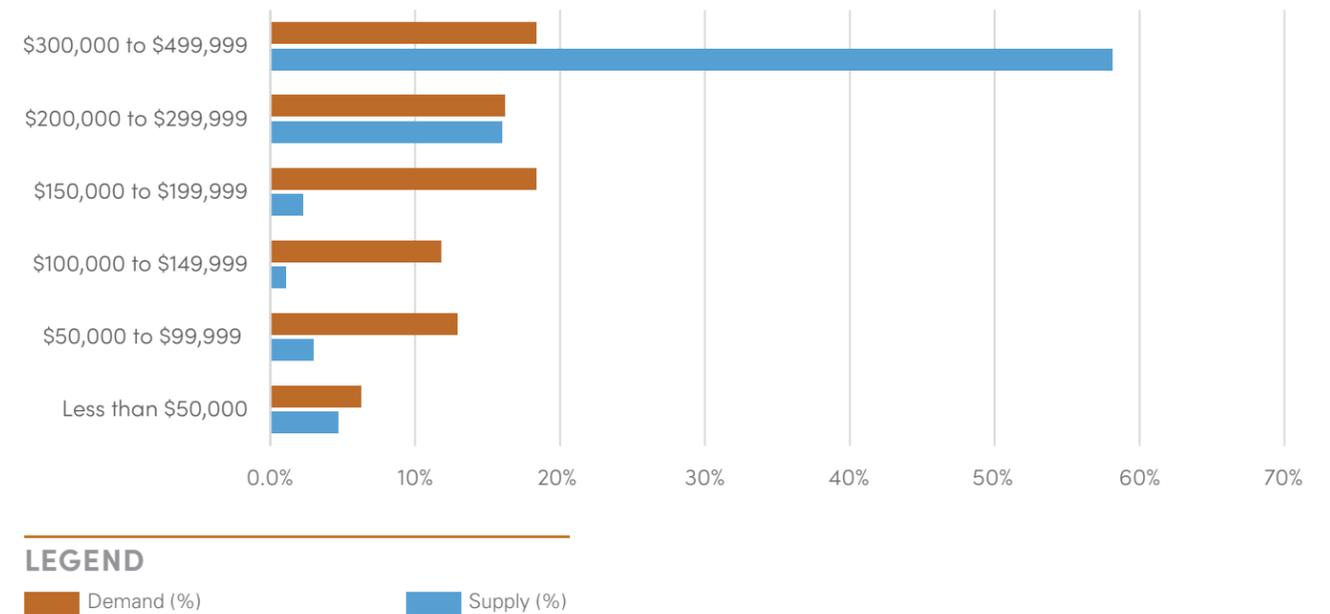
more than 30 percent of their income for housing, increased among all household types.

With median home values growing almost twice as fast as income, homeowners with and without mortgages will likely be impacted by an increase in the assessed value of property, resulting in increased property taxes. Rising property taxes may force some homeowner to sell their properties and relocate to rental housing, which has also become less affordable. As more households become cost-burdened, dependency of public services is likely to increase as well.

Findings in the 2020–2024 Adams County Consolidated Plan indicate that housing affordability remains a critical issue in Adams County. Systemic issues related to affordability have been compounded by explosive population growth within the Denver Metro area. The Plan found that “the current availability of housing units does not meet the needs of households at all income levels in Adams County.”¹ Issues related to affordability are particularly severe for extremely and very low-income renters, however, problems with affordability extend to low and moderate income households as well. Additional findings within The Plan related to affordability include the following:

¹ 2020 – 2024 Adams County Consolidated Plan | Adams County Government (adcogov.org) Retrieved from <https://www.adcogov.org/sites/default/files/2020-2024%20Adams%20County%20Consolidated%20Plan%20Draft.pdf>

Figure 23: Housing Supply Vs. Demand (2019)



LEGEND

■ Demand (%) ■ Supply (%)

Source: Colorado State Demographer’s Office

- Most of Adams County rental units (46%) are in the \$1,000 to \$1,499 range according to the 2017 ACS, which is well above what renters with housing needs can afford. The greatest need for housing assistance in Adams County is for renters earning \$25,000 and less, needing rents under \$600 per month (including utilities).
- Regional housing pressures and price increases are impacting both owner and renter occupied housing affordability in Adams County. The median home value in Adams County increased 106 percent between 2000 to 2017, while the median rent rose by 83 percent between 2000 and 2017.
- Renters earning less than \$25,000 per year have a hard time finding rental units they can afford. There are an estimated 3,254 rental units in Adams County, 6 percent of total rental units, with rents \$600 or less per month (accounting for utilities). There are 12,231 renters who need

DID YOU KNOW?

AVERAGE HOUSEHOLD SIZE
2.88 IN ADAMS COUNTY (2020) **2.51** STATE OF COLORADO (2021)

MEDIAN HOUSEHOLD INCOME
\$75,804 ADAMS COUNTY **\$77,127** STATE OF COLORADO

TOTAL # OF HOUSING UNITS
178,517 IN ADAMS COUNTY 2019 **165,046** IN ADAMS COUNTY 2015

rents this low leaving a gap of 6,372 units.

- Most rental units in Adams County fall in the \$800 to \$1,999 range (77% of all rentals) which is not affordable to low income renters.

Affordability Gap

In addition to increasing housing costs, the median sales prices of homes in Adams County have continued to soar, resulting in growing affordability gaps. The 2018 Housing Needs Assessment found that affordability gaps in Adams County had increased at all income levels between 2006 and 2015, but particularly for households at or above the median household income level.

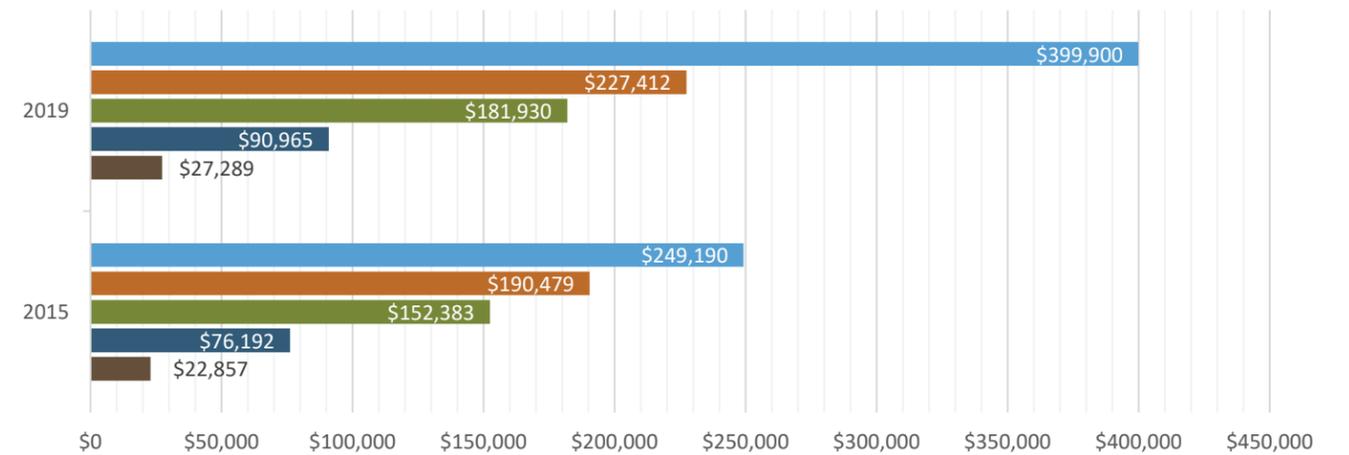
As of 2019, we see that the trend has continued with gaps increasing at all income levels, but most significantly for households at or above the County's median household income level. For households earning 100 percent of median household income, the affordability gap has increased nearly 200 percent from 2015 to 2019. The gap for households earning 80 percent, 50 percent and 30 percent of County median household income has increased by 125 percent, 79 percent, and 65 percent respectively since 2015.

The additional housing needed to close the affordability gap is unlikely with recent rates of construction and will require a dedicated effort from the County to provide options for all income levels.

Preservation of Existing Housing

Adams County includes a significant amount of older housing stock, and has one of the highest percentages of mobile homes in the Denver-metro area. The current housing provides a critical portion of accessible and attainable housing for the community. As growth pressures continue, there is a risk that these housing units could disappear, and residents could be displaced. Ensuring policies that preserve existing housing units is critical to ensuring continued affordability in the County.

Figure 24: Adams County Affordability Gap (2019)

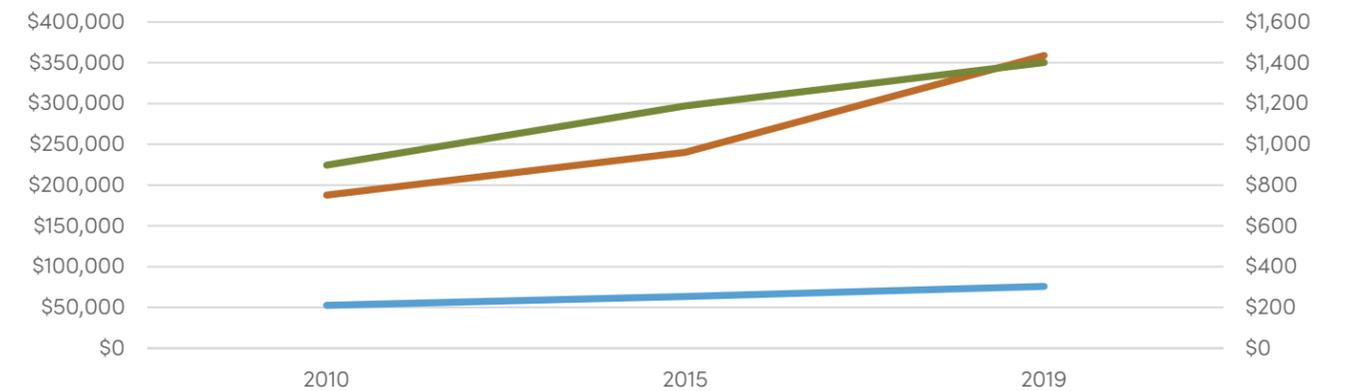


LEGEND

- Home Price Affordable to HH's earning 100% of MHI
- Home Price Affordable to HH's earning 80% of MHI
- Home Price Affordable to HH's earning 50% of MHI
- Home Price Affordable to HH's earning 30% of MHI
- Median Sales price

Source: Colorado State Demographer's Office

Figure 25: Adams County Affordability Gap



LEGEND

- Median Household Income
- Median Home Value
- Median Gross Rent

Source: Colorado State Demographer's Office, 2019

COMMUNITY AND HOUSING:

STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS ANALYSIS

A SWOT analysis provides the foundation of understanding for the Adams County Comprehensive Plan. Although the analysis is structured like four distinct quadrants, there is actually an interplay between strengths, weaknesses, opportunities and threats.

- **Strengths** describe what the County excels at and what makes it distinct. Strengths should be supported and amplified where possible.

- **Weaknesses** stop the County from reaching full potential. They are areas where the County needs to improve. Weaknesses can become opportunities.
- **Opportunities** refer to favorable external factors that could give the County an advantage. Opportunities can turn into future strengths.
- **Threats** refer to external factors that have the potential to harm the County. Threats should be minimized, mitigated and/or proactively planned for.

Table 14: Community and Housing SWOT Analysis

Note: A checkmark indicates a relationship between the SWOT analysis content and the plan value lenses (equity, sustainability and livability). Details of this relationship will be further evaluated during Phase 2 of the Comprehensive Planning process and plan creation.

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
POPULATION DIVERSITY			
Strength			
» Adams County boasts population diversity.	✓		
Weakness			
» Lack of place-based recognition of population diversity and international residents.	✓		✓
Opportunity			
» Linking place-based strategies with the people who live there such as international markets which could dovetail with economic development goals.	✓		✓
Threat			
» Population diversity could decrease if housing affordability and displacement mitigation are not proactively planned for.	✓	✓	✓

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
PROJECTED POPULATION GROWTH			
Strength			
» Adams County is one of the fastest growing Counties in Colorado, projecting an additional 200,000 residents over the next 20 years.	✓	✓	✓
Weakness			
» The development of new housing units lags behind the pace of population growth.	✓	✓	✓
Opportunity			
» Develop housing at a pace that matches population growth, in strategic infill locations within proximity of employment centers and transit.	✓	✓	✓
Threat			
» Without the development of adequate housing supply, several threats could result including an increase in the homeless population, displacement for at-risk populations and decreased affordability.	✓	✓	✓
HOUSING PRODUCT DIVERSITY AND AFFORDABILITY			
Strength			
» Adams County is generally more affordable than other options in the Denver metropolitan area. (Note: the southwest portion of the County shows gross rents at a similar level as Denver according to the map in Existing Conditions Report.)	✓		✓
Weakness			
» Adams County's for sale housing stock is mostly single-family residences and the County does not currently have much supply of for sale multi-family units.	✓	✓	✓
» Additional housing in unincorporated Adams County is more expensive for the County than commercial development.		✓	
Opportunity			
» Increasing density in some locations (such as proximate to employment centers and transit) by providing more "missing middle" and attainable for sale housing.	✓	✓	✓
» Explore the creation of an affordable housing program or other programs such as height incentives in exchange for the provision of affordable housing (may require change to State Law).	✓	✓	✓
» Explore solutions to accommodate the existing homeless population including provisions for homelessness prevention and housing assistance.	✓	✓	✓
Threat			
» The Construction Defect Law, a Colorado State Law, is a barrier for developers to provide more for sale multi-family housing.		✓	
» The cost of land and new infrastructure is a barrier to the development of new affordable housing.		✓	✓

NATURAL ENVIRONMENT

Climate change is an existential threat we all must face. Through a combination of adaptation and carbon reduction (mitigation) strategies Adams County will show leadership and environmental resilience.

NATURAL ENVIRONMENT ENVIRONMENT

Adams County is classified as a Central Shortgrass Prairie ecoregion (or biome) with the major habitat being temperate grasslands,

savannas and shrublands. The relative aridity of the grasslands is a defining characteristic, with a typical one to two month drought period in the summer, unlike tall and mixed grass prairies to the east. The soils in the undeveloped regions are generally

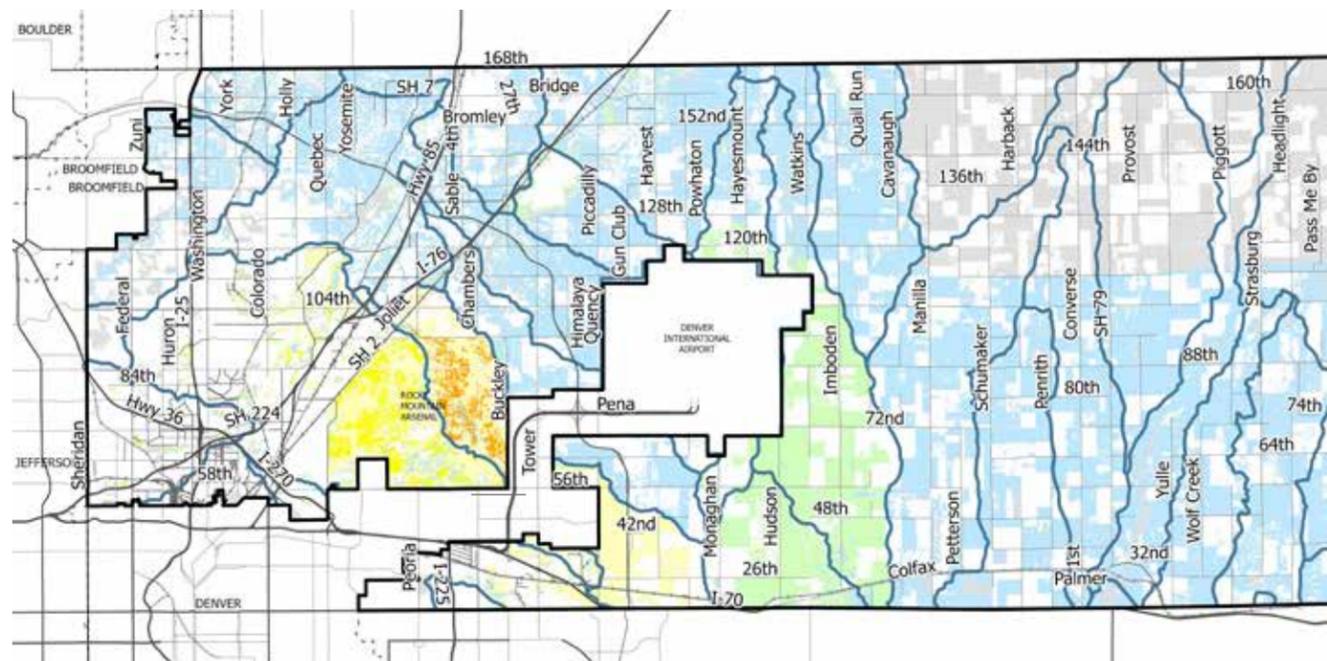
nutrient-rich, and store most of their carbon below ground in the soil and root structures of the prairie grasses.

While historically the keystone species was the bison who maintained much of the environment by applying grazing pressure, the region is inhabited now by a plethora of animal species adapted to living in the open such as pronghorn antelope, prairie dogs, and cattle. There may be state and/or federally listed species in the area including burrowing owls, Prebbles jumping mice, and Ute Lady's Tresses orchids, though occurrences are not extremely likely and would be most concentrated proximate to water bodies.

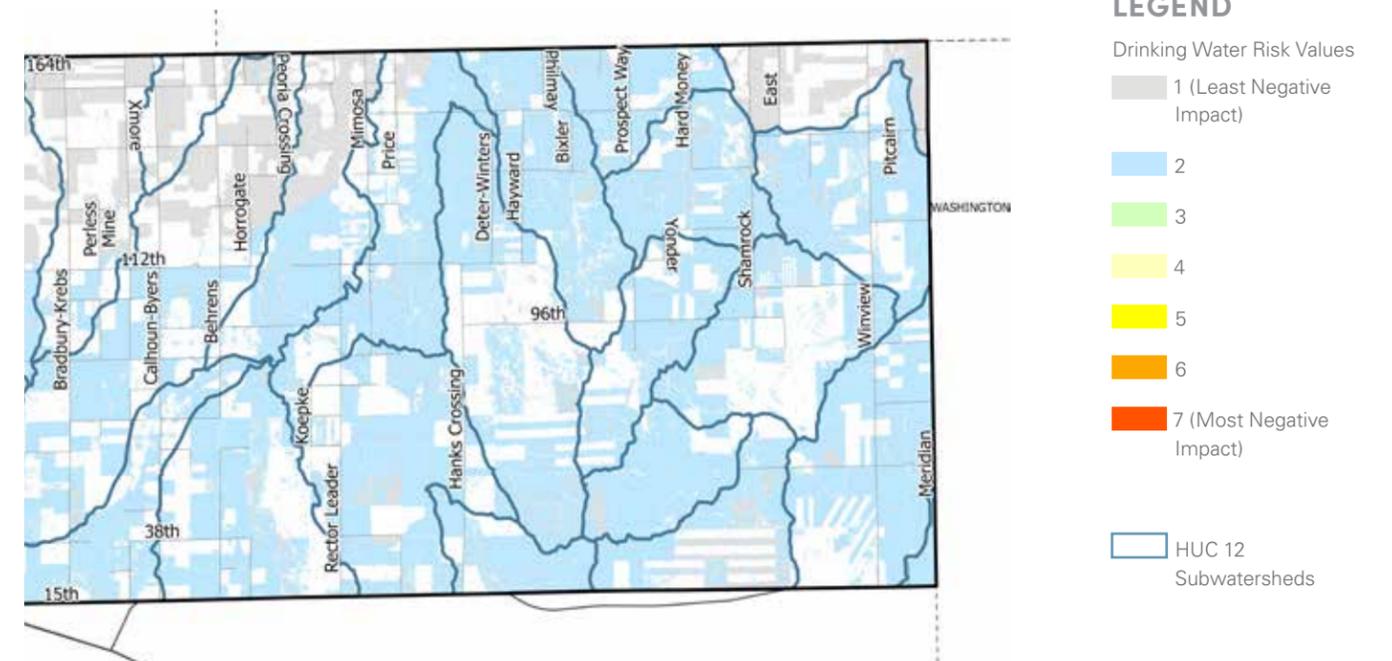
While there has certainly been increased fragmentation of habitat due to development, there is still a strong potential to link habitat into defined corridors that would allow freedom of migration and support native populations of flora and fauna. The relative abundance of un- and underdeveloped prairie in the County is an opportunity for the County to look at strategic planning to preserve, restore and combine these natural areas with recreation activities and cultivate areas of higher total ecological and resource value.

Human activities have created significant negative impacts to the natural environment in Adams County, with ongoing air quality

MAP 10: SUBWATERSHEDS AND DRINKING WATER RISK



Data Source: Adams County, DRCOG, Spirit Environmental, CDPHE, CONHP, NHD



LEGEND

Drinking Water Risk Values

- 1 (Least Negative Impact)
- 2
- 3
- 4
- 5
- 6
- 7 (Most Negative Impact)

HUC 12 Subwatersheds

NOT TO SCALE

impacts, contamination of land and water, and habitat destruction leading to impaired areas in various degrees. Climate change is expected to exacerbate these impacts; the additional carbon dioxide concentrations and seasonal changes are expected to increase things like pollen count further deteriorating air quality, potentially causing more allergy issues. The locations of the more significant landfill and industrial contamination correlate with the historical and existing locations of populations of residents that are typically less affluent and more diverse than Adams County residents as a whole. A better understanding of the underlying environmental justice issues and conditions will help to mitigate those moving forward, and will be explored in the Phase 2.

NATURAL RESOURCES

Adams County has abundant solar resources and relatively marginal wind resources, providing differing pathways for utilization. The solar availability, measured in terms of average annual direct normal irradiance, ranges from roughly six to 6.25 Watts/square meter, which is more than sufficient to justify installations of both solar photovoltaics (PV) and concentrated solar. According to the recently developed Brightfields GIS database and tool, there are a number of marginal land use sites in Adams County with a high potential for solar development. Avoiding higher value

sites and looking for opportunities to co-locate solar with agricultural uses or otherwise less useful land can provide a multitude of benefits and avoid underutilization of high value land in the County. The potential for community scale solar in the County is significant, and solar is a viable option for powering residential, commercial and industrial uses. The high quantity of land considered marginal due to poor environmental conditions, can also be seen as a potential opportunity to develop solar energy sites that are compatible with such lands under the right conditions. There are already community solar gardens developed in the County, and the potential nexus of innovation and potential will be an opportunity for the County to explore.

The wind resource is less robust. While wind in the area can be gusty and gets better the further east one goes, reaching wind power class three in some areas, the potential for electricity generation by wind is rather limited overall.

In terms of resource storage and underground reserves, there are limited water resources and moderate mineral and fossil fuel resources. The County lies in the South Platte River basin, and while some water is stored in local reservoirs, much of the County's water comes from reservoirs in other river basins including the Colorado River Basin on the West Slope. Local aquifers include the Fox Hills aquifer, the Arapahoe aquifer, and the Laramie Foundation, though

all are seeing some level of depletion and are not relied upon for significant quantities of water outside of domestic wells.

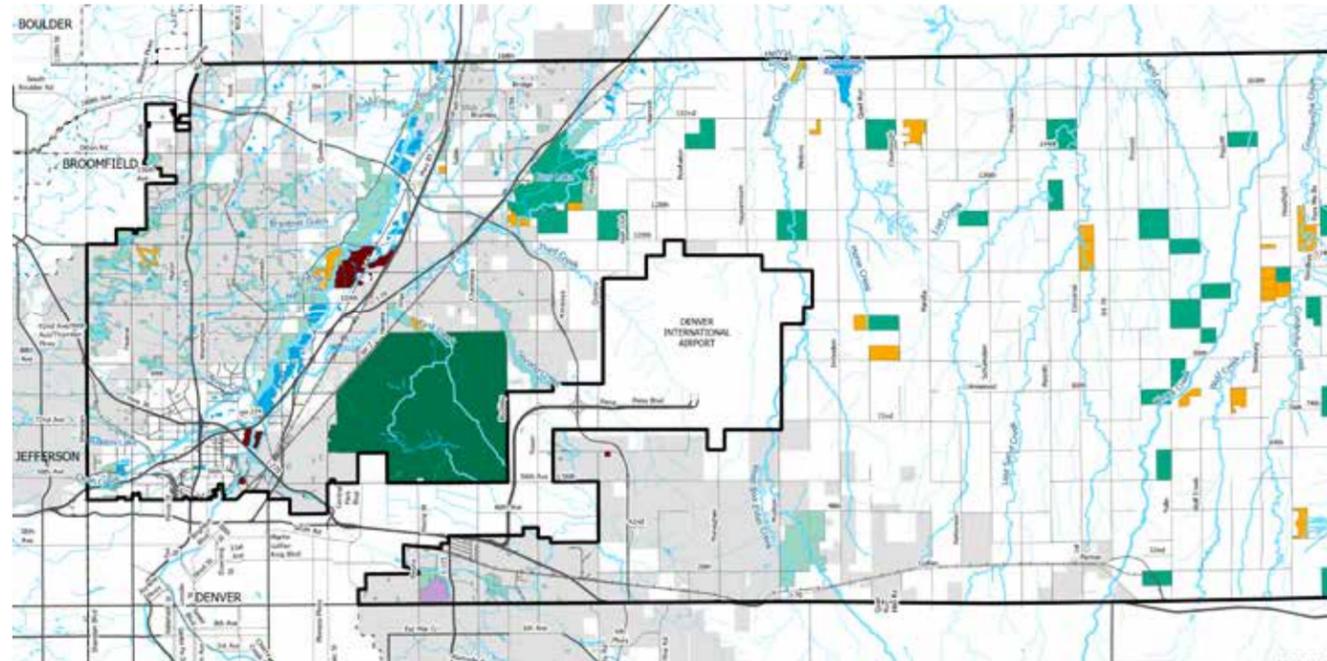
In terms of below ground mineral resources, the County does have shale deposits containing fossil fuels, a number of which have been drilled. However, the lack of infrastructure, particularly pipes to take excess produced natural gas, has limited extraction to date. State regulations limiting the ability of producers to flare off excess natural gas will be important to planning best and feasible long term utilization of these assets.

The primary ecological resources within County borders consist of the Rocky Mountain Arsenal National Wildlife Refuge and Barr Lake State Park in addition to County owned resources. The Rocky Mountain

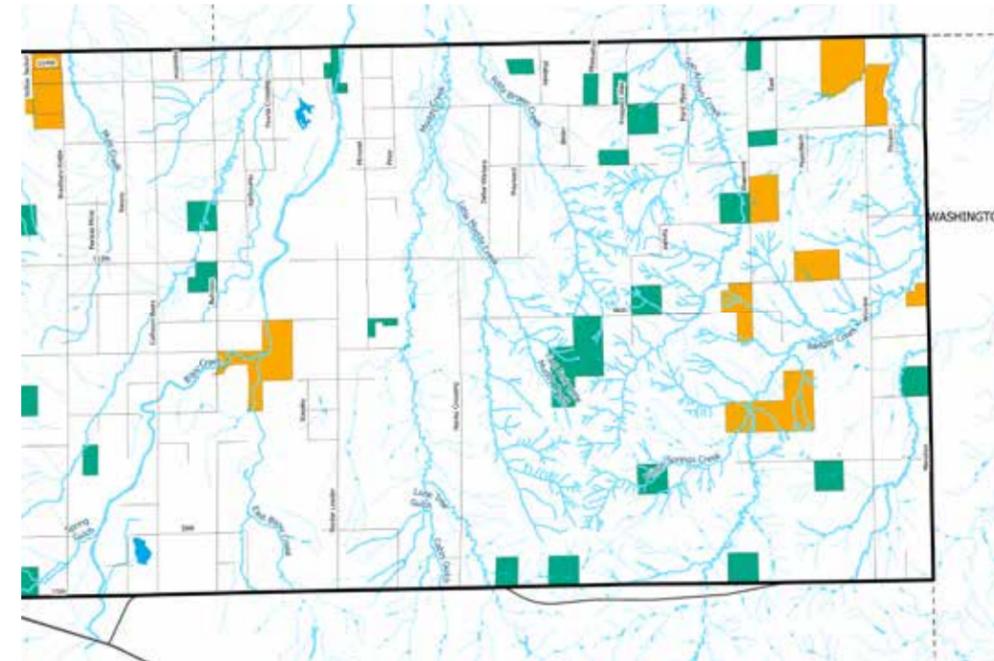
Arsenal National Wildlife Refuge is a success story where a polluted site was transformed into the largest urban wildlife refuge in the country, home to over 300 species of animals, ongoing restoration efforts, and a robust visitor education program. Barr Lake is a Colorado State Park home to an abundance of bird species, additional refuge acreage, and recreational and educational opportunities for visitors and residents.



Figure 26: Solar Farm in Unincorporated Adams County



Data Source: Adams County, DRCOG, COMaP / CHNP



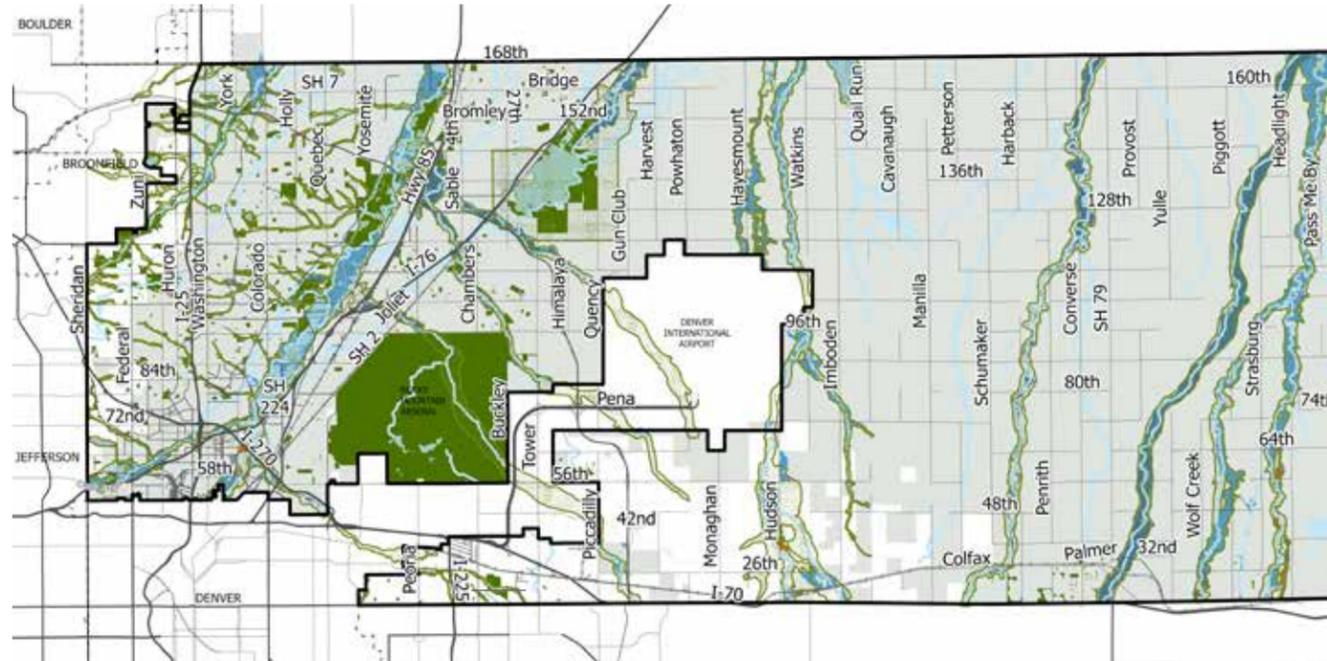
LEGEND

- COMaP Owner
- Misc. Federal (BOR, DOD, Misc)
 - BLM
 - NPS
 - USFS
 - USFWS
 - Tribal
 - State
 - Local
 - NGO/LandTrust
 - Private Conservation
 - Private

NOT TO SCALE 

PROTECTED LANDS

Generally, protected lands are fragmented throughout the County. Rocky Mountain National Arsenal and Barr Lake State Park are two examples of protected lands with a substantial acreage compared to others. The South Platte River appears to have relatively consistent protected lands along the stretch from the County boundary to the north to the boundary to the south, with the exception of a few gaps south of the Clear Creek confluence. Clear Creek also boasts protected lands from the County boundary to the South Platte confluence. Big Dry Creek in the northwest of the County also features a collection of protected lands.



Data Source: Adams County, DRCOG

ECOLOGY

The Natural Resource Conservation Overlay (NRCO) provides protection for the natural, wildlife, agricultural, and cultural resources that are crucial to the community’s character and economics. The overlay also sustains and enriches the County’s quality of life.

While some areas of Adams County are protected with a Natural Resource Conservation Overlay, many important areas are not, including Horse Creek which flows to Horse Creek Reservoir, Lost Creek, and others east of Denver International Airport. Areas that are protected with the Natural Resource Conservation Overlay or other state / national protection include Box Elder Creek, Kiowa Creek, Wolf Creek, Comanche Creek, Bijou Creek, East Bijou Creek, and Muddy Creek. A few

pockets of high and medium density Wildland Urban Interface occurs in Aurora, just east of I-255.

Different flood zones can be found in MAP 12 and MAP 13. The following is a list of these zones with a brief description for each:

- Zone A: An area inundated by one percent annual chance flooding, for which no Base Flood Elevations (BFEs) have been determined.
- Zone AE: An area inundated by one percent annual chance flooding, for which BFEs have been determined.
- Zone AO: An area inundated by one percent annual chance flooding (usually sheet flow on sloping terrain), for which average depths have been determined;



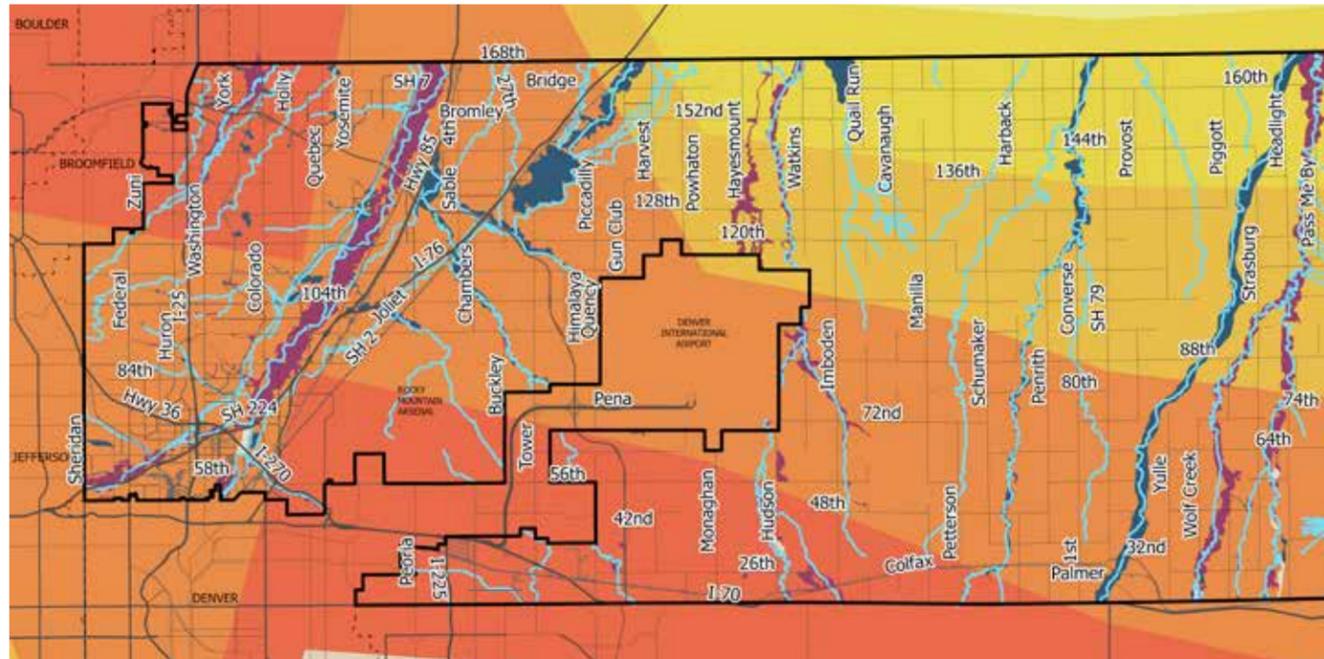
LEGEND

- Natural Resource Conservation
- Flood Zones
 - A
 - AE
 - AO
 - X
- Adams County
- Community Park, Open Space, and Regional Park

NOT TO SCALE

flood depths range from one to three feet.

- Zone D: An area of undetermined but possible flood hazards.
- Zone X: Areas determined to be outside 500-year floodplain determined to be outside the one percent and 0.2 percent annual chance floodplains.



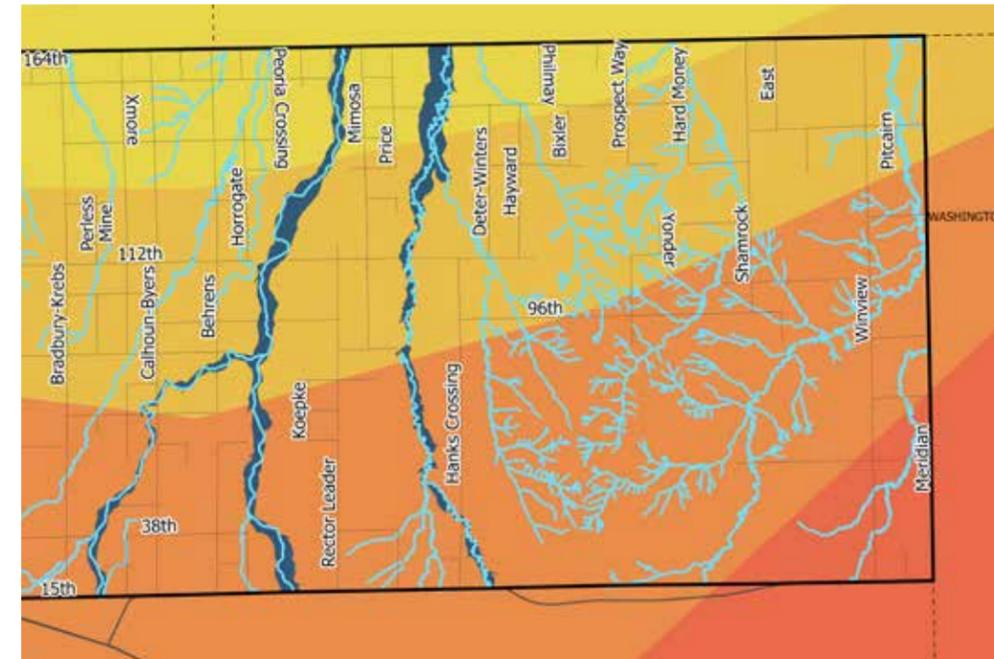
Data Source: Adams County, DRCOG, Spirit Environmental

CLIMATE

The climate in the region is classified as cold semi-arid local steppe (BSk) under the Koppen-Geiger climate classification system, which effectively recognizes the relatively high altitude interior location combined with dry conditions and significant diurnal temperature swings between daytime and nighttime. The semi-arid conditions and relatively hot summertime temperatures are anticipated to be exacerbated under the impacts of increased carbon dioxide concentration in the atmosphere for the foreseeable future. By 2050, the primary projections for the area include: an increase in average temperatures by 2.5 to five degrees Fahrenheit, more consecutive days over 95 degrees Fahrenheit in the summer months, more extreme

weather from warmer air cells, and longer and more severe droughts. Another way to conceptualize this change would be that by 2050, the climate in Adams County could more closely resemble that of present day El Paso, Texas.

Colorado as a state will experience additional impacts, especially related to water supply with earlier spring runoff anticipated, but the increased severity of droughts and the impacts from high heat in the summer will need to be incorporated into the planning process. Both mitigation strategies to actively minimize carbon emissions and adaptation strategies to prepare for these changing conditions will need to be employed to minimize future disruptions.



LEGEND

- Flood Zones
- A
- AE
- AO
- 36 months temperature departure from normal
- 0.2
- 0.4
- 0.6
- 0.8
- 1
- 1.2

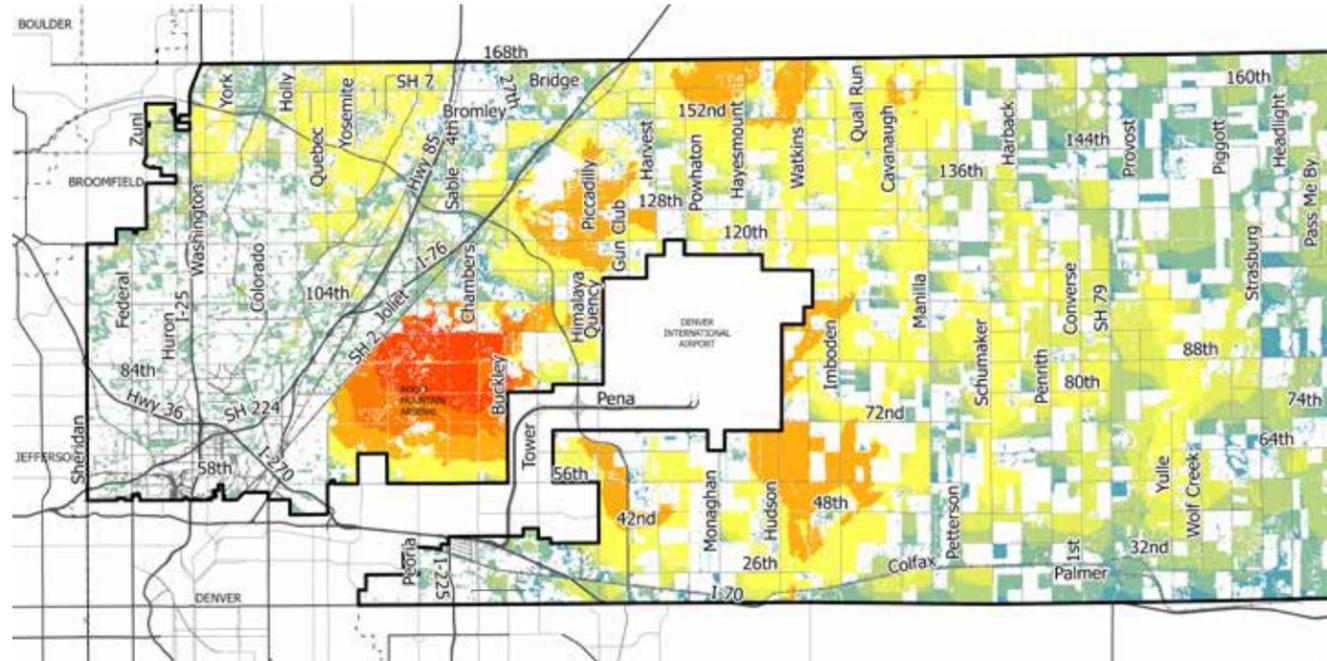
NOT TO SCALE

One of the largest mitigation strategies, carbon neutrality, is outside the direct control of the County, but has significant impacts on residents and business owners. The power supplied to Adams County is getting less carbon-intensive at a relatively rapid pace. Xcel Energy, which served approximately 160,000 premises in 2019 for both electric and gas, has committed to reaching 80 percent carbon-free electricity by 2030, and 100 percent carbon-free electricity by 2050, and is on target to reach those goals. United Power, the County's other electricity provider, currently buys their power from Tri-State Generation and Transmission¹, which provides more carbon-intensive electricity, but they are moving toward

¹ <https://www.unitedpower.com/united-power-files-puc-tri-state-exit-price>

a lower carbon portfolio. There is a possibility United Power may exit their agreement with Tri-State per recent filings before the Public Utilities Corporation (PUC), in part to bring more low carbon generation online.

As part of the County's update to their existing sustainability plan, there will be an increased focus on carbon accounting and impact strategies alongside other elements of sustainability including water conservation and social equity. Looking at ways to complement and coordinate these plans will result in more effective long-term outcomes.



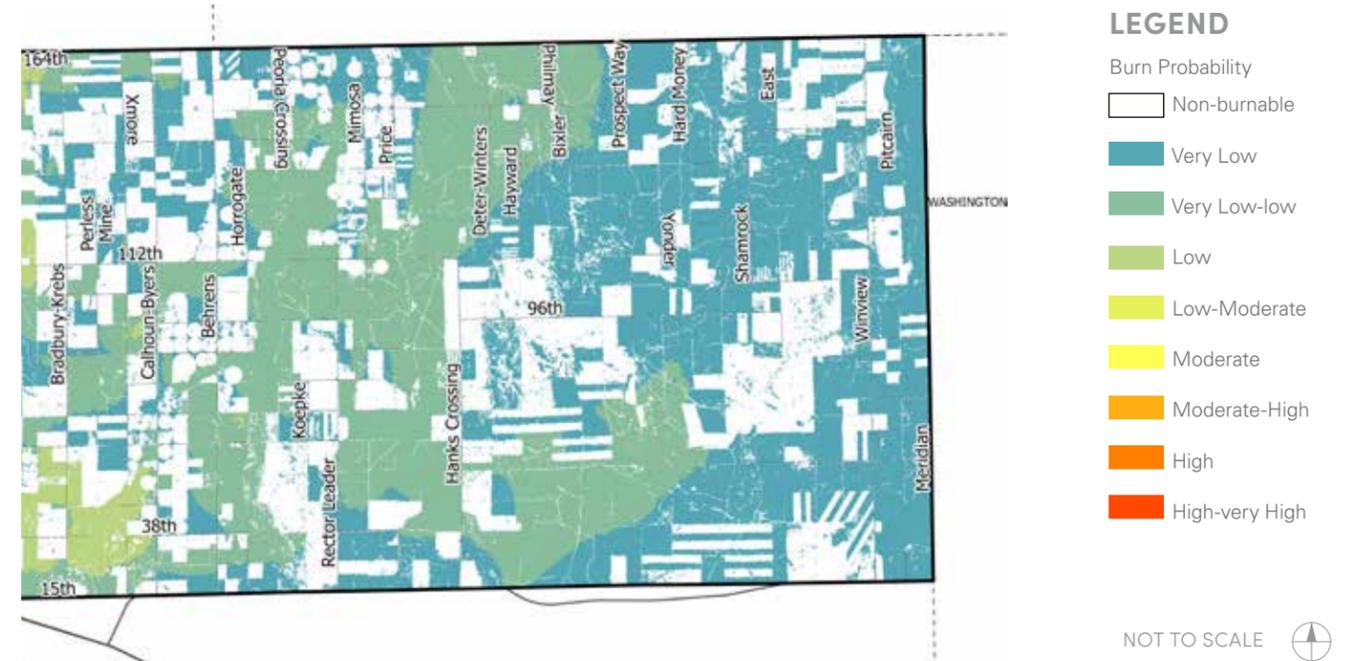
Data Source: Adams County, DRCOG, Spirit Environmental, CSFS, USDA

EXTREME WEATHER EVENTS AND FIRES

In addition to drought, climate change in Adams County will exacerbate the impacts of discrete extreme weather events such as wildfires, flooding, and more severe winter storm events. The Adams County Hazard Mitigation Plan identifies risks from tornadoes/damaging winds, winter weather and thunderstorms as highly significant at the County level and effectively lays out risk mitigation plans. Most climate projections indicate that wildfires will increase in frequency and severity in Colorado by the mid-21st century due to the projected warming. While wildfire risks are generally low in Adams County, there are areas of higher fire risk generally concentrated around the more urbanized parts of the County that may see those risks

increase with higher temperatures and less summertime precipitation.

The topographical and environmental conditions in Adams County lend themselves to rapid and effective fire responses, but the grasslands do lend themselves to rapidly spreading if low intensity fires, and the risks in more urbanized areas of the County from fire are significant. Fire risk is higher in areas where building density limits fire fighting ability and is less about vegetation in Adams County. The air quality impacts to the County from regional fires as well as those on County lands can be significant in themselves, with air quality indices reaching unearthly levels and smoke impacting already at-risk populations more than those living with less ambient air pollution.



LEGEND

Burn Probability

- Non-burnable
- Very Low
- Very Low-low
- Low
- Low-Moderate
- Moderate
- Moderate-High
- High
- High-very High

NOT TO SCALE

NATURAL ENVIRONMENT: STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS ANALYSIS

A SWOT analysis provides the foundation of understanding for the Adams County Comprehensive Plan. Although the analysis is structured like four distinct quadrants, there is actually an interplay between strengths, weaknesses, opportunities and threats.

- **Strengths** describe what the County excels at and what makes it distinct. Strengths should be supported and amplified where possible.

- **Weaknesses** stop the County from reaching full potential. They are areas where the County needs to improve. Weaknesses can become opportunities.
- **Opportunities** refer to favorable external factors that could give the County an advantage. Opportunities can turn into future strengths.
- **Threats** refer to external factors that have the potential to harm the County. Threats should be minimized, mitigated and/or proactively planned for.

Table 15: Natural Environment SWOT Analysis

Note: A checkmark indicates a relationship between the SWOT analysis content and the plan value lenses (equity, sustainability and livability). Details of this relationship will be further evaluated during Phase 2 of the Comprehensive Planning process and plan creation.

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
ECOLOGICAL RESOURCES IN ADAMS COUNTY			
Strength			
» The existing ecological resources in Adams County are celebrated through the preservation of Rocky Mountain Arsenal National Refuge and Barr State Park, among many other protected lands throughout the County.		✓	✓
Weakness			
» Habitat fragmentation is an issue and has been identified in the Parks, Open Space and Trail Plan.		✓	✓
» Development within the floodplain that contributes to habitat fragmentation.		✓	✓
Opportunity			
» Preserve, link and layer existing undeveloped and underdeveloped prairie with recreation in the County through greater parks, opens space and trail corridor connectivity. The weak links in the system will be determined in the Parks, Open Space and Trail Plan.		✓	✓
Threat			
» Climate change could impact the quality of ecological resources in Adams County, including increased temperatures and more extreme droughts and storm events.	✓	✓	✓

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
LOCAL WATER RESOURCES			
Weakness			
» Local reservoir resources are limited in Adams County. Some water resources in Adams County are from outside sources while other water resources serve/provide water for districts located outside the County.	✓	✓	
Opportunity			
» Adams County has an opportunity to conduct a total water resource inventory and assess water needs for conservation purposes while smartly growing the County through a methodical approach.		✓	
» Adams County has an opportunity to secure additional water resources and reduce potable water consumption through conservation and non-potable strategies.		✓	
» DOLA will provide technical assistance on request for incorporating water supply and demand planning into comprehensive plans, developing key items like drought triggers and indicators.		✓	
» Water conservation regulations can be effective at various scales, from xeriscaping in the rights of way to including water use plans with certain permits.		✓	
» Develop a plan to extend recycled water infrastructure County-wide including distribution and treatment facilities.		✓	
» Investigating the possibility of greater coordination between the County and water suppliers. (Note: Per the 2019-2020 Hazard Mitigation Plan, there are 45 water and sanitation districts located throughout the County.)		✓	
Threat			
» Without addressing limited local water resources, the County will be required to limit the number of residents and businesses that can be supported.	✓	✓	✓
» Aquifers are experiencing some levels of depletion.		✓	
» The County could postpone public hearings and the development process if applicants cannot address the water requirements with the State Water Resource office.		✓	
FOSSIL FUEL RESOURCES			
Strength			
» Moderate fossil fuel resources are available.		✓	
Weakness			
» There is not a "Just Energy Transition Plan" or policies in place regarding fossil fuel extraction.		✓	
» Lack of pipelines and processing plants limit the ability of operators to extract natural gas resources in a more environmentally friendly manner.		✓	

ALIGNMENT WITH PLAN VALUE LENSES			
	 EQUITY	 SUSTAINABILITY	 LIVABILITY
SWOT ANALYSIS BY TOPIC			
FOSSIL FUEL RESOURCES			
Opportunity			
» Although fossil fuels can be extracted because of availability in Adams County, there is a preference for transitioning to renewable energy sources like solar.		✓	
» Establish a "Just Energy Transition Plan" and corresponding policies for fossil fuel extraction.		✓	
Threat			
» Fossil fuel extraction could contribute to dependency on a nonrenewable resource.		✓	
» Extraction and production contribute to and exacerbate air quality issues and inhibit progress toward state-mandated greenhouse gas and specific criteria pollutant emissions reductions.		✓	✓
RENEWABLE ENERGY SOURCES			
Strength			
» Some of the energy in Adams County is being transitioned to zero carbon or reduced carbon. Xcel Energy's current plan calls for 80 percent of portfolio from renewable resources by 2030 and 100 percent carbon free by 2050, while United Power is actively exploring options to increase their renewable energy portfolio.		✓	
» In 2019, Adams County updated solar regulations to allow stand alone solar power generation.		✓	
Weakness			
» Untapped potential in solar power generation throughout the County. Considering the vast potential of solar power generation in Adams County, the solar production could be improved and expanded.	✓	✓	
» There is a barrier for residential access to existing renewable energy sources.		✓	
Opportunity			
» Encourage more permissive and encouraging solar energy adoption regulations and distributed generation and storage regulations community wide, such as via a neighborhood solar cooperative program like Solar United Neighbors.		✓	
» Encouraging or requiring renewable energy, either on site or via a certified offset program to reach certain carbon targets is an effective tool to reduce carbon in the built environment.		✓	
» Establish a "Renewable Energy Plan" and a "Solar for All Plan" to support and provide additional guidance for policies.		✓	
» Take advantage of new Brightfields tool to identify marginal County lands appropriate for solar development.	✓	✓	

ALIGNMENT WITH PLAN VALUE LENSES			
	 EQUITY	 SUSTAINABILITY	 LIVABILITY
SWOT ANALYSIS BY TOPIC			
Threat			
» Airport overlays could impose restrictions on the locations of solar production areas due to glare. (This threat can be explored more and mitigated through collaboration with municipalities and FAA, Colorado Air & Space Port (CASP) and Denver International Airport (DEN.) Large solar installations have been increasingly competing with farmland, and without more cooperative models or other viable land for solar, agricultural uses could be threatened.		✓	
WILDFIRE RISK			
Weakness			
» Adams County does not have a Firewise community designation or a Community Wildfire Protection Plan.		✓	
Opportunity			
» The lowland grasses and agricultural areas make for relatively easy firefighting, allowing the County to focus on areas of higher risk.		✓	✓
Threat			
» Although ranked much lower than other climate-related risks, wild fire is a risk to Adams County especially in the areas identified in the Hazard Mitigation Plan.		✓	
» Smoke from proximate and regional fires will continue to pose real threats to residents and need to be mitigated.		✓	
FLOOD RISK			
Strength			
» Adams County has substantial waterway natural resources.		✓	
» The Hazard Mitigation Plan lays out effective and prioritized flooding mitigation strategies for the County.		✓	
Weakness			
» Habitat fragmentation is prevalent along South Platte and Clear Creek.		✓	
Opportunity			
» There is an opportunity for the County to be proactive about flood prone areas and those that will be flood prone areas as FEMA maps are updated in order to minimize risk to community members.	✓	✓	✓
Threat			
» If updated FEMA maps are not anticipated, then community members could be at risk for flood hazards.	✓	✓	
» Loss of riparian corridor and habitat increases risks of flooding.		✓	
» Some property owners in Adams County floodplains do not have flood insurance.	✓		✓
» The flood risk significance has been deemed high in the Hazard Mitigation Plan		✓	

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
DROUGHT			
Strength			
» The State of Colorado prepared a State Drought Mitigation and Response Plan and accompanying vulnerability assessment to identify areas of greatest concern. This document lays out a process for state-wide drought response.		✓	
Weakness			
» Adams County already has limited potable and water resources and drought strategy should be coordinated at the State level with the State 2020 Drought Planning document.		✓	
Opportunity			
» The State 2020 Drought Planning guidance document for local agencies can be used to incorporate drought planning into the comprehensive plan process.		✓	
Threat			
» Without a coordinated proactive response to drought, agriculture and other land uses will be at great risk in Adams County.		✓	
WEATHER EVENTS			
Strength			
» The Hazard mitigation plan ascribes a high significance to the risks of winter weather, thunderstorms, and tornadoes.		✓	
Opportunity			
» Enhanced building standards and vegetation mitigation strategies can reduce severe impacts from the highest ranked hazards in Adams County including thunderstorms, tornadoes and damaging winds and winter weather.		✓	
» Strategies for implementation can be coordinated with the Hazard Mitigation Plan.		✓	
Threat			
» Without proactive planning, severe weather events have the potential of damaging property and possibly injuring residents.	✓	✓	✓



Figure 28: Adams County Fire Rescue Community Event



Figure 27: Barr Lake



Figure 29: South Platte River Trail

BUILT ENVIRONMENT AND CONNECTIONS

New development will happen in Adams County; new roads, new housing and new districts. This Plan will consider the best location and best structures for growth and the types of connections that will be needed.

BUILT ENVIRONMENT AND CONNECTIONS

CORRIDORS AND TRANSPORTATION

Adams County is served by a multimodal transportation network, with regionally significant interstate highways passing through the County, bus and rail transit that are provided by the Regional Transportation District (RTD), and on- and off-street bicycle and pedestrian facilities that provide local access and regional connections. The mix of land uses in the County dictates unique opportunities and challenges for the transportation network. The more developed western portion of the County is served by interstate highways that provide travel opportunities to regionally significant destinations like Denver and Fort Collins. The more rural eastern portion of the County is home to a network of unpaved roadways and travel demand that stems more from agriculture and goods movement than from commuting. The Transportation Master Plan (TMP) will consider how to balance meeting existing travel

demand in the developed portion of Adams County through a variety of transportation modes while ensuring future development in the east can experience improved regional connectivity appropriate for rural areas.

The southwestern portion of Adams County functions as a gateway between Adams County and the City and County of Denver. The Southwest Framework Plan identifies I-70, I-25 and I-76 as critical corridors to include landscape enhancements, streetscape improvements, and signage provisions. Other corridors identified by Adams County include Federal Boulevard, Pecos Street, Washington Street, 104th Avenue, and 120th Avenue, which will be included as corridor plans in the Comprehensive Plan and the Transportation Plan. By addressing the land use, aesthetic conditions, and opportunities to expand travel options on the major gateways into Adams County, the TMP can improve both the user experience and safety outcomes along the corridors.

In addition to the key roadway corridors, transit service in Adams County has been expanding as a result of new commuter rail lines being constructed through the RTD FasTracks program. With three new transit lines and 12 stations within the County, two of which are in unincorporated Adams County, the western portion of the County is poised to have a shift in development patterns toward more urbanized, walkable communities. In anticipation of these changes, the County developed the Transit Oriented Development (TOD) and Rail Station Area Planning Guidelines in 2006. These Guidelines are intended to provide basic guidance for creating unified station area plans that are compatible with the County's character while providing community benefits through increased access to services in more pedestrian-scale environments. The TMP will seek to build upon the growing rail transit system by exploring opportunities for improved bus service as well as innovative mobility options for the less densely populated portions of the County. It should be noted that the size of Adams County dictates that transit be targeted to strategic locations since it may be impractical to provide transit service to all County residents. Additionally, a future land use strategy has the potential to increase density around transit stations as a way to service more residents and create needed housing units.

The County trails system ties together transportation, parks and open space, and land use planning. The Clear Creek Trail, for example, provides east-west travel opportunities through the western portion of the County for cyclists and pedestrians and connects to the South Platte River Trail. The 2017 Clear Creek Corridor Master Plan identified opportunities not just for improving access to the trail, but also to guide development along the trail. The Transportation Plan is an opportunity to leverage the success of both the County trail system and the regional trail system supported by the Denver Regional Council of Governments (DRCOG) to establish more multimodal infrastructure throughout the County.

ZONING

The County has a significant number of zone districts and special overlays, and the 2012 future land use map similarly includes a number of different categories.

The Adams County Development Standards and Regulations identify a series of zone districts and overlay zone districts. This information is helpful in understanding the development of new zone districts in Adams County since the 2012 Comprehensive Plan.

The 2012 Comprehensive Plan proposed a number of zone district changes. In 2017, a TOD zone district was created, but it has not been utilized to date. In 2020, a new mixed-

use commercial zone was adopted to support development along key corridors. The 2012 Comprehensive Plan recommendations related to zoning will be evaluated in Phase 2 in collaboration with the community.

OPEN SPACE

The Parks, Open Space and Trails (POST) plan is an update to the adopted 2012 plan. The updated plan will emphasize subareas and focus areas including opportunities for parks and recreation service in urban unincorporated areas of the County; the Clear Creek and South Platte River Corridors; and the regional park and its surrounding areas. The 2012 Plan emphasized agricultural conservation and open space acquisition. Since then, the County has been successful in acquiring lands which is leading to a shifted focus to how to best utilize, enhance and manage those assets. Another new component will be the inclusion of Cultural Arts and how it becomes embedded into the practices that the plan informs, especially in the corridor areas.

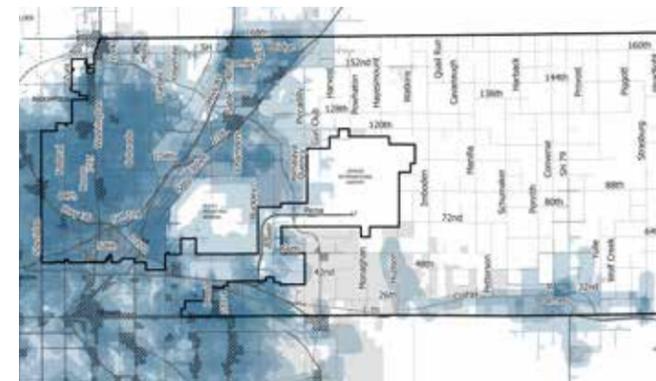
SERVICE AREA MAPS

The Looking Forward Chapter on page 161 features an innovative strategy for a 20-minute community. The concept of a 20-minute community is grounded in the value lenses for the planning process. It represents an equitable distribution of services and amenities that create walkable and livable communities and supports sustainability goals by reducing the dependence on single-occupancy vehicles.

The maps on the following pages represent service areas for different services and amenities in Adams County such as grocery stores and parks. Most of the service areas are within a one mile walking radius from the destination although the service areas for hospitals and higher education destinations are a ten minute drive.

The purpose of this mapping series is to illustrate highly served areas of the County as well as the gaps that exist.

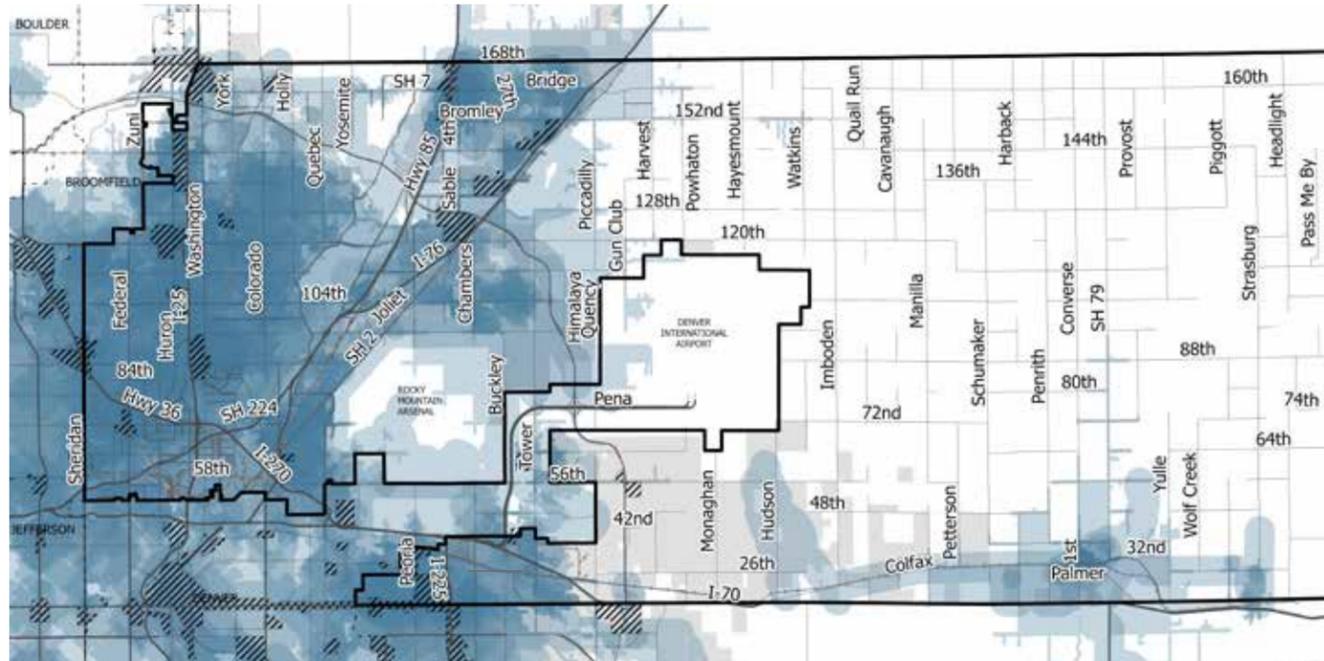
As the County grows and adds residential development, it is important to look at the proximity of services that residents need - childcare, food, libraries, etc. - with a goal of planning for these services to be provided within a 20 minute walk.



20-Minute Community Composite Map

20-MINUTE COMMUNITY COMPOSITE MAP SHOWS A SPECTRUM OF HIGH AND LOW CONCENTRATIONS OF ESSENTIAL SERVICES AND AMENITIES ON THE WESTERN MOST POPULATED PORTION OF ADAMS COUNTY

Figure 30: Individual Amenities and Services Layer to Create a Composite Map



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

LEGEND

- Service Areas
- DRCOG Urban Centers
- Adams County Boundary
- Railroads
- Roads

Composite 20-Minute Community Analysis Map

The 20-minute community framework is appropriate for the urban areas of the County, predominantly in the western portion of the County. Some small towns throughout the County could also seek to achieve the 20-minute community framework. This framework is not applicable to other, more rural areas of the County, where agricultural uses and conservation are more appropriate.

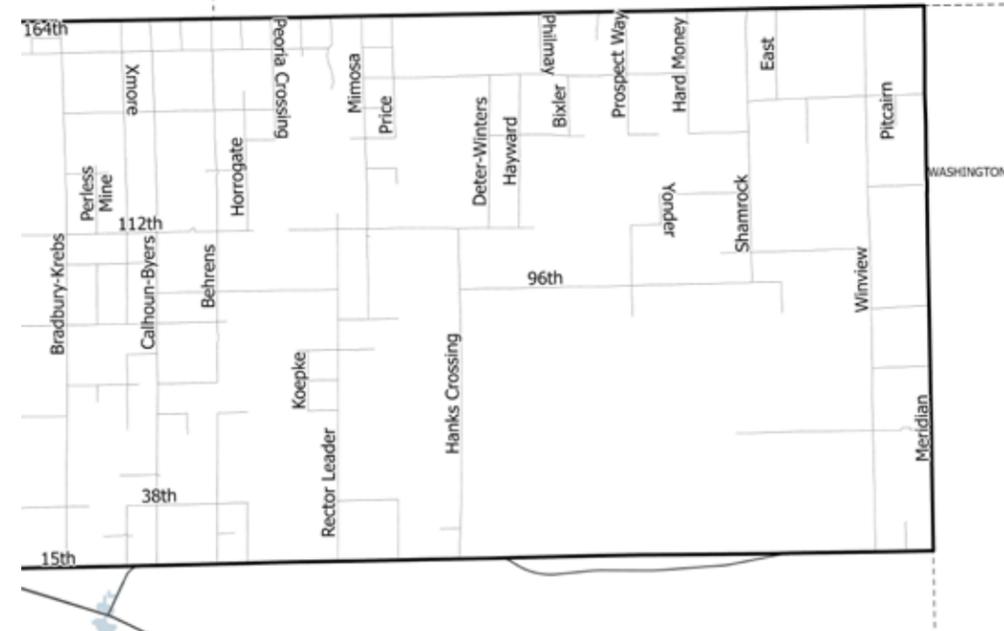
MAP 15 shows a composite of all the service areas in Adams County. The data includes all areas of Adams County including municipal areas, to provide a complete picture of service and access levels throughout the County. However, it is important to note that this document and the

Advancing Adams effort as a whole focuses and makes recommendations about areas of unincorporated Adams County. Each mapping element of the 20-minute community aspiration contributes to:

- An equitable distribution of services and amenities,
- Sustainability because of a reduced dependence on the personal vehicle, and
- Livability because these destinations are located within a safe and comfortable walk from residential areas.

Mapping elements of this composite map include the following at one mile service areas, which is approximately a 20-minute walk:

- Full service grocery stores and farmers markets
- Transit stops
- Parks and open space



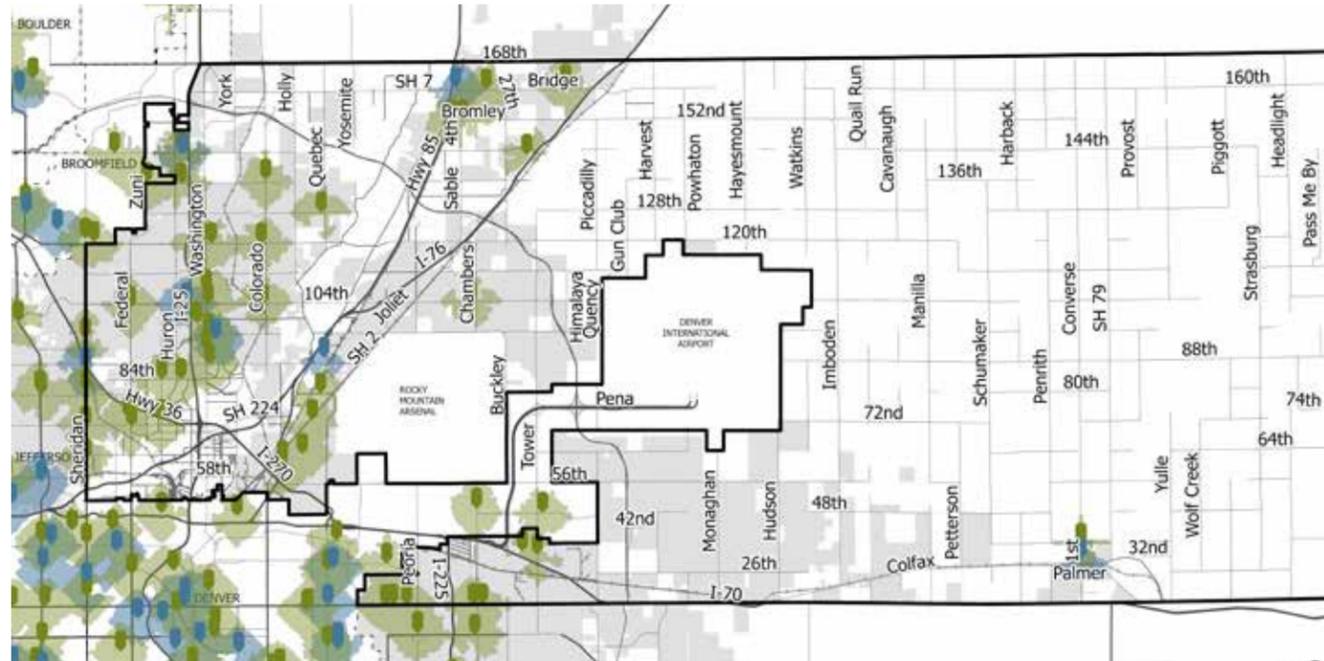
- Trails
- Early education and child care centers
- Kindergarten through grade 12 schools
- Public libraries

Elements of this composite map include the following at a 10-minute drive time service area:

- Urgent care facilities and hospital locations
- Higher education, community college and training centers

The individual maps can be viewed on the next pages.

MAP 16: FULL SERVICE GROCERY AND FARMERS MARKETS (20-MINUTE WALK)



Data Source: Adams County, DRCOG, ESRI, USDA, Design Workshop

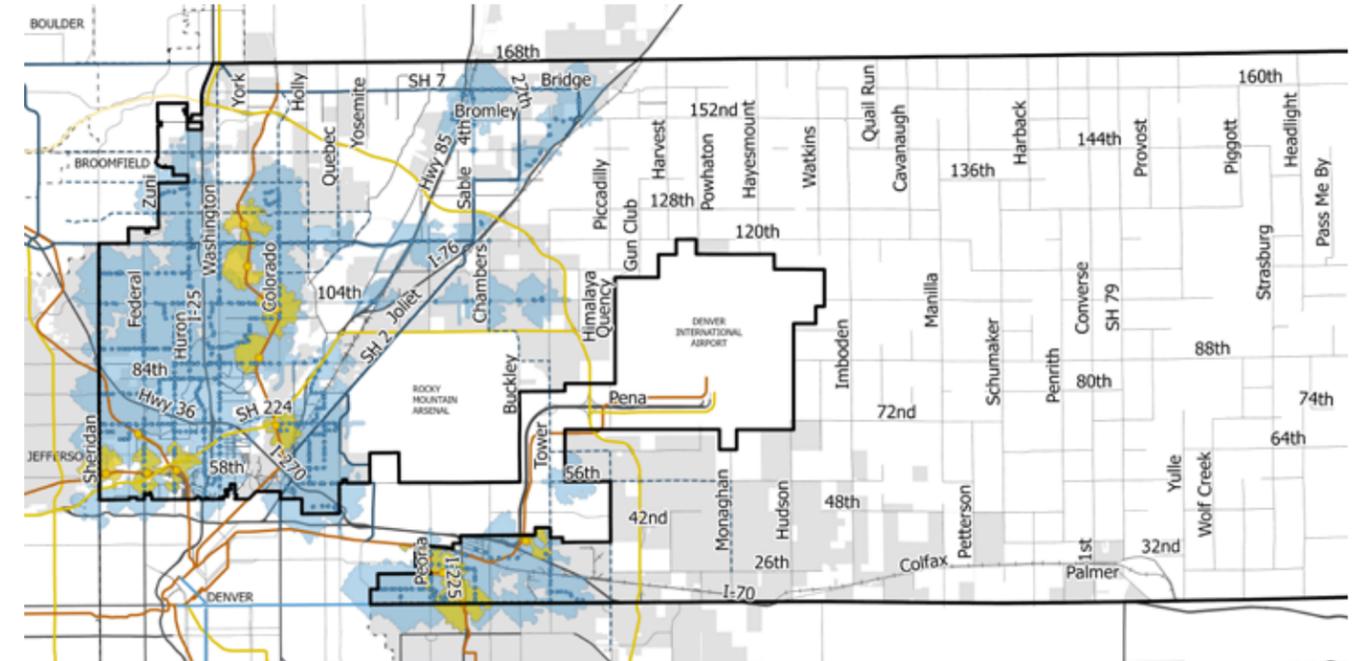
NOT TO SCALE

LEGEND

- Farmers Market
- 1 Mile
- WIC Approved Stores
- 1 Mile
- Adams County Boundary
- ++++ Railroads
- Roads
- Municipal Areas

Grocery store and farmers market locations are somewhat limited in Adams County, even in the western most populated portions of the County. While a complete coverage of grocery service areas may not be achievable for Adams County as a whole, with added density, grocery stores as well as many other retail and services will be justified in adding more locations.

MAP 17: TRANSIT STOPS (20-MINUTE WALK)



Data Source: Adams County, DRCOG, Fehr & Peers, Design Workshop

NOT TO SCALE

LEGEND

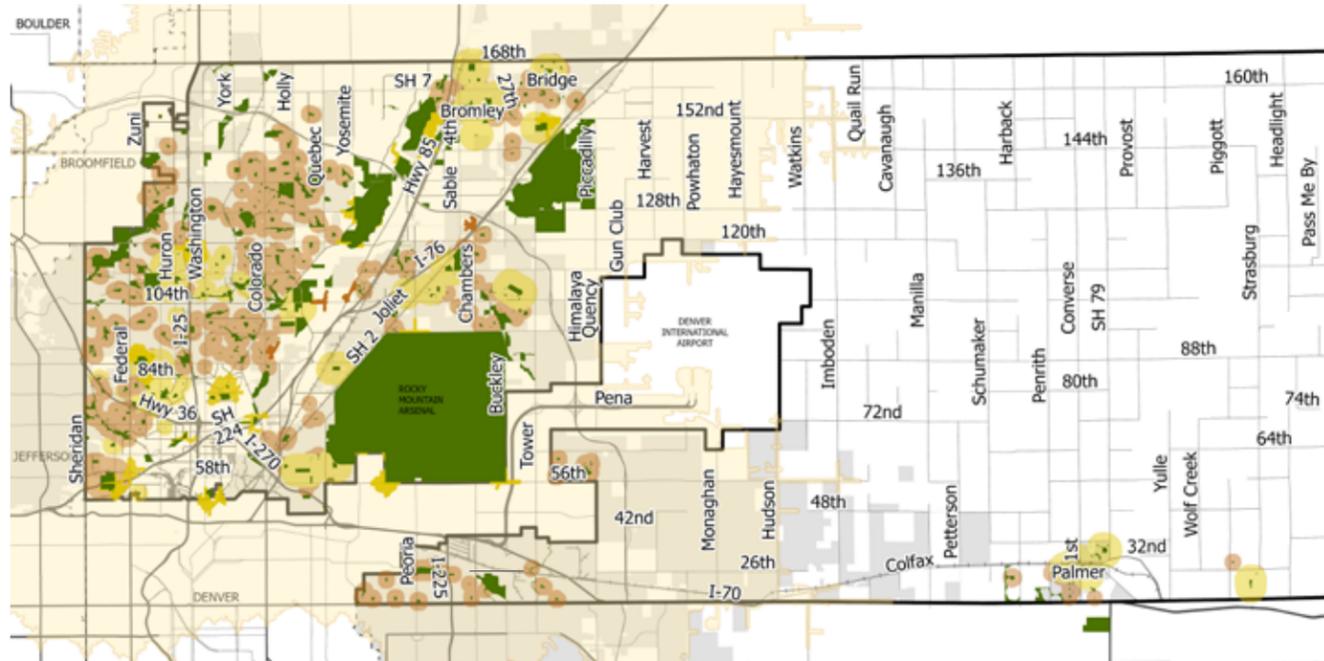
- Transit
- Tier 1 BRT/Busway
- Tier 1 Base Rail
- Tier 2 Potential BRT/Busway
- Tier 2 Potential Rail
- Tier 3 Conceptual
- RTD Bus Route Planned
- Bus Stops
- Rail Stops
- 1 Mile
- 1 Mile
- Adams County Boundary
- ++++ Railroads
- Roads
- Municipal Areas

The western portion of Adams County is generally well served by a transit network within the E-470 loop with some notable gaps along the South Platte River corridor and east of I-76.

In terms of land use opportunities, the areas with the best transit connectivity would be well suited for increased density. Increased safe multi-modal connections are also an opportunity.

As population density and demand increases in unserved or underserved parts of the County, route frequency and expansion can be reevaluated.

MAP 18: PARKS AND OPEN SPACE (10-MINUTE WALK)



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

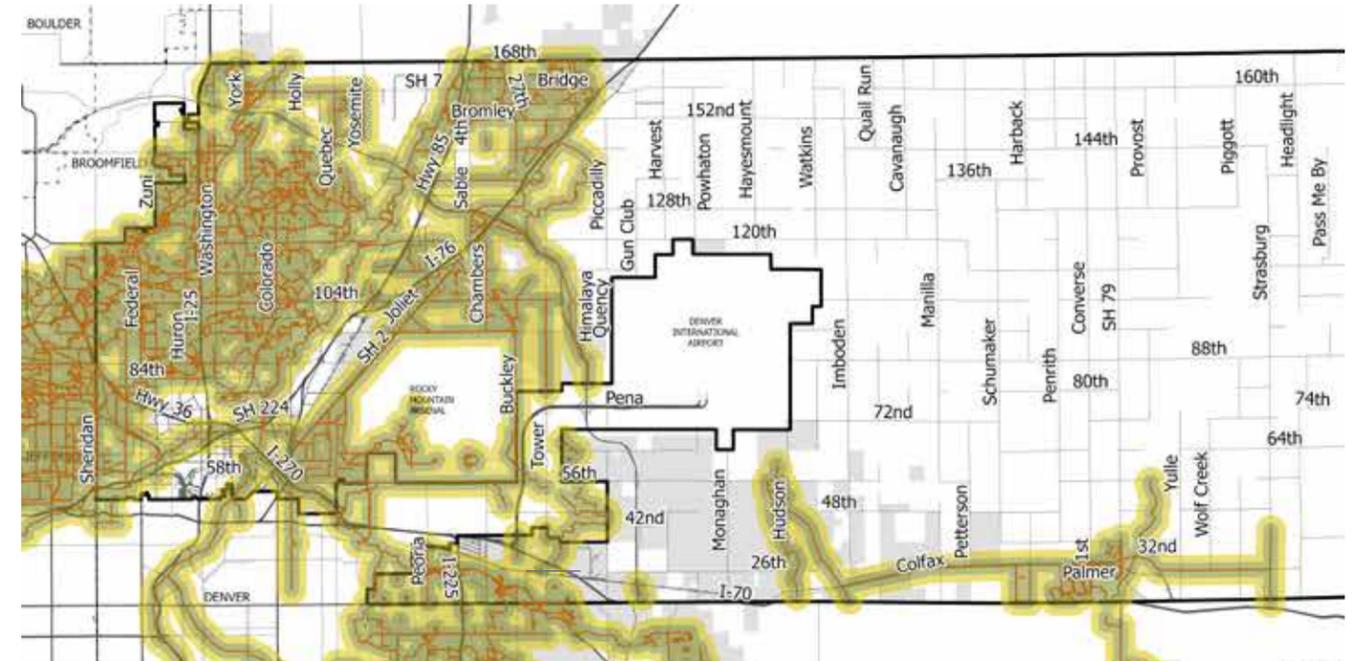
LEGEND

- Parks and Open Space
- 0.25 Mile Buffer
- 0.5 Mile Buffer
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

Generally, the western and most populated portions of Adams County are well served by parks and open space. A few exceptions include:

- Northwest and north central Adams County, west of Highway 85 and east of I-76
- Southwest Adams County around Washington Street south of I-270. Although, west of Federal Boulevard features parks and open space assets
- The Highway 85 corridor features a gap in parks and open space, however, these areas are primarily industrial land uses
- The area between Highway 85 and I-76 along E-470 also features a gap in parks and open space

MAP 19: TRAILS (10-MINUTE WALK)



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

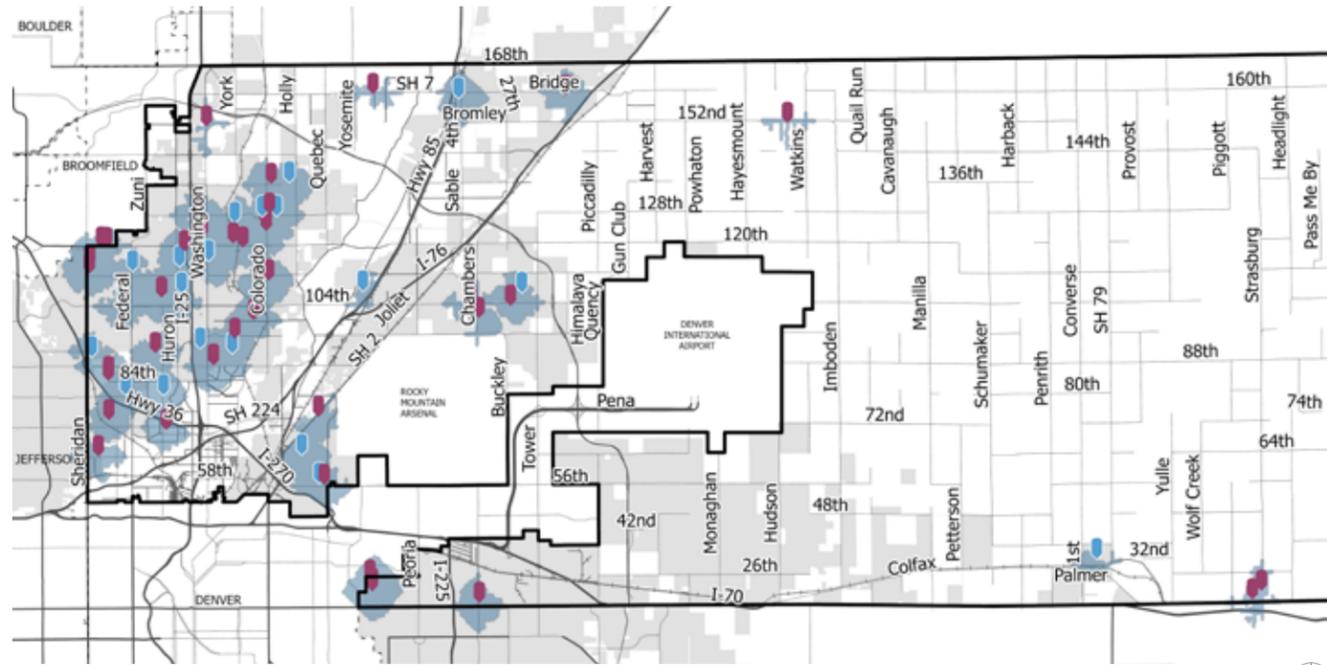
LEGEND

- Trails (Municipal, County, and Regional)
- 0.25 Mile Buffer
- 0.5 Mile Buffer
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

Municipal, County and regional trails are an asset in the western and most populated portions of Adams County. The biggest opportunities for spur connections include the following locations:

- West of Highway 85 in Todd Creek area
- Along Highway 85 in Commerce City
- Along Highway 36, west of Washington Street
- Between Pecos Street and Washington Street along the border with Denver County

MAP 20: EARLY EDUCATION AND CHILD CARE CENTERS (20-MINUTE WALK)



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

LEGEND

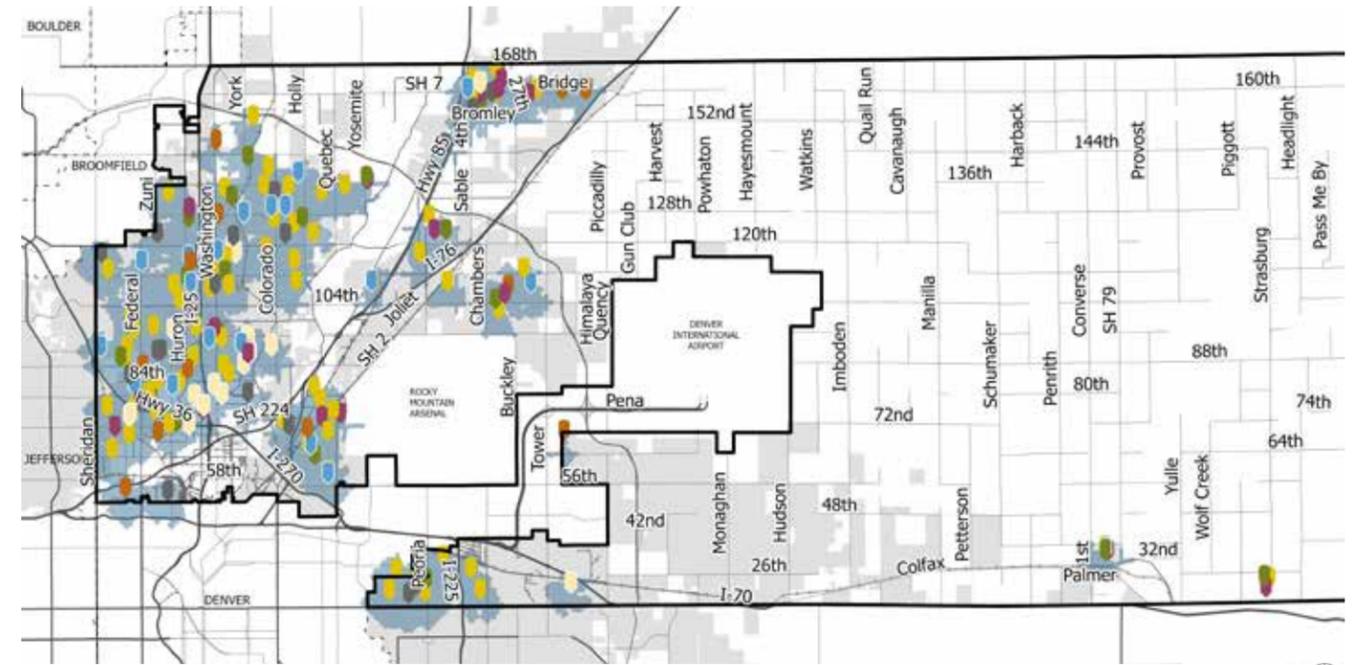
- Early Education
- Child Care Center
- 1 Mile
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

Early education and child care centers are one of the various elements that contribute to livability. Generally the western and populated portions of Adams County are well served by these facilities with some gaps to note:

- Northern Adams County
- Southwest Adams County
- South Platte River corridor

The County has an opportunity to play a role in the development of these assets for the community's benefit in locations that are currently underserved.

MAP 21: KINDERGARTEN THROUGH GRADE 12 SCHOOLS (20-MINUTE WALK)



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

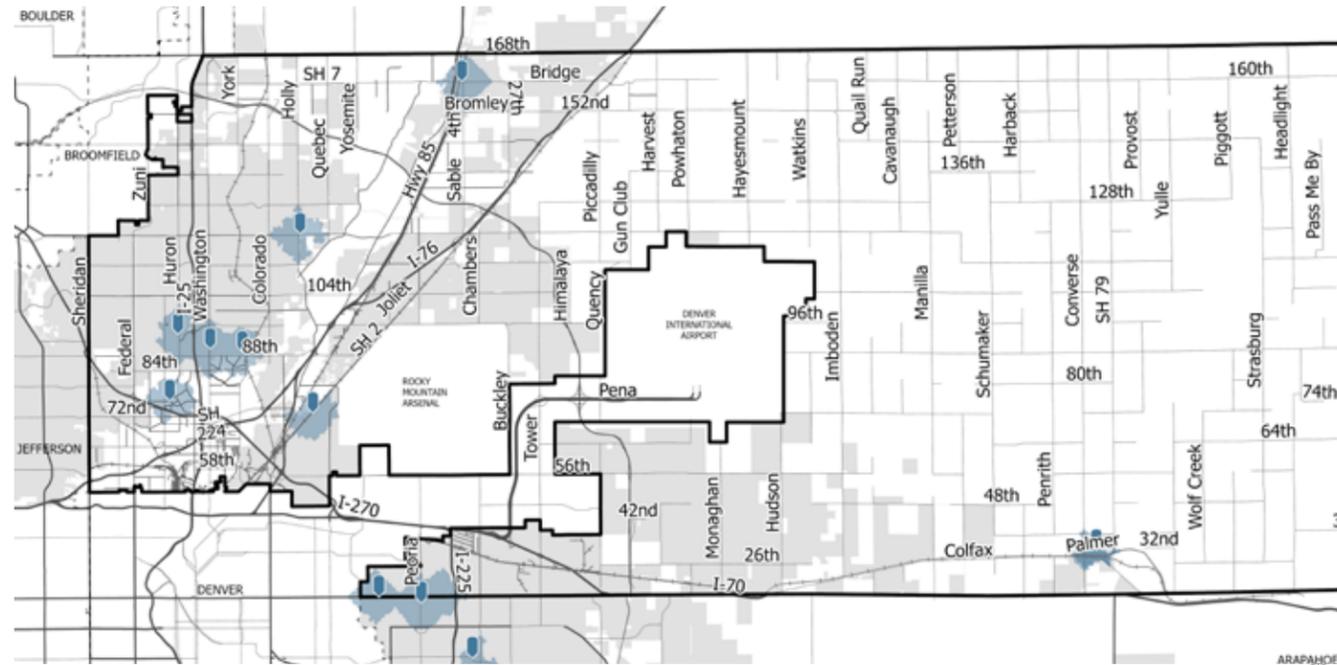
LEGEND

- Charter
- Early Education
- Elementary
- High
- Middle
- Other
- Private
- 1 Mile
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

Kindergarten through Grade 12 schools are generally well served in the western and populated portions of the County. Some gaps to note include:

- Northwest Adams County
- Southwest Adams County
- South Platte River corridor

MAP 22: PUBLIC LIBRARIES (20-MINUTE WALK)



Data Source: Adams County, DRCOG, Design Workshop

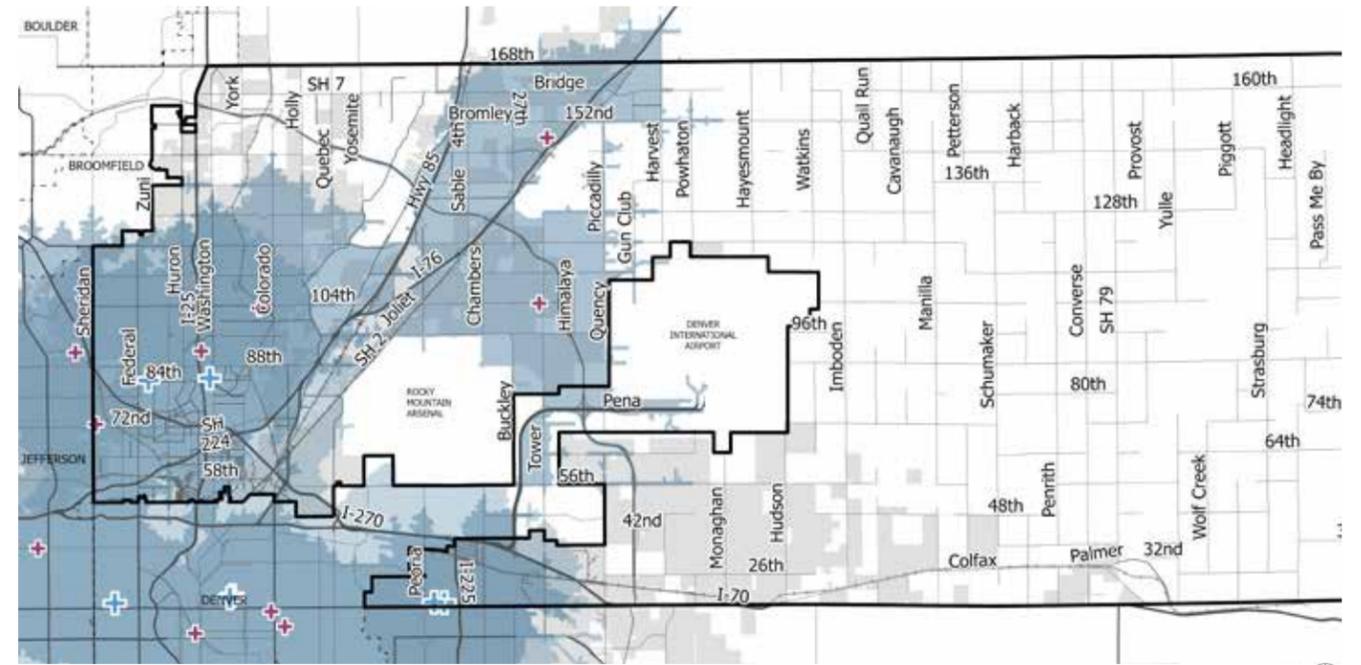
NOT TO SCALE

LEGEND

- Libraries
- 1 Mile
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

While the County is served by a number of libraries, very few residents live within a one mile walk shed of a public library. There may be an opportunity to improve overall proximity of library resources to the community through additional library assets. Additionally, creative solutions to provide library access can be considered including mobile libraries, partnerships with schools and higher education facilities to offer public access to libraries, promotion audio books and services online or a delivery logistics program.

MAP 23: HOSPITALS AND URGENT CARE FACILITIES (10-MINUTE DRIVE)



Data Source: Adams County, DRCOG, ESRI, Design Workshop

NOT TO SCALE

LEGEND

- Urgent Care Service Areas
- 10 Minute Drive
- Hospital Service Areas
- 10 Minute Drive
- + Urgent Care Medical Facilities
- + Hospitals
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

Hospitals and urgent care facilities are generally serving the western portion of Adams County with the exception of Northwest Adams County.

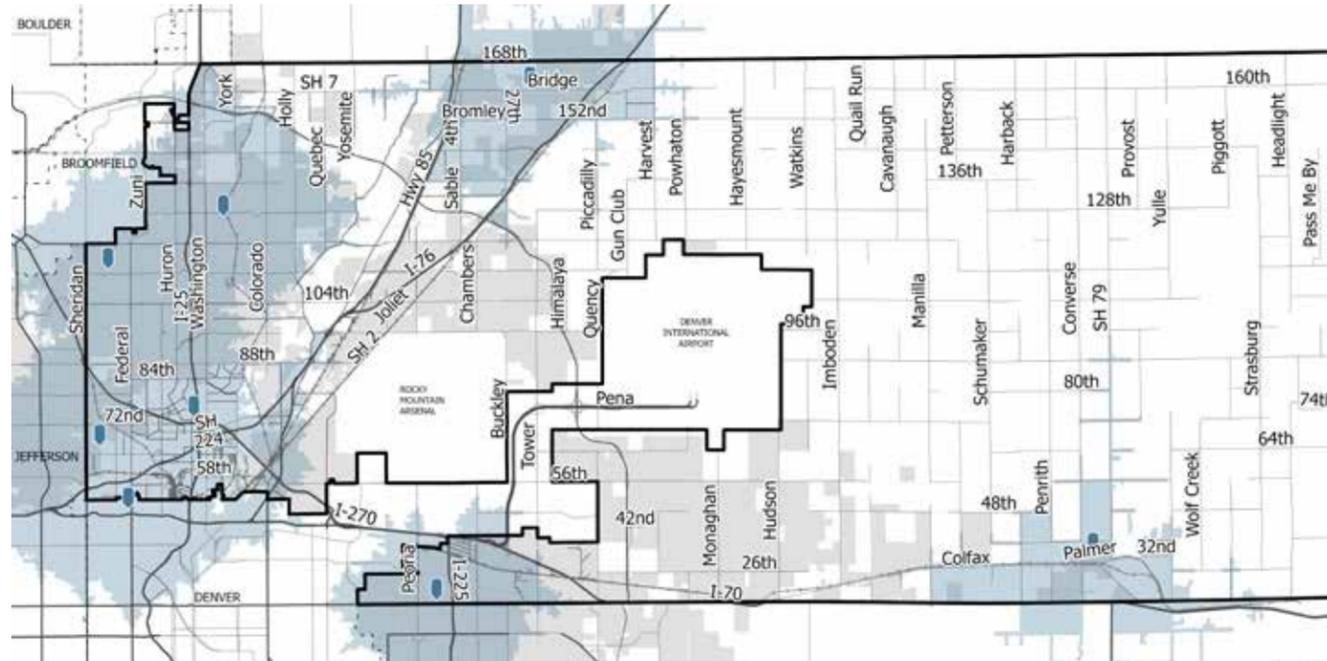
Bennett and Strasburg also feature limited access to hospitals and urgent care facilities but added density may be required to justify the investment of new facilities.

As a more rural area, the eastern portion of the County has less access to urgent care facilities. There may be opportunities to improve this infrastructure in towns located in the County.

Hospitals and urgent care facilities provide a regional service, and are not expected to be within a 10 minute drive from all residents without an increase in population density. However, because not all Adams

County residents have access to a car, it is important to use this relatively short drive time to understand what areas of the County might need additional transit service and how the location of emergency services could be adjusted to ensure equitable coverage in the County.

MAP 24: HIGHER EDUCATION, COMMUNITY COLLEGE AND TRAINING CENTERS (10-MINUTE DRIVE)



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

LEGEND

- Higher Education, Community College or Training Center
- 10 Minute Drive
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

Generally, the most populated areas of the County are well served by higher education, community colleges and training centers. Some of the destinations shown in MAP 24 include:

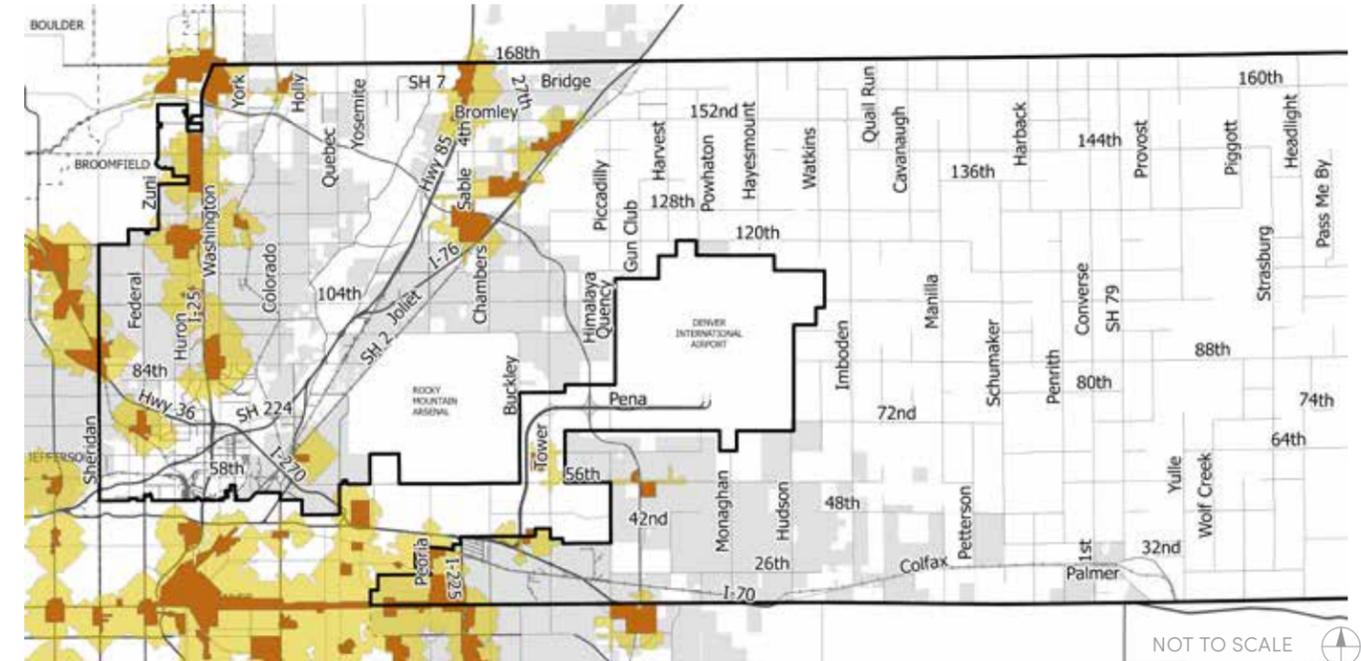
- DeVry University-Colorado
- Front Range Community College
- Pima Medical Institute-Denver
- The University of Colorado Anschutz Medical Campus

Regionally, the County is well served by higher education institutions. These include the University of Colorado system (CU Denver, CU Boulder, and CU Anschutz Medical Center), Regis University, University of Denver, and a number of Community Colleges, and Metropolitan State University of Denver.

Higher Education institutions are generally considered to be regional

facilities and are not intended to only serve a population within a ten-minute drive. As with hospitals, the drive time metric indicates where additional transit service could be beneficial, and where community colleges and training centers could fill some of the service area gaps.

MAP 25: DRCOG URBAN CENTERS (20-MINUTE WALK)



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

LEGEND

- DRCOG Urban Centers
- 1 Mile
- Adams County Boundary
- Railroads
- Roads
- Municipal Areas

In Phase 2, we will complete the land use analysis component of the planning process. One of our inquiries will strive to answer: Where should Adams County grow? The DRCOG Urban Centers is one strategy.

In the DRCOG Metrovision Plan, performance measures for increasing Urban Centers density in terms of housing and employment are outlined in DRCOG's 2040 plan. Overall, a 25 percent increase in regional population-weighted density is identified from 4,850 people per square mile in 2014 to 6,062 people per square mile in 2040.

What does this mean for housing and employment in Urban Centers?

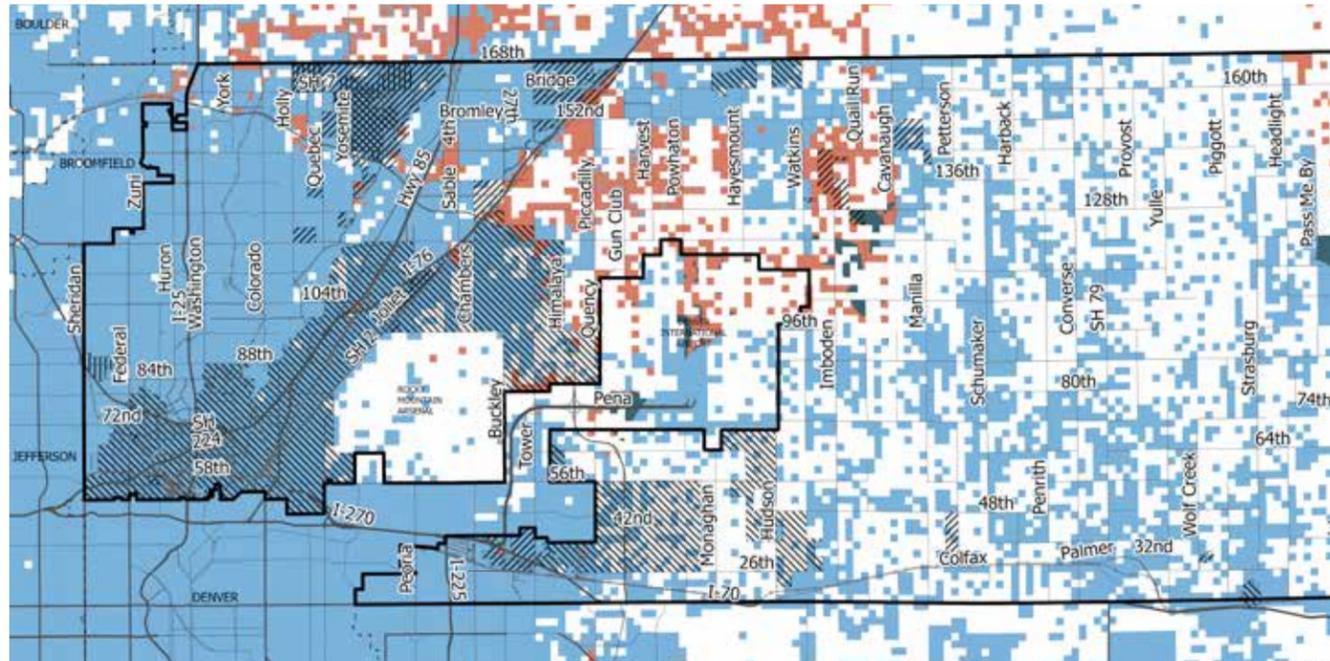
- In 2014, Urban Centers accounted for 10 percent of the region's

housing. In 2040, the goal is to increase the metric to 25 percent.

- In 2014, Urban Centers accounted for 36.3 percent of the regions employment. In 2040, the goal is to increase the metric to 50 percent.

The County has an opportunity to support DRCOG's guidance and increase density in Urban Centers.

MAP 26: UTILITY SERVICE AREAS IN UNINCORPORATED ADAMS COUNTY



Data Source: Adams County, DRCOG, Colorado Governor's Office of Information Technology, ESRI, Design Workshop

NOT TO SCALE

LEGEND

Metro, Water or Water and Sanitation Districts within unincorporated Adams County

- Metro
- Water
- Water and Sanitation

Broadband Service Levels according to the Colorado Broadband

- Served (Reported service meets 25 Mbps download standard)
- Unserved (Reported service does not meet 25 Mbps download standard)
- Priority (reported service is 10 Mbps download or less)
- Adams County Boundary
- Railroads
- Roads

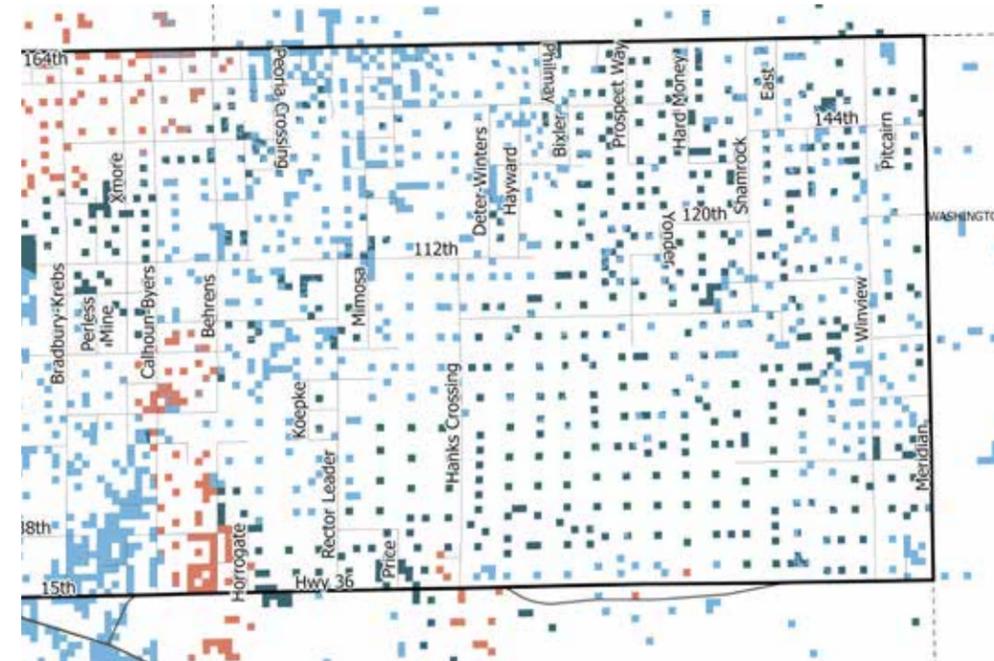
Note: Water and Sanitation districts provided by municipalities are not indicated on this map with the interest of focusing on conditions in the unincorporated areas of the County.

UTILITY SERVICE AREAS

Water, sanitation and broadband access and capacity are some of the most significant barriers to growth in Adams County.

In terms of water and sanitation, the County has an opportunity for a two-pronged approach of increasing efficiency to reduce water use in addition to exploring ways to add capacity and understanding the amount of water available for future development.

While there may be opportunities to add additional capacity, it is important to first focus on available water resources. This is an opportunity area for the County to review and potentially adjust requirements and allowances related to anticipated growth demands.



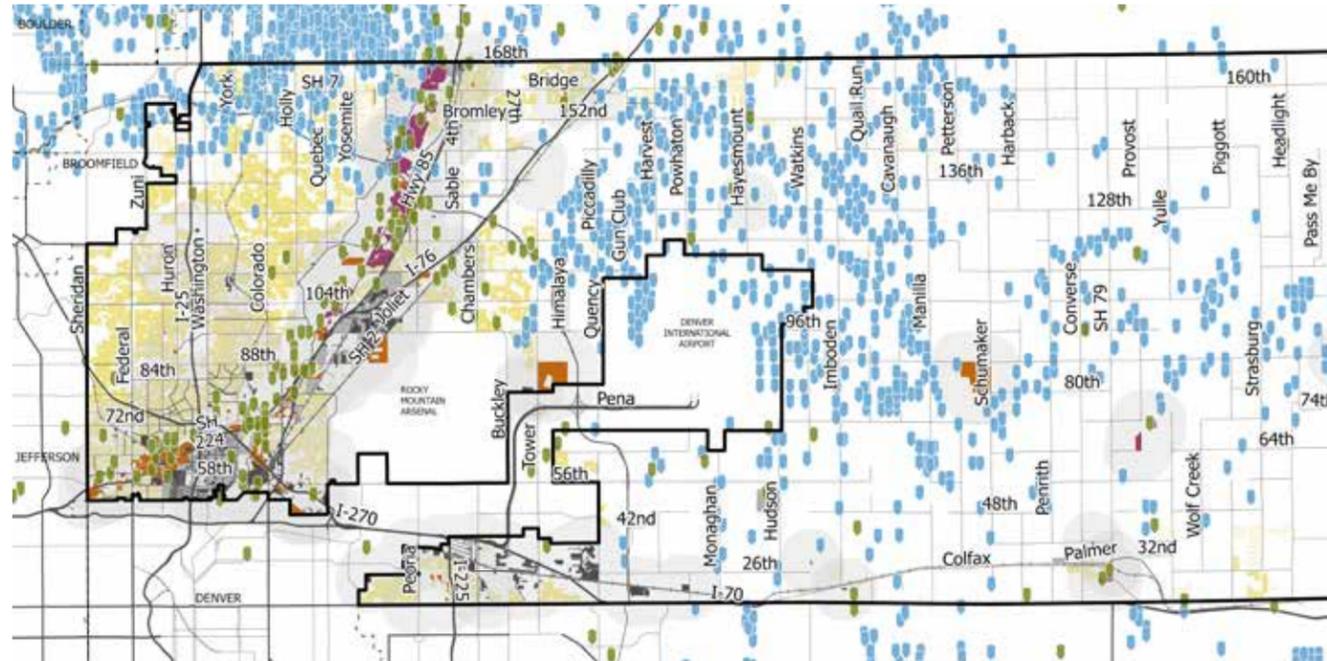
NOT TO SCALE

Working to better inventory water supply and demand and developing a more complete understanding of hydrological resources will help the County in determining the best ways to work with providers and develop appropriate regulations that will balance water use and conservation. A complementary water planning effort will help to direct most appropriate future land use regulations within the comprehensive plan.

Building out more non-potable water systems such as the one utilized by the South Adams County Water and Sanitation District in the northern part of that district would enable greater resource efficiency, and could be coupled with conservation measures to reduce the total potable water consumption County-wide.

From an internet connectivity perspective, there are opportunities to move toward a more robust network, particularly given the changes occurring related to work-from-home during COVID-19. Broadband service is typically provided by private service providers, so there is some potential for County partnership, or including these considerations in requirements for new development.

MAP 27: INCOMPATIBLE LAND USE ADJACENCIES



Data Source: Adams County, DRCOG, COGCC, Design Workshop

LEGEND

Hazard Sites

- Permitted Mine
- Active Oil and Gas Well
- Landfills
- Adams County Boundary
- Producing Mine
- Railroads
- Roads

Current Land Use

- Industrial
- Producing Mine

Future Land Use

- Industrial

Buffer

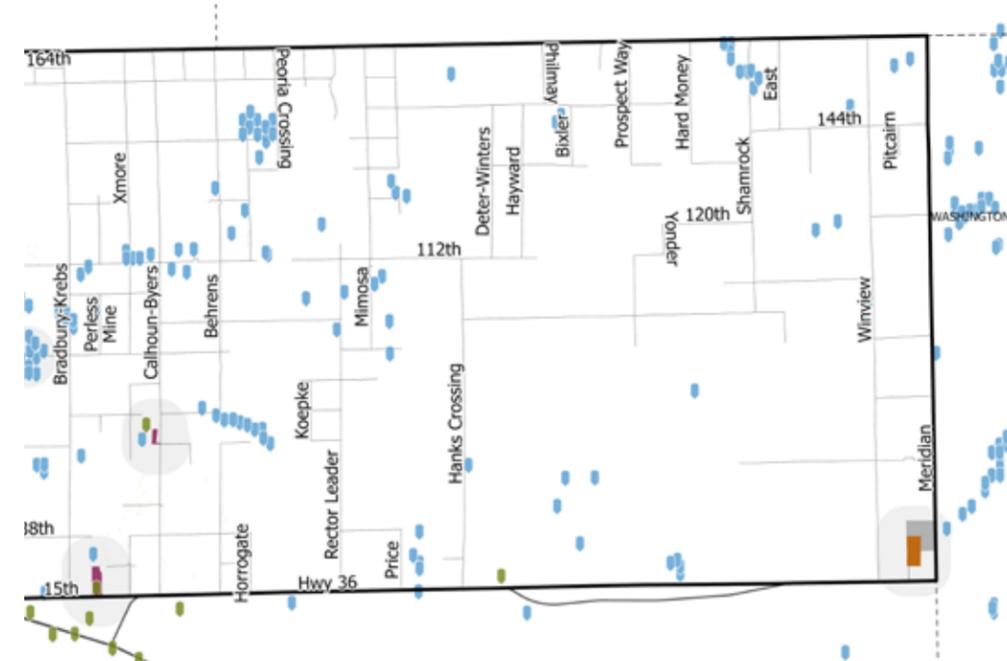
- 1 Mile

- Residential Addresses

ENVIRONMENTAL JUSTICE

Some areas of Adams County have adjacency issues with industrial and residential land uses. As noted in the Hazard Mitigation Plan, Adams County has the highest number of hazardous fixed facilities of any Colorado County. These consist of 707 sites required to fill out annual Tier II reports on emergency and hazardous chemical inventory, and 14 sites containing extremely hazardous materials to submit Risk Management Plans (RMPs). These are most prominent along the South Platte especially along the South Platte River corridor and the railroad network.

By overlaying the proximity to these RMP sites along with other identified environmental criteria combined with demographic data, the US EPA has



NOT TO SCALE



generated an Environmental Justice screening tool to help identify areas particularly impacted by combined factors. The western portion of Adams County in particular scores particularly poorly in indices related to proximity to superfund and RMP sites, especially when combined with higher numbers of residents that are people of color, with less than high school education and with some degree of being linguistically isolated. These factors indicate a need to continue to identify and include these impacted residents in restorative efforts to address some of the impacts they have borne.

Adams County can proactively plan to reduce conflicts and address persistent environmental justice issues through an updated future land use map so that industrial areas are clustered together and

criteria is established for industrial uses in close proximity of residential land uses. Additionally, a focus on opportunities for clean industries to locate or expand in Adams County while emphasizing local and inclusive hiring practices is an important aspect of improving environmental justice on a County-wide scale.

Additionally, there are opportunities for improving environmental justice while creating economic development opportunities. By remediating hazardous sites and providing clean energy jobs, these sites can become an asset to the community.

BUILT ENVIRONMENT AND CONNECTIONS:

STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS ANALYSIS

A SWOT analysis provides the foundation of understanding for the Adams County Comprehensive Plan. Although the analysis is structured like four distinct quadrants, there is actually an interplay between strengths, weaknesses, opportunities and threats.

- **Strengths** describe what the County excels at and what makes it distinct. Strengths should be

supported and amplified where possible.

- **Weaknesses** stop the County from reaching full potential. They are areas where the County needs to improve. Weaknesses can become opportunities.
- **Opportunities** refer to favorable external factors that could give the County an advantage. Opportunities can turn into future strengths.
- **Threats** refer to external factors that have the potential to harm the County. Threats should be minimized, mitigated and/or proactively planned for.

Table 16: Built Environment SWOT Analysis

Note: A checkmark indicates a relationship between the SWOT analysis content and the plan value lenses (equity, sustainability and livability). Details of this relationship will be further evaluated during Phase 2 of the Comprehensive Planning process and plan creation.

ALIGNMENT WITH PLAN VALUE LENSES			
	 EQUITY	 SUSTAINABILITY	 LIVABILITY
SWOT ANALYSIS BY TOPIC			
COMMUTER RAIL AND TRANSIT			
Strength			
» New commuter rail lines and transit stations serve the western urbanized portions of Adams County.			✓
Weakness			
» There is not a consistent pattern of population density around existing rail and transit stops in order to serve more population by this service.	✓		✓
» There is a lack of consistent and reliable transit service outside of the urbanized areas and a lack of bicycle and pedestrian connections to the transit stops.	✓		✓
Opportunity			
» There is an opportunity to increase density around existing transit and rail stops in order to serve more population. Service can be expanded to meet demand in the future.	✓		✓
» Focus capital improvement projects on improving sidewalk connections and connecting bike lanes from adjacent neighborhoods to rail and transit stops.	✓		✓
» Plan for seamless connections from all transit modes to enhance convenience of the service.	✓		✓

ALIGNMENT WITH PLAN VALUE LENSES



EQUITY



SUSTAINABILITY



LIVABILITY

SWOT ANALYSIS BY TOPIC

Threat

» If population density is not added to rail and transit stops then fewer residents in the County will consider transit a convenient mode of travel, thus perpetuating the use of single-occupancy vehicles.	✓		✓
» COVID-19 related RTD budget impacts could have lasting consequences on existing services and future expansion.	✓		✓

REGIONAL TRAIL SYSTEMS

Strength

» New investments in regional trail systems serve the western urbanized portions of Adams County.	✓		✓
» New regional multimodal trail connecting to the South Platte and Clear Creek trails.	✓	✓	✓

Weakness

» Trail access is not consistent throughout the County – even in locations with trails in close proximity such as trailhead access to the Clear Creek Trail from Pecos Street.	✓		✓
--	---	--	---

Opportunity

» Now that the trail networks are established, better connections can be made between the trails and the County residents through spur trails and trailheads.	✓		✓
» Trail and trailhead design needs to be comfortable and safe in order to encourage more use such as public art and vegetation management.		✓	✓
» Other opportunities should be explored to determine ways to enhance comfort and safety of Adams County trails.		✓	✓
» Additionally, there is an opportunity to invest in trail opportunities that serve eastern Adams County residents.	✓		✓

Threat

» If additional trail connections are not addressed, then the use of single occupancy vehicles could be further perpetuated rather than multi-modal options.	✓		✓
--	---	--	---

DISTRIBUTION OF ESSENTIAL SERVICES AND AMENITIES (20-MINUTE COMMUNITY)

Strength

» Mostly equitable distribution of essential services and amenities in the western portion of the County with a few gaps to address (more to come in the land use analysis).	✓		✓
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Weakness

» Some gaps in access to healthcare, grocery stores, childcare centers are identified.	✓		✓
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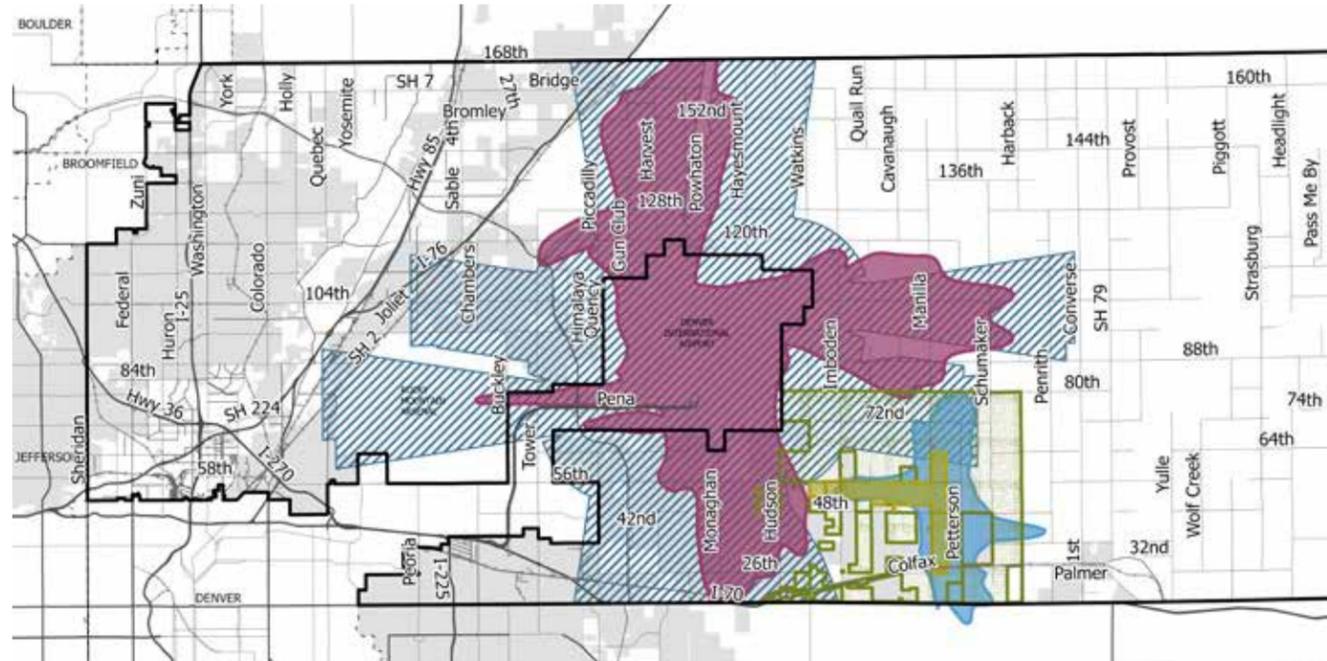
ALIGNMENT WITH PLAN VALUE LENSES			
	 EQUITY	 SUSTAINABILITY	 LIVABILITY
SWOT ANALYSIS BY TOPIC			
DISTRIBUTION OF ESSENTIAL SERVICES AND AMENITIES (20-MINUTE COMMUNITY)			
Opportunity			
» Use economic development tools to provide for private development essential services and amenities like grocery stores and hospitals and leverage County resources to provide for public amenities like parks and libraries.	✓		✓
Threat			
» If the distribution of essential services and amenities are not addressed, then the plan values for equity, livability and sustainability cannot be fully attained.	✓		✓
ZONE DISTRICTS AND DENSITY			
Weakness			
» Limited implementation of zone districts from the 2012 Comprehensive Plan.	✓	✓	✓
» Lack of density and destinations around transit stations and limited walkable districts.	✓	✓	✓
» Developer dependence on Planned Unit Developments (PUD) to provide developments like the Midtown neighborhood.	✓	✓	✓
Opportunity			
» Creating zone districts that match the County vision will ensure that PUD zone districts can be reduced and zoning categories can provide the standards to guide density and compatible uses throughout the County.	✓	✓	✓
Threat			
» If the County does not update zone districts to reflect the future Comprehensive Plan, then the County will have less control over future land uses and density in Adams County.	✓	✓	✓
» The use of PUD instruments will be continually utilized by developers which are difficult for the County to administer and challenge the ability to ensure built environment goals are achieved.		✓	
CHARACTER AND IDENTITY OF ADAMS COUNTY			
Strength			
» Adams County has strong character and identity in terms of agriculture heritage especially with the success of Riverdale Regional Park and ongoing work with Historic Splendid Valley.			✓
Weakness			
» Character and identity of Adams County is lost in the mosaic of jurisdictions.			✓
» Auto-dominated gateway corridors from Denver lack character and identity.			✓
Opportunity			
» Character and identity could be different for different areas of Adams County.			✓
» Character and identity supports sense of place and could lead to additional tourism and/or new developments.			✓

ALIGNMENT WITH PLAN VALUE LENSES			
	 EQUITY	 SUSTAINABILITY	 LIVABILITY
SWOT ANALYSIS BY TOPIC			
Threat			
» If Adams County does not address character and identity then there will be reduced sense of place in the County and potentially lost tourism and new development revenues.			✓
ENVIRONMENTAL JUSTICE			
Strength			
» Some areas of the County do not have an environmental justice issue with the adjacency of industrial/hazard sites and residential.	✓	✓	✓
Weakness			
» There are areas of the County that are of concern regarding the adjacency or lack of land use transition between industrial/hazard sites and residential.	✓	✓	✓
» Some industrial uses have close proximity to higher-occupancy uses such as schools and offices.	✓	✓	✓
Opportunity			
» The future land use plan can address environmental justice issues by creating land use transitions between industrial/hazard sites and residential to ensure equity and livability for all residents.	✓	✓	✓
» Additionally, policies can be adopted to create more performance standards for industrial uses to limit the impact they may create on adjacent land uses.	✓	✓	✓
Threat			
» Public health and noise could be an issue for residents adjacent to industrial/hazard sites.	✓	✓	✓
AIRPORT OVERLAYS			
Strength			
» Airport overlays provide safety for Adams County residents.	✓		✓
» The overlay districts protect the airports from liability and create buffers to ensure the airports can operate safely and potentially expand operations in the future.			✓
Weakness			
» Airport overlays provide some land use restrictions on large areas of the County.			✓
Opportunity			
» Compatible land uses can be determined for the airport overlay areas considering what the Federal Aviation Administration allows versus other jurisdictions.			✓
» The CASP subarea plan is already addressing this in their planning effort, in which this plan can align.			✓

ALIGNMENT WITH PLAN VALUE LENSES			
	EQUITY	SUSTAINABILITY	LIVABILITY
SWOT ANALYSIS BY TOPIC			
AIRPORT OVERLAYS			
Threat			
» Numerous airport overlay districts to consider in land use planning on the central and western portion of the County (DIA and CASP).			✓
SUSTAINABLE DEVELOPMENT			
Strength			
» Adams County features good infrastructure in terms of transit and regional trails which can be leveraged in creating more sustainable developments throughout the County, especially on the western and urbanized portions of the County.	✓	✓	✓
Weakness			
» The County can do more to encourage density and sustainable practices.	✓	✓	✓
Opportunity			
» Encourage more green space and drought tolerant shade plantings in land use regulations either through development standards and regulations or code.		✓	✓
» Increase density especially around transit corridors supporting the 20-minute community aspiration and protecting greenfield space from low density development in the County.		✓	✓
» Include or require/incentivize Electric Vehicle (EV) charging stations throughout the County such as at fuel stations or in certain new developments.		✓	
» Provide incentives or land use regulations to require projects of a certain size to meet third-party sustainability standards (LEED, Envision, Living Building Challenge, WELL).		✓	
» The standards for green infrastructure and low impact development could be standardized for new development requirements in Adams County.		✓	
» Create a needs assessment and integrated plan for renewable energy resources, transportation plan and EV infrastructure.		✓	
Threat			
» Climate change will increase pressures on development that will progressively increase in severity and necessitate a longer-term view.	✓	✓	✓
EMERGENCY PREPAREDNESS			
Opportunity			
» Allowing and/or requiring schools and churches to serve as community resiliency centers in times of need.	✓	✓	✓
» Plan for enough back-up power and configurations in existing and new facilities to accommodate community members' needs.		✓	



Figure 31: Aerial of Colorado Air and Space Port



Data Source: Adams County, DRCOG, CASP - Design Workshop

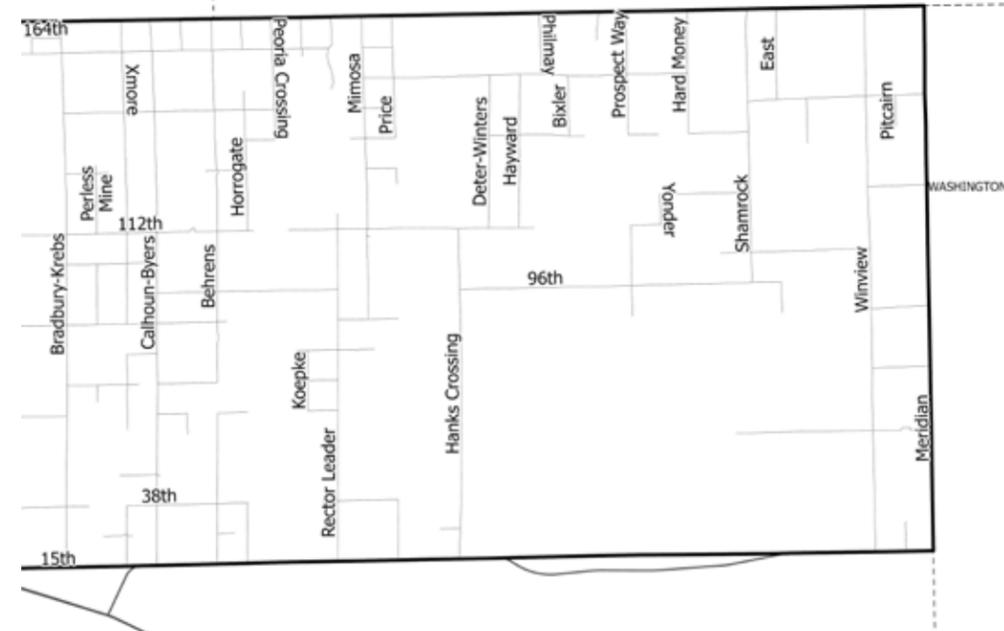
LEGEND

- AIZ
- AHO
- Front Range Noise
- DIA Noise
- Colorado Air and Space Port Subarea
- Adams County Boundary
- Railroads
- Roads

AVIATION

The Airport Height Overlay (AHO) provides protection for residential and non-residential land uses where aircraft frequently flies low to the ground during takeoff and landing. Natural and man-made objects are regulated in this overlay in order to avoid hazards.

The Airport Influence Zone (AIZ) provides areas that are fitting for economic development and safe operation of air carrier and/or general aviation airports for public use. This zone also provides for notice and disclosure to property owners in areas where aircraft activities would constitute a nuisance.



NOT TO SCALE

The County is currently working on a subarea plan for the Colorado Air and Space Port (CASP), which will update and replace the land use vision articulated in the 2012 Comprehensive Plan for this area. This Comprehensive Plan update will align the land use strategy across documents to ensure consistency in the land use vision for this critical area. Updates to land uses are anticipated to reflect aviation, manufacturing and innovation industries and a business park concept that are identified in the subarea plan.

WORKFORCE AND LABOR PROFILE

According to 2020 data from ESRI Business Analyst, there are 14,172 businesses in Adams County employing 196,673 total employees.

The unemployment rate, without accounting for COVID-19 impacts, is relatively low at 7.3 percent and 264,459 of the population over the age of 16 being employed.

Skills training is available from several nearby universities as well as higher education opportunities with the County including: Regis, University of Colorado Anschutz Medical Campus, Front Range Flight School and Front Range Community College, Colorado's largest community college.

The Education Consortium and Workforce/Business Center are evidence of the County's prioritization of developing the workforce.

EMPLOYMENT AND INDUSTRY (INCLUDING COVID-19 IMPACT)

The work distribution is mostly white collar, which accounts for 54.4 percent of total employment, followed by blue collar and services, which make up 27.4 and 18.2 percent respectively.

Employment by industry in Adams County is led by Services which accounts for 43.2 percent of total employment, followed by Construction and Retail Trade representing 12.9 and 10.6 percent respectively.

Key and emerging industries are aerospace, aviation, bio/life sciences, food/ agribusiness/ beverage, and manufacturing.

The economy is supported by blue-collar industries such as construction, retail and services.

COVID-19 IMPACT

Adams County has been growing rapidly over the past 20 years, providing a generally strong economic development picture.

However, like communities across the country, COVID-19 has impacted Adams County. By mid-May 2020, unemployment reached almost 15 percent nationally and 11 percent in Adams County.

The impacts of COVID-19 on the long term economy are still being understood, and will be incorporated into these planning efforts.

Economic Development Land Use Analysis

There is an opportunity to focus industrial development in current industrial areas and reduce industrial expansion into existing agriculture and/or housing areas. Requirements like parking, landscaping, and buffers can impact the amount of land required for industrial development. These requirements may need to be adjusted to enable this land use pattern change.

Additionally, there may be an opportunity to activate or transition

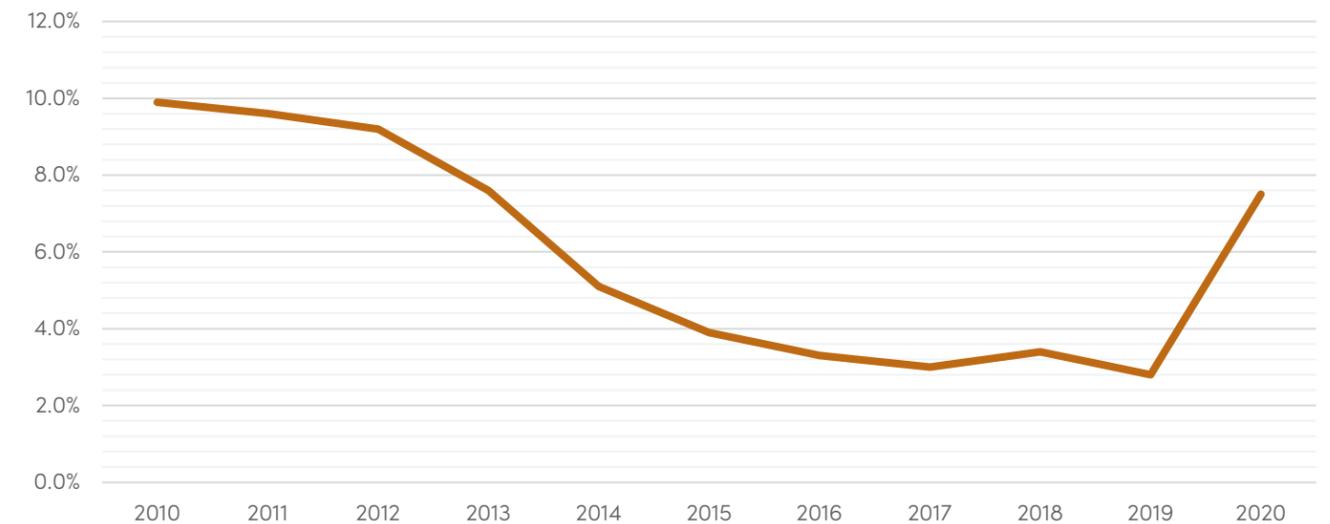
underutilized parcels through incentives or reductions in mitigation requirements in order to provide for appropriate uses such as solar job centers, commercial destination, energy production, clean tech, or warehousing on existing brownfields and hazard sites.

Table 17: Unemployment

	2020 UNEMPLOYED POPULATION (AGE 16+)	UNEMPLOYMENT RATE (2020)
Adams County	20,738	7.30%
Arapahoe County	28,205	7.40%
Broomfield County	2,487	6.10%
Denver County	29,868	7.00%
Jefferson County	23,554	6.70%
Morgan County	1,300	8.00%
Washington County	165	5.90%
Weld County	12,770	7.50%

Source: Esri, 2020

Figure 32: Unemployment in Adams County for the Past Decade



DID YOU KNOW?

14,172 BUSINESSES IN ADAMS COUNTY EMPLOYING **196,673** TOTAL EMPLOYEES

7.3% UNEMPLOYMENT RATE WITHOUT ACCOUNTING FOR COVID-19 IMPACTS

54.4% WHITE COLLAR EMPLOYEES

27.4% BLUE COLLAR EMPLOYEES

18.2% SERVICE EMPLOYEES

Data from ESRI Business Analyst 2020 Report

ECONOMIC DEVELOPMENT:

STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS ANALYSIS

A SWOT analysis provides the foundation of understanding for the Adams County Comprehensive Plan. Although the analysis is structured like four distinct quadrants, there is actually an interplay between strengths, weaknesses, opportunities and threats.

- **Strengths** describe what the County excels at and what makes it distinct. Strengths should be

supported and amplified where possible.

- **Weaknesses** stop the County from reaching full potential. They are areas where the County needs to improve. Weaknesses can become opportunities.
- **Opportunities** refer to favorable external factors that could give the County an advantage. Opportunities can turn into future strengths.
- **Threats** refer to external factors that have the potential to harm the County. Threats should be minimized, mitigated and/or proactively planned for.

Table 18: Economic Development SWOT Analysis

Note: A checkmark indicates a relationship between the SWOT analysis content and the plan value lenses (equity, sustainability and livability). Details of this relationship will be further evaluated during Phase 2 of the Comprehensive Planning process and plan creation.

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
INDUSTRIAL LAND USES			
Strength			
» Strong industrial sectors located in Adams County contributing to job creation and economic resiliency.	✓		✓
Weakness			
» Some industrial land uses can be incompatible if adjacent to residential or restaurant/retail areas.	✓	✓	✓
Opportunity			
» Permitting large scale renewable energy installations in industrial zones.		✓	✓
» Secure more manufacturing and clean, indoor industrial uses that have fewer impacts on adjacent land uses.	✓	✓	✓
Threat			
» The expense incurred by developers cleaning up historic industrial uses could add risk to their projects.		✓	
» Lack of incentives or resources for developer-led hazardous waste mitigation efforts.		✓	

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
PRIVATELY PROVIDED ESSENTIAL SERVICES AND AMENITIES DESTINATIONS IN ADAMS COUNTY (CHILDCARE CENTERS, HOSPITALS, GROCERY STORES, WALKABLE NEIGHBORHOOD COMMERCIAL, TRADE SCHOOLS AND JOB TRAINING CENTERS, ETC)			
Strength			
» Some successful collaboration with developers to bring essential services and amenities to the residents such as the childcare center in the Midtown project.	✓		✓
Weakness			
» Not all essential services and amenities destinations in Adams County are equitably distributed.	✓		✓
» Broadband internet access is a challenge in Adams County.	✓		✓
Opportunity			
» Foster economic development of essential services in gap areas in the County. (Note: implementation will be addressed in Phase 2 but this could be achieved through a neighborhood-based economic development strategy).	✓		✓
Threat			
» Reliance on private essential services can result in less equitable distribution throughout the community.	✓		✓
OPPORTUNITY ZONES			
Strength			
» Nine designated Opportunity Zones in Adams County including one north of the Federal Boulevard corridor area and one at the Washington Street corridor area, among others.	✓	✓	✓
Opportunity			
» Opportunity Zones should be leveraged to provide the most benefit for existing and new residents.	✓	✓	✓
Threat			
» With new development, housing displacement is a risk.	✓	✓	✓
» Lack of federal incentives or guidance to identify the potential future for the Opportunity Zones.	✓	✓	
» Improvements to Opportunity Zone areas could lead to gentrification.	✓		✓
» The timeline for investment can be unpredictable.	✓	✓	✓
» There is a threat that the improvements will not directly benefit the existing neighborhood.	✓		✓

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	 EQUITY	 SUSTAINABILITY	 LIVABILITY
AVAILABLE LAND FOR DEVELOPMENT			
Strength			
» The County has ample land for future development on infill sites where infrastructure exists, areas near transit and areas not yet developed.	✓	✓	✓
Weakness			
» Protections in unincorporated Adams County are not currently in place to protect against rampant greenfield development in the eastern portions of the County. Although a barrier to greenfield development is the lack of existing infrastructure and distance from services like transit.	✓	✓	✓
Opportunity			
» The Advancing Adams effort affords the opportunity to put forth policies regarding how new development within existing neighborhoods can mitigate risks of gentrification and address other impacts	✓		✓
» Adding density to areas with existing development and redevelopment of existing parcels could reduce the impacts to Adams County greenfield sites.	✓	✓	✓
Threat			
» Continuous development on greenfield sites could reduce water, ecological and agriculture resources.	✓	✓	✓
» Risk of displacement to existing residents and businesses as redevelopment causes a rise in property values.	✓		✓

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CULTURAL HERITAGE

A strong working class of people and agriculture is part of Adams County's regional identity and will continue to be in the future. Adams County can celebrate these assets through public art, events like the Adams County Fair and neighborhood identity that builds placemaking and local pride.

CULTURAL HERITAGE

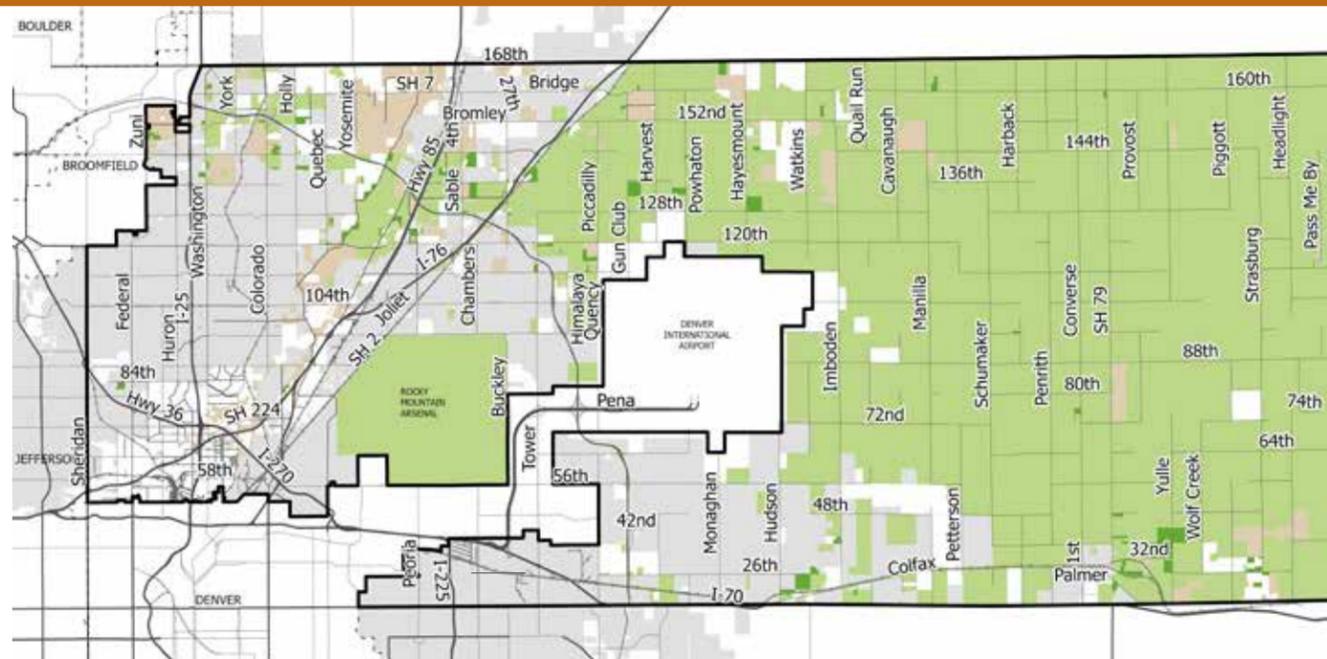
Agriculture, historic assets, scenic views and a vibrant future of artful expression and events will define the future of Adams County.

AGRICULTURE

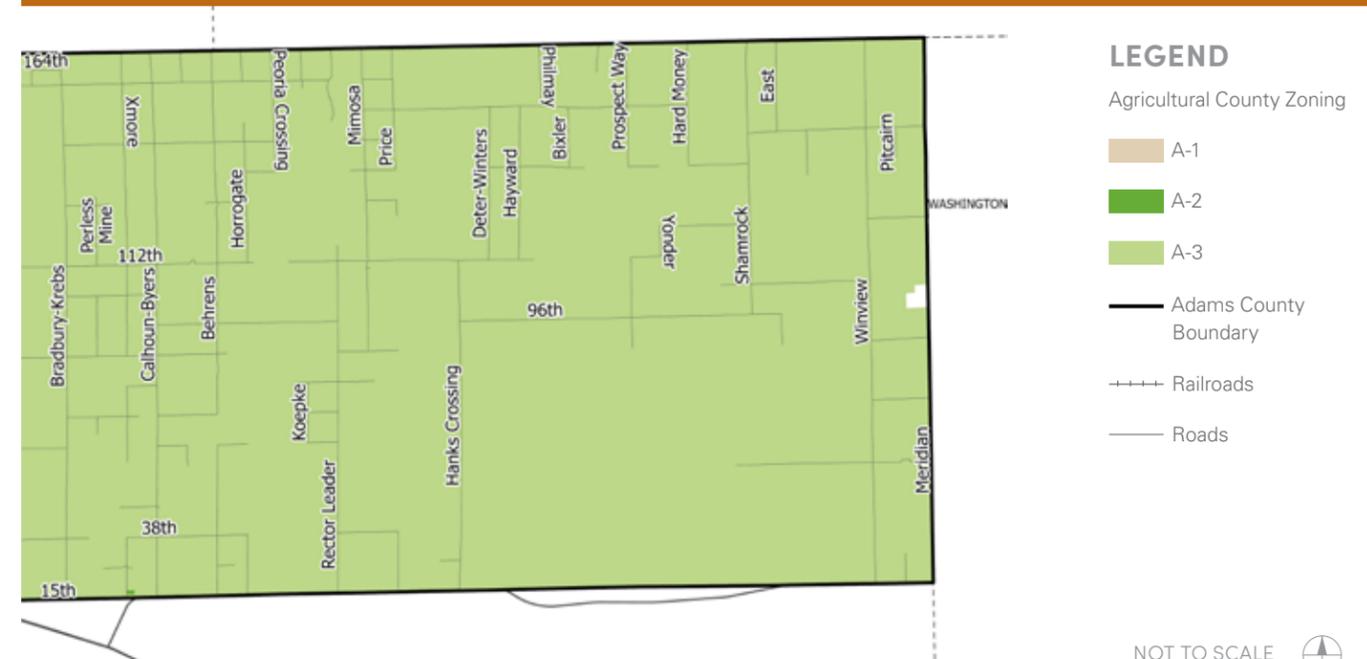
The existing agricultural land uses are a significant cultural heritage component of Adams County. A large percentage of the County, mostly located on the eastern portion of the County, is dedicated to agricultural uses and the popularity of the Adams County Fair at Riverdale Regional

Park is a testament to this valuable heritage. The District Plan (for Historic Splendid Valley) identifies multiple land use typologies that can both accommodate growth and preserve the local culture such as: farms, community supported agriculture, farmers markets, cottage food industries, community gardens, food processing facilities and gardens integrated with school campuses. The challenge is to ensure that these land uses are viable from a market perspective if they are located in other areas besides the District Plan where they were specifically recommended. County insights indicate that the community has an interest in progressive agricultural-based commercial uses such as event barns, farm stands, and farm-to-table dinner venues in Agriculture zone districts.

MAP 30: AGRICULTURAL ZONING



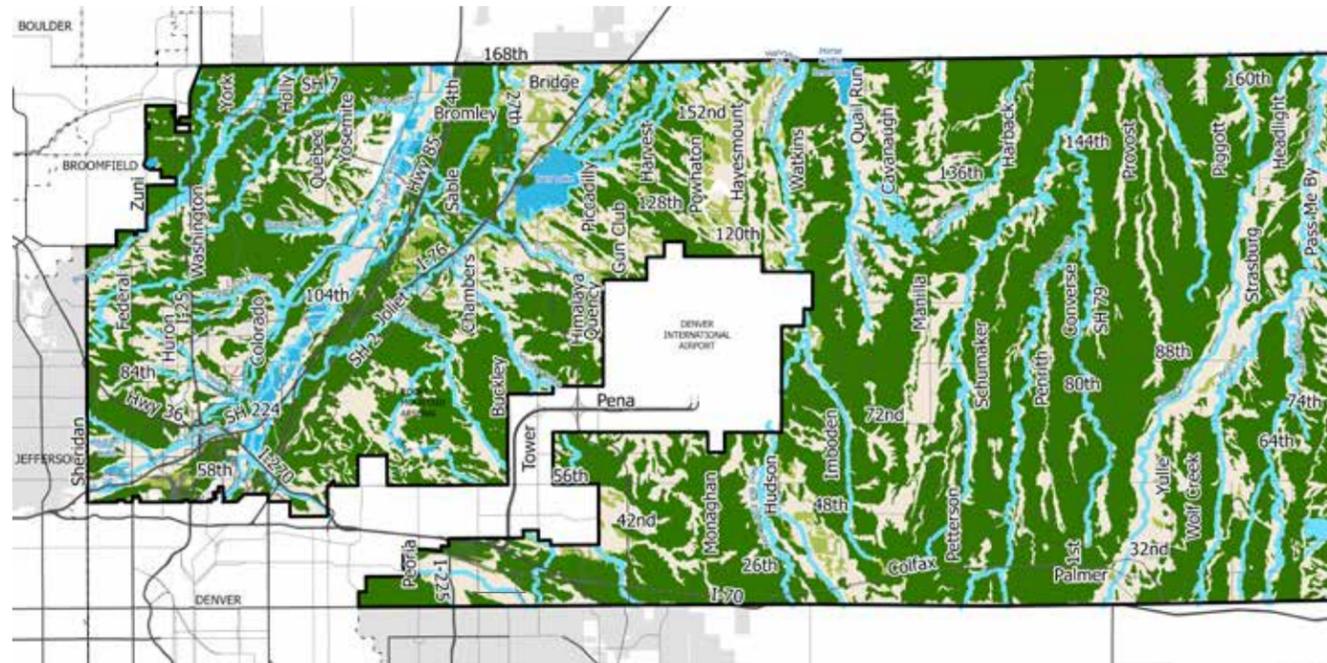
Data Source: Adams County, DRCOG



LEGEND
 Agricultural County Zoning

- A-1
- A-2
- A-3
- Adams County Boundary
- Railroads
- Roads

NOT TO SCALE



Data Source: Adams County, DRCOG, NRCS, USDA

Economics of Agriculture in Adams County

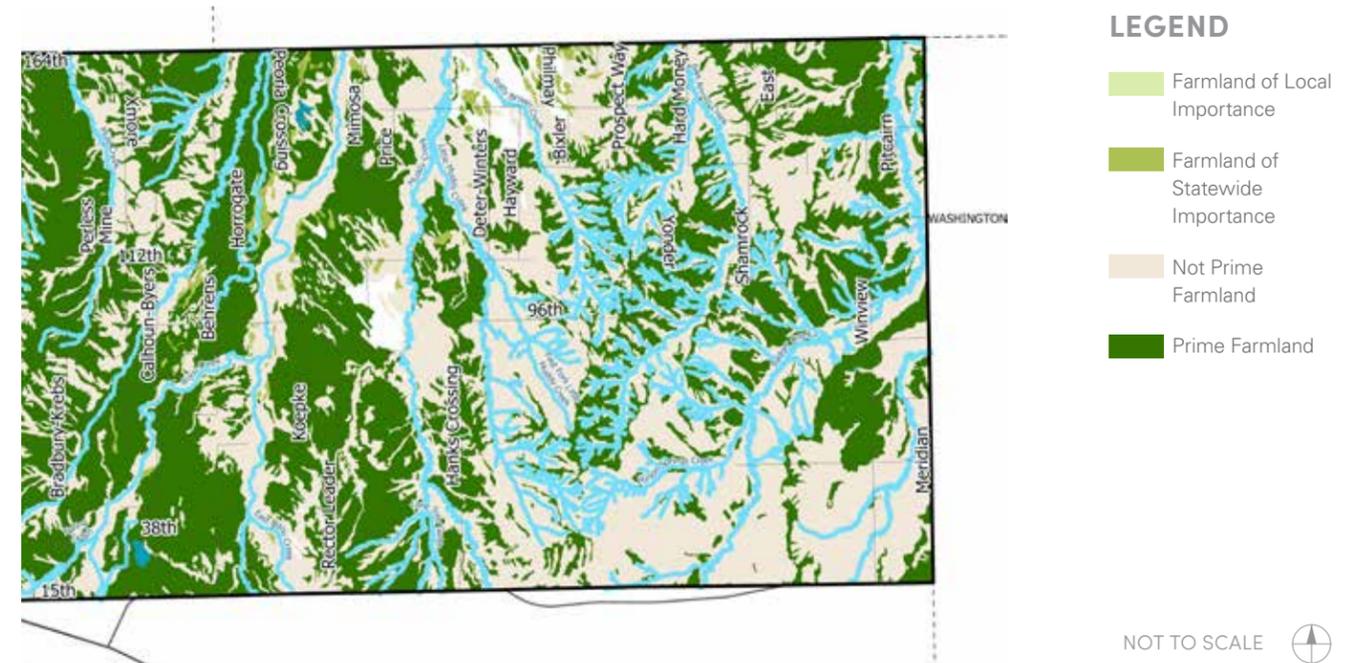
According to the USDA 2017 Census of Agriculture, 93 percent of the county land area (705,289 acres) is classified as “land in farms.” This is defined as the value of sales of agricultural products of more than \$1,000 annually. In Adams County this is a total of 905 farms. While the number of farms in Adams County grew by eight percent from 2012 to 2017 with two percent more acres of land in farms, farm-related income decreased by 26 percent. Although the market value of products sold increased by nine percent, expenses and lower government payments challenged average net cash income. Only 15 farms in the County have a value of sales reported to be over \$50,000

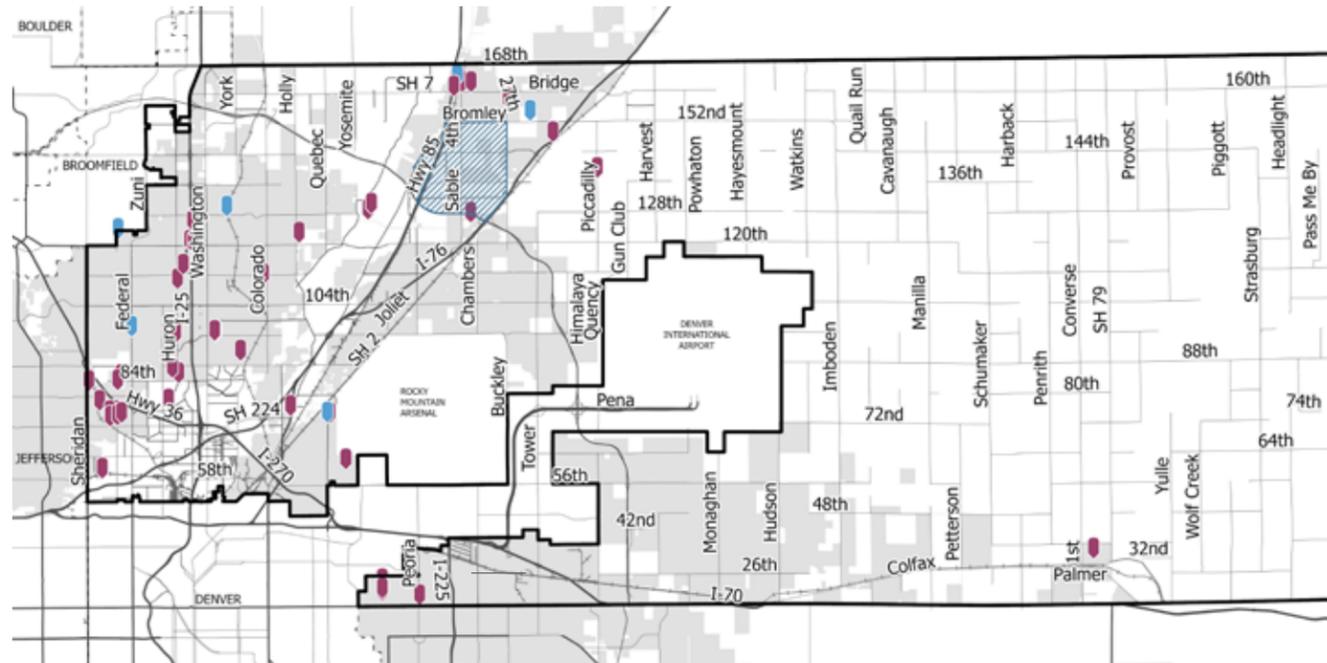
annually and 45 percent of farms are considered small in size 10 to 49 acres¹.

Agriculture Soils and Prime Farmland

The agriculture zoning map shows most of the eastern portion of Adams County zoned as A-3 for agriculture uses, however, not all of the agriculture zoned areas are identified as prime farmland according to USDA classifications. The relationship between agricultural land uses and locations of prime farmland can be evaluated in Phase 2 of the planning process.

¹ Census of Agriculture, Adams County Profile, 2017





Data Source: Adams County, DRCOG, History CO, Design Workshop

LEGEND

- Historic agriculture assets (HistoryColorado.org)
- Other historic assets (HistoryColorado.org)
- Municipal areas
- Adams County Boundary
- Railroads
- Roads
- Historic Splendid Valley

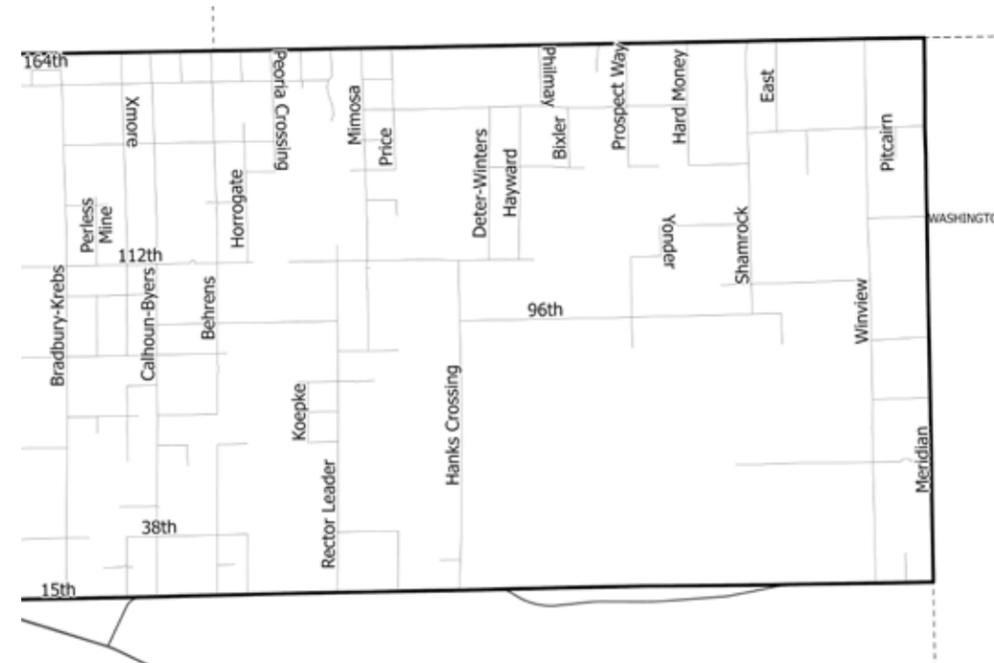
CULTURAL ASSETS

MAP 32 shows historic and cultural asset points² from the History Colorado program as well as the boundary for Historic Splendid Valley.

The agriculture-related assets from the History Colorado program include:

- Bromley Farm / Hishinuma Farm
- Colorado Sanitary Canning Factory
- Eastlake Farmers Co-Operative Elevator Company
- Gottlieb and Rose Egli House
- Metzger Farm
- Savery Savory Mushroom Farm Water Tower
- Thede Farmhouse

² HistoryColorado.org



NOT TO SCALE

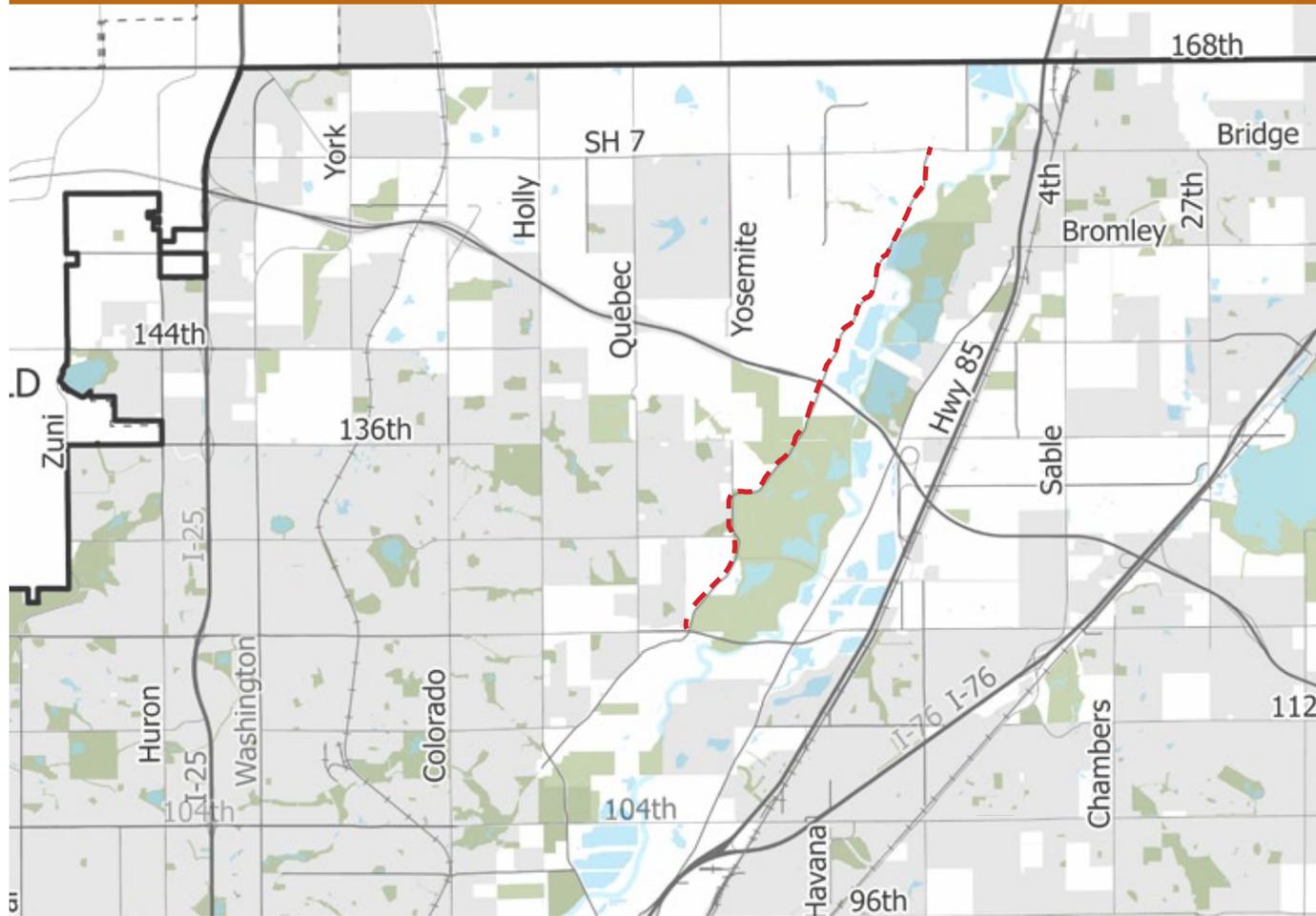
Other historic assets from the History Colorado program are also indicated and they include:

- Adams County Courthouse (Brighton City Hall)
- Bowles House
- Brannan Sand and Gravel Pit #8, Lake Sangraco and Boat Complex
- Brighton High School
- Bruderlin House
- Cline School
- Denver Tramway Street Car #4
- Engelbrecht Farm
- First Presbyterian Church (Brighton)
- Fitzsimons General Hospital, Main Hospital Building
- Granville Fuller House
- Harris Park School
- M.J. Lavina Robidoux House
- Riverside Cemetery
- St. Stephens' Lutheran Church
- Union High School

- Westminster University (Bellevue College)
- William J. Gregory House
- Wilson House (Centennial House)

While there are a number of historic assets in Adams County, the County does not have its own historic preservation program and has not sought designation as a Certified Local Government by the state. Because preservation of historic assets is strongest at the local level, the County could consider such a program to protect cultural and historic assets that are located in the unincorporated portions of the County.

MAP 33: RIVERDALE ROAD SCENIC BYWAY (AS PROPOSED)



Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE

LEGEND

- - - Riverdale Road
- Adams County Boundary
- Municipal Area
- Railroads
- Parks and Open Space
- Roads
- Lakes and Streams

Scenic Byway Key Plan



POTENTIAL SCENIC BYWAY

The 2005 Riverdale Road Corridor Plan outlined a plan to preserve Riverdale Road and the South Platte River Valley for future generations. One of the recommendations was to establish a scenic byway designation for a stretch of Riverdale Road as indicated in MAP 33. This recommendation is still valid but has not been implemented yet.

Some of the scenic preservation guidelines mentioned in this plan includes:

- Limiting the scale of development

- Preventing future access points to Riverdale Road
- Preserving trees and vegetation
- Preserving and enhancing historic structures
- Preserving farmland
- Fostering community stewardship, and
- Developing a scenic corridor management plan

PUBLIC ART AND EVENTS

Public art and events also contribute to the culture and heritage in Adams County. Advancing Adams has an opportunity to learn from the past but also look forward to new and innovative ways to celebrate the County.

The Adams County Fair is one of the most cherished events in the County as it celebrates the rich agricultural heritage of the County. The fair and rodeo date back to 1888 before the official formation of the County. The early years of the Fair were held at the present-day site of the City of Brighton Government Center on

South Fourth Avenue. The first official Adams County Fair was held in October 1904. In 1964, the Fairgrounds were relocated to its current home in Riverdale Regional Park. The Adams County Fair continues to be a popular event that celebrates the rich agricultural heritage.

In addition to agriculture, the County also has a rich history of industry, including sand and gravel mining and agricultural processing, and a rapidly growing population with increasing diversity. These are all elements of the County that can be celebrated in a multitude of ways. Public art and placemaking investments are strategies that celebrate the character of a community through visual identity. Even practical elements like wayfinding signage are an opportunity to offer expression. Public art and placemaking will be evaluated further for policies and implementation details in Phase 2.



Figure 33: Adams County Fair at Riverdale Regional Park

CULTURE AND HERITAGE: STRENGTHS, WEAKNESSES, OPPORTUNITIES AND THREATS ANALYSIS

A SWOT analysis provides the foundation of understanding for the Adams County Comprehensive Plan. Although the analysis is structured like four distinct quadrants, there is actually an interplay between strengths, weaknesses, opportunities and threats.

- **Strengths** describe what the County excels at and what makes it distinct. Strengths should be supported and amplified where possible.
- **Weaknesses** stop the County from reaching full potential. They are areas where the County needs to improve. Weaknesses can become opportunities.
- **Opportunities** refer to favorable external factors that could give the County an advantage. Opportunities can turn into future strengths.
- **Threats** refer to external factors that have the potential to harm the County. Threats should be minimized, mitigated and/or proactively planned for.

Table 19: Culture and Heritage SWOT Analysis

Note: A checkmark indicates a relationship between the SWOT analysis content and the plan value lenses (equity, sustainability and livability). Details of this relationship will be further evaluated during Phase 2 of the Comprehensive Planning process and plan creation.

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
RIVERDALE REGIONAL PARK AND FAIRGROUNDS			
Strength			
» Riverdale Regional Park and Fairgrounds as a cultural and heritage asset for the County.	✓	✓	✓
Weakness			
» Some lack of clarity on the allowable uses.			✓
Opportunity			
» Ongoing code work to define allowable uses.			✓
» Celebration of the Japanese-American farming heritage.	✓		✓
» Creation of the Riverdale Road Scenic Byway.			✓
» Access improvements along East 120th Avenue.			✓
» Current capital improvements plans.			✓
COUNTY AGRICULTURE			
Strength			
» Preserved small-scale agricultural land uses west of the DIA including Historic Splendid Valley.		✓	
Weakness			
» Some agriculture production areas utilize methods that are not adaptive for climate change including water intensive crops, monocrop production and/or annual tilling practices.		✓	

SWOT ANALYSIS BY TOPIC	ALIGNMENT WITH PLAN VALUE LENSES		
	EQUITY	SUSTAINABILITY	LIVABILITY
» Permaculture practices and hydroponic practices could be more supported by the County.		✓	
Opportunity			
» Gather input of agriculture land owners on land use accommodations to help them adapt to anticipated climate change.		✓	✓
» Allowing and encouraging the diversification of crops including industrial crops and biofuels that may be more suited for drier conditions.		✓	
» Permitting additional agriculture uses like regenerative agriculture, permaculture and hydroponics and encouraging their adoption by removing any regulatory barriers, especially adjacent to high value ecological sites.		✓	
» Incorporate land management practices and provide County support for no-till farming to sequester carbon and maintain soil fertility with reduced use of fertilizers.		✓	
» Address any regulatory barriers to allow more crop production for local consumption.		✓	
» Ensure there are no land use restrictions to allow both agriculture and renewable energy production for solar often referred to as agrivoltaics unless prohibited by existing conservation easements		✓	
» Update regulations to allow agriculture land owners to use their properties in more flexible ways that support agri-tourism and other community benefits.	✓	✓	
Threat			
» Development pressures to convert agricultural lands into residential greenfield development.	✓	✓	✓
(Note: these topics will need to be coordinated with the water resource/supply analysis under "local water resources" in the "Natural Environment" section.)			
ADAMS COUNTY PLACEMAKING AND PUBLIC ART			
Strength			
» Successful local artist curation process with projects like the mural and musical instruments at the Federal Boulevard RTD station/ Gateway Park.			✓
Weakness			
» Lack of placemaking and local art that celebrates Adams County.			✓
Opportunity			
» Protections for Adams County historic assets through a formalized County historic preservation program if a County program will provide additional support or resources to local historic assets above and beyond the State program (to be determined in Phase 2).			✓
» Alignment with and leverage of the 2030 State Historic Preservation Plan. Explore incentives for adaptive reuse development projects.			✓

ALIGNMENT WITH PLAN VALUE LENSES			
	EQUITY	SUSTAINABILITY	LIVABILITY
SWOT ANALYSIS BY TOPIC			
ADAMS COUNTY PLACEMAKING AND PUBLIC ART			
Threat			
» Adams County historic assets could be at risk if adequate protections are not established.			✓
COLORADO CREATIVE DISTRICTS			
Weakness			
» Adams County does not boast a Colorado Creative District designation.	✓		✓
Opportunity			
» Adding one or more Colorado Creative Districts in Adams County as a way to celebrate character and identity and attract tourism (note that tourism would overlap with Economic Development theme).	✓		✓
» Improve walkability and bikeability in prototype areas that could secure a Creative District designation and serve as an initial incremental improvement along corridors.	✓		✓
Threat			
» The lack of walkability and bikeability along some corridors can create a barrier to securing a Creative District designation.	✓	✓	✓



Figure 36: Event at Clear Creek Valley Park



Figure 34: Sign at 104th and McKay Rd



Figure 35: Bull Riding

FIVE STRATEGIC CORRIDORS



Washington Street and 88th
Avenue

This section includes:

- Corridor selection process
- Corridor context
- Federal Boulevard
- Pecos Street
- Washington Street
- East 104th Avenue
- East 120th Avenue

CORRIDOR SELECTION OVERVIEW

As part of the Advancing Adams planning process, the County identified five strategic corridors for taking an in depth look at planning issues. The five corridors (identified on MAP 32) are Federal Boulevard, Pecos Street, Washington Street, 104th Avenue and 120th Avenue.

The County utilized several criteria to select and define the extents of the five strategic corridors, including the following characteristics:

- » Be a principal arterial roadway;
- » Have unincorporated lands adjacent to it;
- » Be subject to a study or upcoming improvements within the municipality;
- » Fall within an Opportunity Zone area;
- » Be identified for improvements in the Adams County 5-year Capital Improvement Plan;
- » Have redevelopment potential – significant current development activity, large areas of undeveloped land or land assemblage; and
- » Be in proximity to multi-modal transportation opportunities.

CORRIDOR CONTEXT

Understanding the overall context of the corridors provided an important baseline from which to evaluate future opportunities. This document outlines the current conditions of these five strategic corridors. Phase 2 will explore future opportunities for them.

MAP 35 and MAP 36 summarize the major surrounding influential parcels and regional connections in proximity of each of the Five Strategic Corridors.

NORTH TO SOUTH CORRIDORS

This section details key context considerations for the different corridors, divided by the North to South corridors and the East to West Corridors.

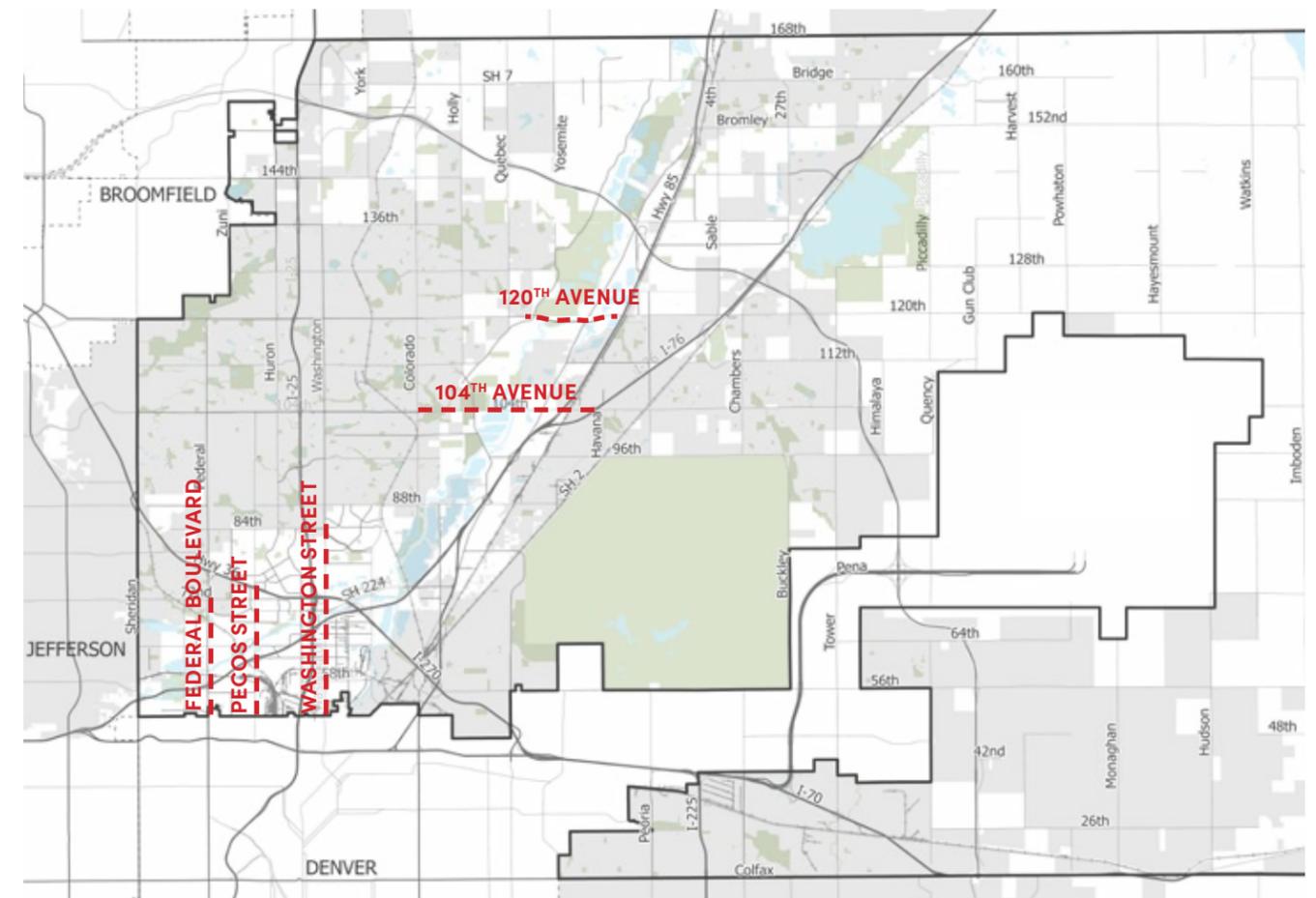
National Western Center

The National Western Center, located in Denver south of the Washington Street corridor planning area, is the product of collaboration between multiple large entities who sought to create a space that serves as an urban hub for food and agricultural discovery. The complex is set to be completed by 2024 and will host an array of educational, recreational, and tourist opportunities.

Table 20: Five Strategic Corridors Summary Table

	LENGTH	SOUTHERN OR WESTERN BOUNDARY	NORTHERN OR EASTERN BOUNDARY
FEDERAL BOULEVARD	2.5 miles	West 52nd Avenue	Little Dry Creek
PECOS STREET	2.75 miles	West 52nd Avenue	Highway 36
WASHINGTON STREET	4.5 miles	East 52nd Avenue	East 88th Avenue
104TH AVENUE	3.75 miles	Colorado Boulevard	I-76
120TH AVENUE	2.5 miles	Riverdale Road	Peoria Street

MAP 34: FIVE STRATEGIC CORRIDORS KEY PLAN



Data Source: Adams County, DRCOG, Design Workshop

LEGEND

- Corridor Locations
- █ Municipal Area
- █ Parks and Open Space
- █ Lakes and Streams
- Adams County Boundary
- Railroads
- Roads

NOT TO SCALE

MAP 35: NORTH TO SOUTH CORRIDORS CONTEXT



Data Source: Adams County, DRCOG, Design Workshop, Google Earth Imagery

NOT TO SCALE

LEGEND

- - - Corridor locations
- Adams County Boundary
- Opportunity Zones
- 1 National Western Center
- 2 River North Arts District (RiNo)
- 3 South Welby area, primarily industrial and agriculture with some residential
- 4 Midtown
- 5 Pecos Logistics Park
- 6 Federal Boulevard Opportunity Zone
- 7 Washington Street Opportunity Zone

River North Arts District (RiNo)

The RiNo Arts District, located in Denver south of the Washington Street corridor, was a former industrial hub in four historic neighborhoods. After industries moved out, artists moved in and later worked with local neighborhood leaders and the City and County of Denver to revitalize the area and foster a creative community. Today the area has grown and attracted many events and developments.

South Welby Area

This area of Welby, located in the unincorporated portion of the County to the east of the Washington Street planning area, has been transitioning away from its agricultural heritage to a light industrial area with some residential developments. However, some agriculture parcels still exist and contribute to local character. The noticeable amount of zoning changes in the area has created a diversity of land uses that are challenged by inadequate infrastructure, including roads. The 2014 Welby Plan provides a framework for the future of this area.

Midtown

Once an industrial area, today Midtown in unincorporated Adams County is a modern neighborhood just outside the City of Denver. Since 2012, this area has grown to become one of the largest developments within five miles from downtown Denver. Midtown is expected to hold 1,300 homes and 11,000 square feet of retail space. The area is zoned as a Planned Unit Development (PUD), and is located along Pecos, just north of the corridor planning area.



Figure 37: Midtown

Pecos Logistics Park

A 67-acre industrial park (with capacity for 1.15 million square feet of building space) in unincorporated Adams County at the northwest corner of North Pecos Street and West 56th Avenue. The Logistics Park broke ground in the summer of 2020 with PepsiCo Beverage as its first tenant. It is located adjacent to the Pecos corridor planning area.



Figure 38: TruStile Doors New Facility

<https://www.denverpost.com/2020/07/31/pepsi-signs-on-new-warehouse-adam-county-project/>

Opportunity Zones

Two Opportunity Zones are located in this area. The Federal Boulevard Opportunity Zone is located at the Census Tract to the northwest of the corridor study. The Washington Street Opportunity Zone is located along the southern portion of the Washington Street study area. Opportunity Zones are areas that have been designated as economically distressed where new

investment and development may be eligible for preferential tax treatment. They are a relatively new economic development tool that can be used to increase investment in Adams County.

<https://www.adamscountyrep.com/opportunities/opportunity-zones/>

MAP 36: EAST TO WEST CORRIDORS CONTEXT



Data Source: Adams County, DRCOG, Design Workshop, Google Earth Imagery

NOT TO SCALE

LEGEND

- Corridor locations
- Riverdale Regional Park and new Animal Shelter
- Route to Denver International Airport
- Riverdale Road, proposed County Scenic Byway (2005)
- Route to E470
- Platte River Trail

EAST TO WEST CORRIDORS

Riverdale Regional Park and Riverdale Animal Shelter

This park has served as a vital space for the community to connect, learn, and celebrate their traditions and heritage. The County in 2018 released its Master Plan for the park that seeks to allow the County to maintain much of the park’s historic uses as well as incorporate new ones in the future

whilst improving the parks visitation, conditions, and experiences.

In the fall of 2020, the County opened the new Riverdale Animal Shelter on the south end of the Riverdale Regional Park.

Route to Denver International Airport

Both CO-2 and I-76 lead to E-470, the controlled access toll road that provides a route to Denver International Airport.

Riverdale Road

The County has expressed their desire to transform this corridor into a scenic byway. The Riverdale Road Corridor Plan was adopted in 2005. This road lies primarily in the floodplain of the South Platte River Basin. It has certain historic and natural elements to it and is surrounded by agricultural and mineral extraction activities. Along the road are some estate residential uses and water reservoirs. The gravel mines have mostly turned into reservoirs.

Additionally, the County is in the process of converting a site of an old private shooting club and historic landfill site to a potential solar array. The site is located along Riverdale Road, to the north of 120th Avenue. Working with the Colorado Department of Public Health and Environment, the County has completed initial demolition and soils cleanup, and regrading and capping of the landfill.

Route to E470

From Riverdale Road a connection can be made to E-470, the controlled-access toll road.

South Platte Trail

This trail is considered a lightly trafficked trail that is partially paved, allows dogs on leashes and features lakes, wildflowers, and scenic views. There are options for a number of activities along the trail such as hiking, biking, and bird watching.



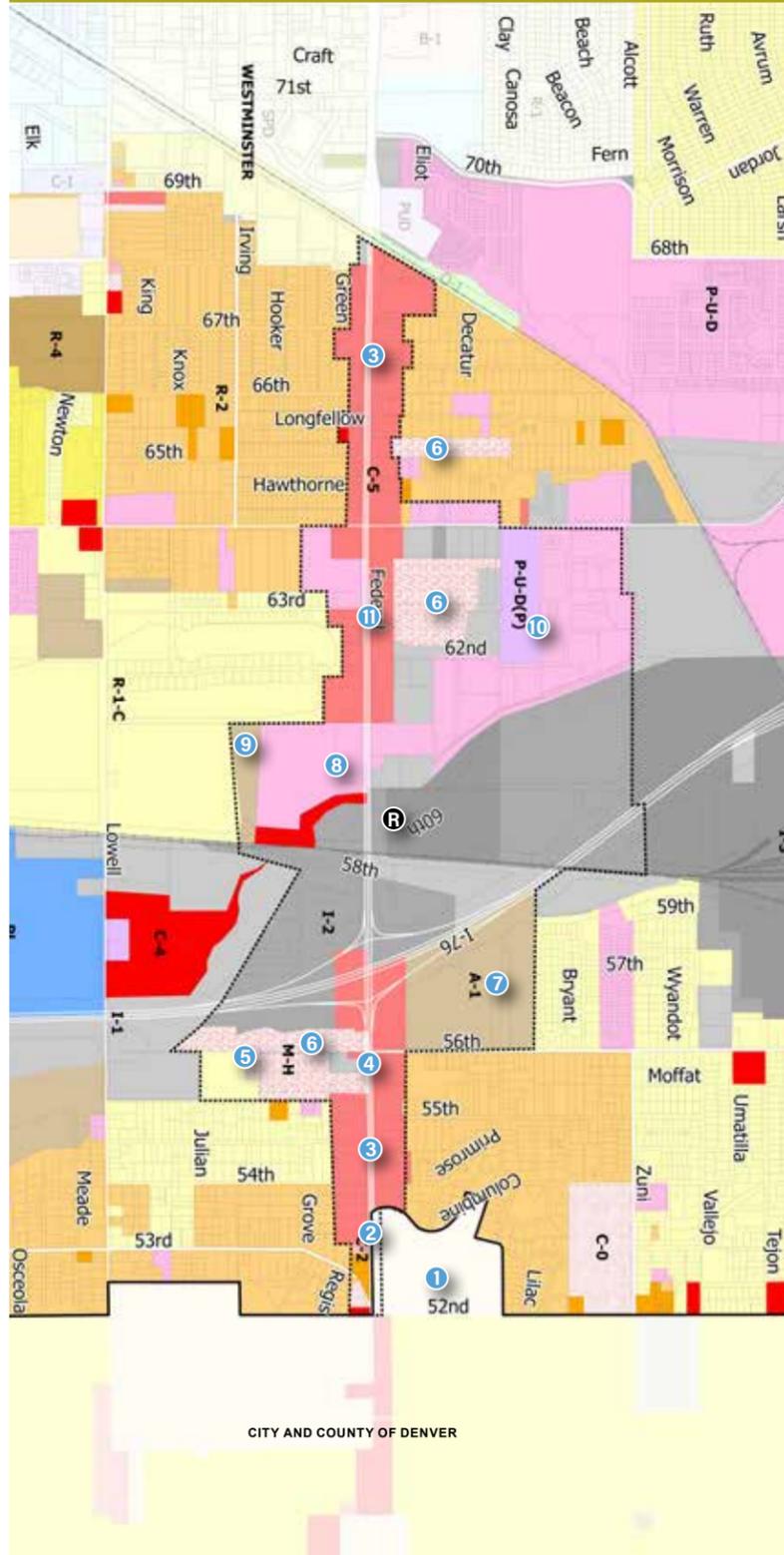
Image Credit: Design Workshop

Figure 39: Riverdale Regional Park



Image Credit: Adams County

Figure 40: Riverdale Animal Shelter Groundbreaking



LEGEND

Adams County Zoning

- Residential-1-A (R-1-A)
- Residential-1-C (R-1-C)
- Residential Two-Family (R-2)
- Residential Moderate Density (R-3)
- Residential High Density (R-4)
- Planned Unit Development (PUD)
- Planned Unit Development (PUD(P))
- Agricultural-1 (A-1)
- Industrial-1 (I-1)
- Industrial-2 (I-2)
- Industrial-3 (I-3)
- Commercial-0 (C-0)
- Commercial-1 (C-1)
- Commercial-2 (C-2)
- Commercial-4 (C-4)
- Commercial-5 (C-5)
- Mobile Home Dwelling (MH)
- Public Lands, Parks, Open Space, and Facilities (PL)

Westminster Zoning

- Single-family Medium Density (R-1)
- Multi-family High Density (R-4)
- Commercial (C-1)
- Industrial (M-1)
- Planned Unit Development (PUD)
- Open/Agriculture (O-1)
- Specific Plan District (SPD)

Other

- RTD Station
- Corridor Area

Corridor Key Plan



Data Source: Adams County, DRCOG, Design Workshop

1 : 36,000

Analysis Notes

- 1 Aria development on West 52nd Avenue
- 2 Mixed housing and commercial uses
- 3 Autocentric commercial and services
- 4 Cowboy monument and strip mall commercial activity near West 56th Avenue
- 5 Electrical substation
- 6 Mobile Home Parks
- 7 Farmland
- 8 Clear Creek Transit Village, approved PUD (currently undeveloped)
- 9 Small family farm
- 10 Industrial PUD including potential marijuana growing facilities
- 11 Street cross-section changes from four to six lanes

FEDERAL BOULEVARD

EXISTING CONDITIONS AND ANALYSIS

Zoning and Land Uses

Along this corridor, the zoning of the unincorporated areas is primarily commercial and industrial, with a number of mobile home parks. Communication and coordination with Denver and Westminster will be needed to ensure the compatibility of land uses along the Federal Boulevard corridor.

Four mobile home parks in varying degrees of upkeep are located along this study area including: Deluxe RV Park, White Rock, Centennial and Rustic Ranch. All provide much needed affordable housing in proximity of transit.

Environmental Justice

The Federal Boulevard corridor has some environmental impacts due to past industrial land uses. The County received an Environmental Protection Agency (EPA) brownfields grant and completed a Phase 1 Environmental Site Assessment for five parcels in

the vicinity of Federal due to known contamination in the area from past uses. These historic uses include landfills, gravel mining operations, industrial facilities and a network of highways, rail lines and freight yards that crisscross the Clear Creek Valley corridor.

Transportation and Mobility

The TMP addresses the transportation and mobility of this corridor in great detail. A critical linkage to the Comprehensive Plan is the overall character of Federal Boulevard as an auto-dominated corridor. While the uses in the area warrant additional walking and biking facilities, there are no designated bicycle facilities, and the pedestrian network is inconsistent. There are a significant number of curb cuts and large parking lots along the corridor.

The RTD 31 route runs along Federal Boulevard to connect to the Clear Creek Federal commuter rail station. The route frequency occurs in 15 minute intervals during peak times of the day with high ridership, even throughout the COVID-19 pandemic. The Federal/Clear Creek Station along

the RTD G-Line is a major asset to the corridor.

Parks, Open Space and Trails

As identified in the POST Plan in more detail, the study area currently lacks adequate parks or open space to serve the nearby population. However, Gateway Park adjacent to the RTD station is responding to this need by providing open turf grass areas, artful murals, interactive musical instruments and seating. The Clear Creek Trail is an active trail with significant potential. Additionally, there are anticipated improvements along Little Dry Creek, including gathering spaces, parking, and water amenities.

Environment

The Federal Boulevard corridor suffers from water and drainage issues like the water quality, an undersized stormwater system and flooding that occurs regularly at the railroad.

Wayfinding, Character and Image

The Federal Boulevard corridor lacks a connected character that integrates green elements like trees, pocket parks, or green alleys and cultural elements like placemaking and public art. Overall, the corridor lacks cohesive urban design elements.

Additional studies

Adams County is currently collaborating with the City of Federal Heights and the City of Westminster on the Federal Boulevard Multimodal

Transportation Study. The study area is eight miles of the Federal Boulevard corridor within the three jurisdictions from 52nd Avenue to 120th Avenue. This study will take a more in-depth look at addressing the challenges of safety for all users, the volume and speed of vehicular traffic, inconsistent pedestrian and bicycle facilities, limited connectivity to trails and first and final mile destinations and need for improved transit service and amenities. Advancing Adams is coordinating with this concurrent study to develop a set of recommendations that is consistent between these two efforts.

Additionally, the Federal Boulevard Framework Plan and corresponding Health Impact Assessment from 2014 provides guidance for land use concepts.

OPPORTUNITIES

- » The Federal Boulevard study area can be a central business hub for Adams County given the diversity of businesses and likelihood that new development will happen in this area.
- » As redevelopment is anticipated, policies should be explored to minimize displacement for residents living in the many mobile home parks in the area.
- » Completion of the brownfields grant and Environmental Site Assessment program along Federal Boulevard.



Figure 42: Autocentric Commercial Activity



Figure 43: Aria Developments on 52nd

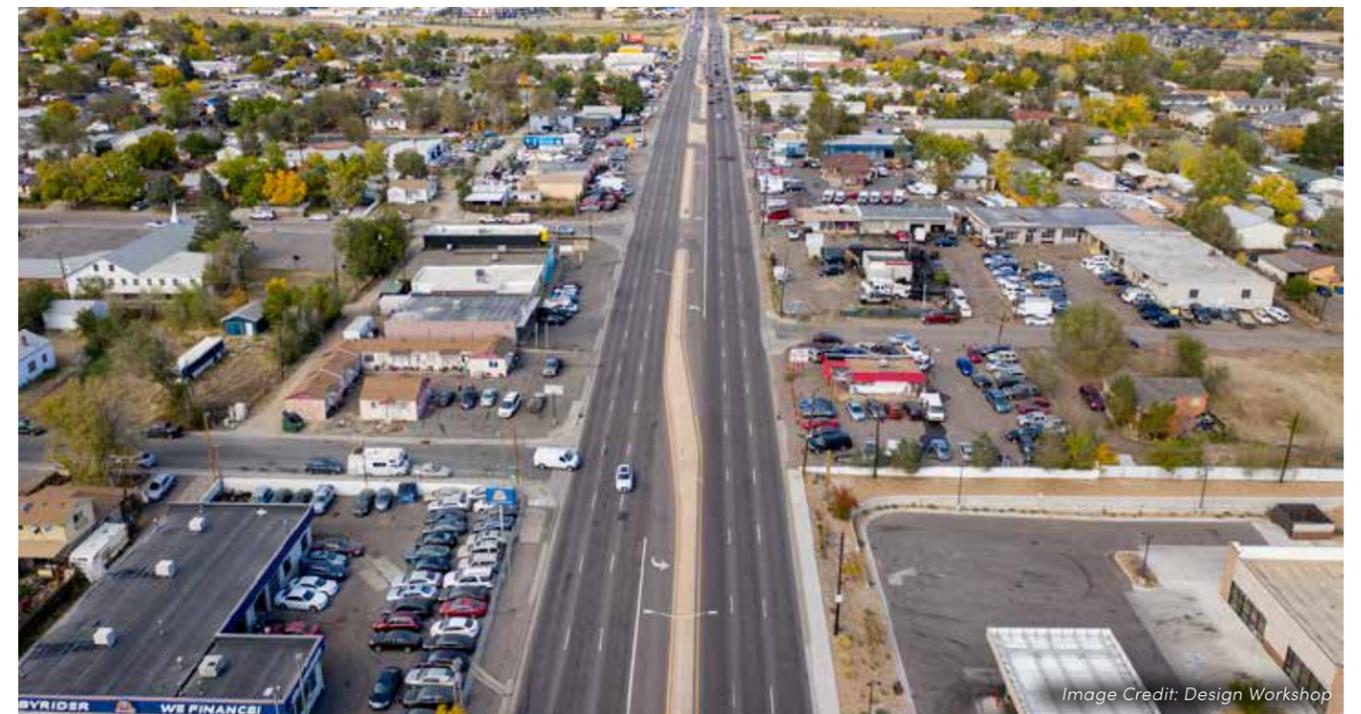


Figure 41: Autocentric Commercial Activity North of West 64th Avenue on Federal Boulevard

- » Reduce and minimize impact of incompatible land use adjacencies through updates to the Future Land Use Map (FLUM) and zoning changes.
- » The area around the Federal/Clear Creek Station has the potential for transit-oriented development that includes a dense, attainable residential housing type depending on environmental mitigation requirements.
- » The potential to make comfortable connections to the Clear Creek Trail also exists, including an at-grade crossing to Clear Creek.
- » Walkable and bikeable roadway improvements including bike facilities, wider sidewalks and street trees.
- » There are opportunities for future trail connections from the RTD Station to the Clay Street Community Trail.
- » Additional parks, programming and trail connections would be a benefit for this area. The Gateway Park is becoming more actively used and has significant potential to be a catalyst for additional connections in the area. Additional residential density could justify the

- addition of an urban plaza public space concept.
- » Low water use xeriscape landscaping is a strategy to introduce more plants to greenspace areas without reliance of excessive irrigation.
- » This corridor has the ability to serve as a gateway into Adams County and set a tone that is distinct yet relatable to Denver and Westminster through the use of district branding and placemaking.
- » Align land use concepts with the Federal Boulevard Corridor Framework Plan and the Health Impact Assessment and the current planning effort with the Federal Boulevard Corridor Study team.

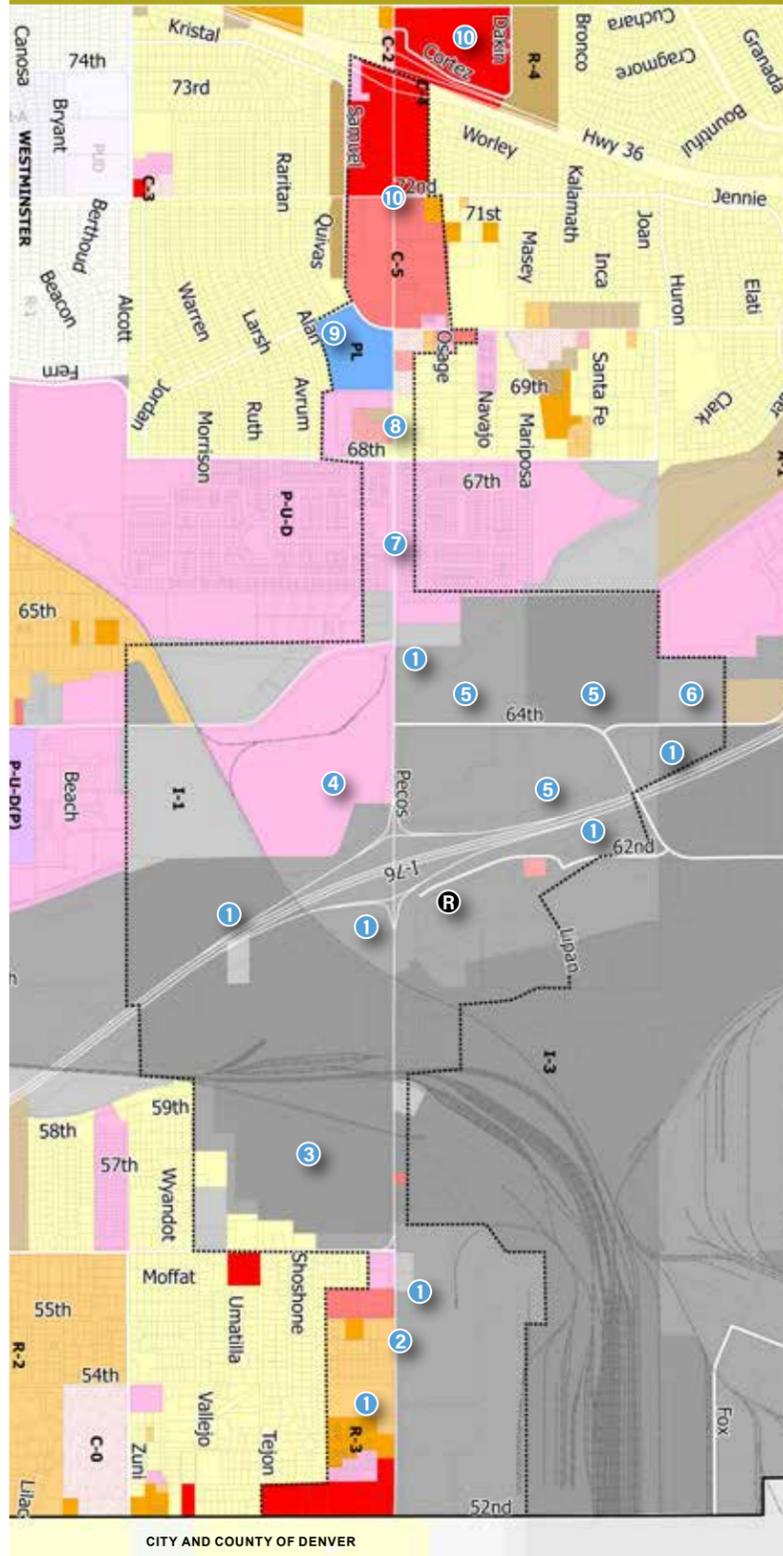


Figure 44: Bus Stop at the Clear Creek/Federal RTD Station



Figure 45: Federal and West 60th Avenue Looking South

Image Credit: Design Workshop



Data Source: Adams County, DRCOG, Design Workshop

1: 24,000

LEGEND

Adams County Zoning

- Residential-1-C (R-1-C)
- Residential Two-Family (R-2)
- Residential Moderate Density (R-3)
- Residential High Density (R-4)
- Planned Unit Development (PUD)
- Planned Unit Development (PUD(P))
- Agricultural-1 (A-1)
- Commercial-0 (C-0)
- Commercial-2 (C-2)
- Commercial-3 (C-3)
- Commercial-4 (C-4)
- Commercial-5 (C-5)
- Industrial-1 (I-1)
- Industrial-2 (I-2)
- Industrial-3 (I-3)
- Public Lands, Parks, Open Space, and Facilities (PL)

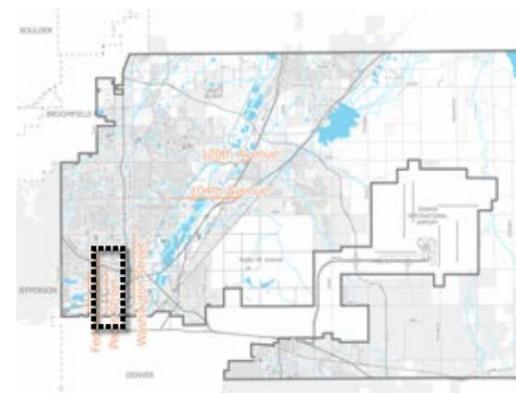
Westminster Zoning

- Single-family Medium Density (R-1)
- Planned Unit Development (PUD)

Other

- RTD Station
- Corridor Area

Corridor Key Plan



Analysis Notes

- 1 Vacant and underutilized Lots in industrial areas
- 2 Pecos Street Project (CIP Project)
- 3 Future Pecos Logistics Park area
- 4 Gravel mine areas
- 5 Storage lots and Parking lots for construction vehicles and logistics trucks.
- 6 Area for proposed Amazon facility
- 7 Midtown
- 8 Few vacant lots in commercial residential area
- 9 Elementary School and Fire Station
- 10 Autocentric commercial and services

PECOS STREET EXISTING CONDITIONS AND ANALYSIS

Zoning and Land Uses

The Pecos Street corridor includes a mix of commercial, industrial, and PUD lands, with some residential zoning. The southern portion of the corridor is primarily zoned for industrial uses. These uses are well served by adequate roadway infrastructure, access to I-76 and the railway yards.

Two upcoming logistics-related developments in the industrial area, Pecos Logistics Park and Amazon, will likely provide employment opportunities for Adams County residents. The Amazon facility proposed along West 64th Avenue and Pecos Logistics Park is being built south of the railroad along West 56th Avenue.

The southwest portion of the study area includes a mix of commercial and residential uses, presenting an incompatible adjacency with the surrounding industrial uses.

To the north, the Midtown neighborhood is centrally located along the Pecos Street corridor study area. The County assisted the developer in assembling key parcels to enable the redevelopment process. The development is modeled after a new urbanist concept with walkable streetscapes, housing diversity, and a median located on Pecos Street that supports pedestrian mobility and placemaking appeal.

North of the Midtown neighborhood is a mix of autocentric commercial and services in addition to a few residential units, an elementary school campus, and fire station.

Currently, Pecos Street does not appear to have a coherent land use approach considering the diversity of land uses that sometimes are incompatible.

Environmental Justice

The Pecos Street RTD station is located over an old landfill. Although the County sought to create additional land uses in this area, the presence of methane gases limits the uses

that could be placed here. This has resulted in the primary use as a park-and-ride lot.

Urban trees cannot be supported on this former landfill because of the contaminants that are present.

Pecos Street features numerous instances of no land use transition or a minimal transition between residential and industrial uses which may contribute to environmental injustices in the area.

Transportation and Mobility

Walking from the Midtown neighborhood to the Pecos Street RTD station is not comfortable for pedestrians and bicyclists despite the short one mile distance and presence of sidewalks. This is due to heavy truck traffic, no on-street parking or demarcated crosswalks, limited street trees and no appealing adjacent retail that typically helps to create pedestrian comfort. Furthermore,



Figure 46: Pecos Junction

pedestrian crossings are also lacking for east-west connections along Pecos and nearby the station. There are limited ADA connections throughout this corridor.

Westbound trucks make a channelized turn onto Pecos Street, which poses conflicts with pedestrians trying to access the station.

RTD's route 19 travels along Pecos Street, with some of the highest ridership stops in the County, at 72nd and 76th Avenues. This route also connects to the Pecos Junction commuter rail station, serving the B and G Lines. Most bus stops along Pecos Street currently lack stop amenities like shelters and benches. Enhancing the bus stops could help improve the transit user experience along the corridor.

Varying street conditions exist along Pecos Street such as unpaved roads that connect to Pecos, narrow roadways from the bridge to I-70, and various widening projects that do not allow for consistency and wayfinding for drivers along the corridor.

As outlined in the TMP, the County is implementing some improvements on Pecos Street between 52nd Avenue and Cargill Drive, which will significantly improve connectivity south of the rail station.

Parks, Open Space and Trails

There is a significant opportunity to improve parks and trails access in the Pecos Street study area, as

outlined in the POST Plan. Some park space is located within the Midtown Neighborhood, however, those amenities are only for residents of Midtown.

There is a lack of access to the Clear Creek Trail from Pecos Street except via an unofficial social trail that traverses a steep slope.

Recreation facilities can be coordinated with the recreation amenities already implemented by the Mile High Flood District. These will be explored more as part of the POST Plan effort.

Environment

As indicated in the Clear Creek Corridor Master Plan, flooding and drainage are an issue in this study area. This could be due to undersized infrastructure and failing irrigation laterals, as well as being within the Clear Creek floodplain, all of which impact the water quality.

Wayfinding, Character and Image

Midtown's housing and streetscape along Pecos itself could serve as a broader placemaking approach for Pecos Street, particularly moving north on Pecos from Midtown. While Midtown has a Metro District that assists with maintenance of character and wayfinding assets, the character and image of Midtown could provide a starting place for an aesthetic, brand, and district.



Figure 48: Area Between US-36 and 70th Avenue



Figure 47: Midtown Development

The Clear Creek Trail is a location to expand a wayfinding program to guide trail users to and from the trail portals.

OPPORTUNITIES

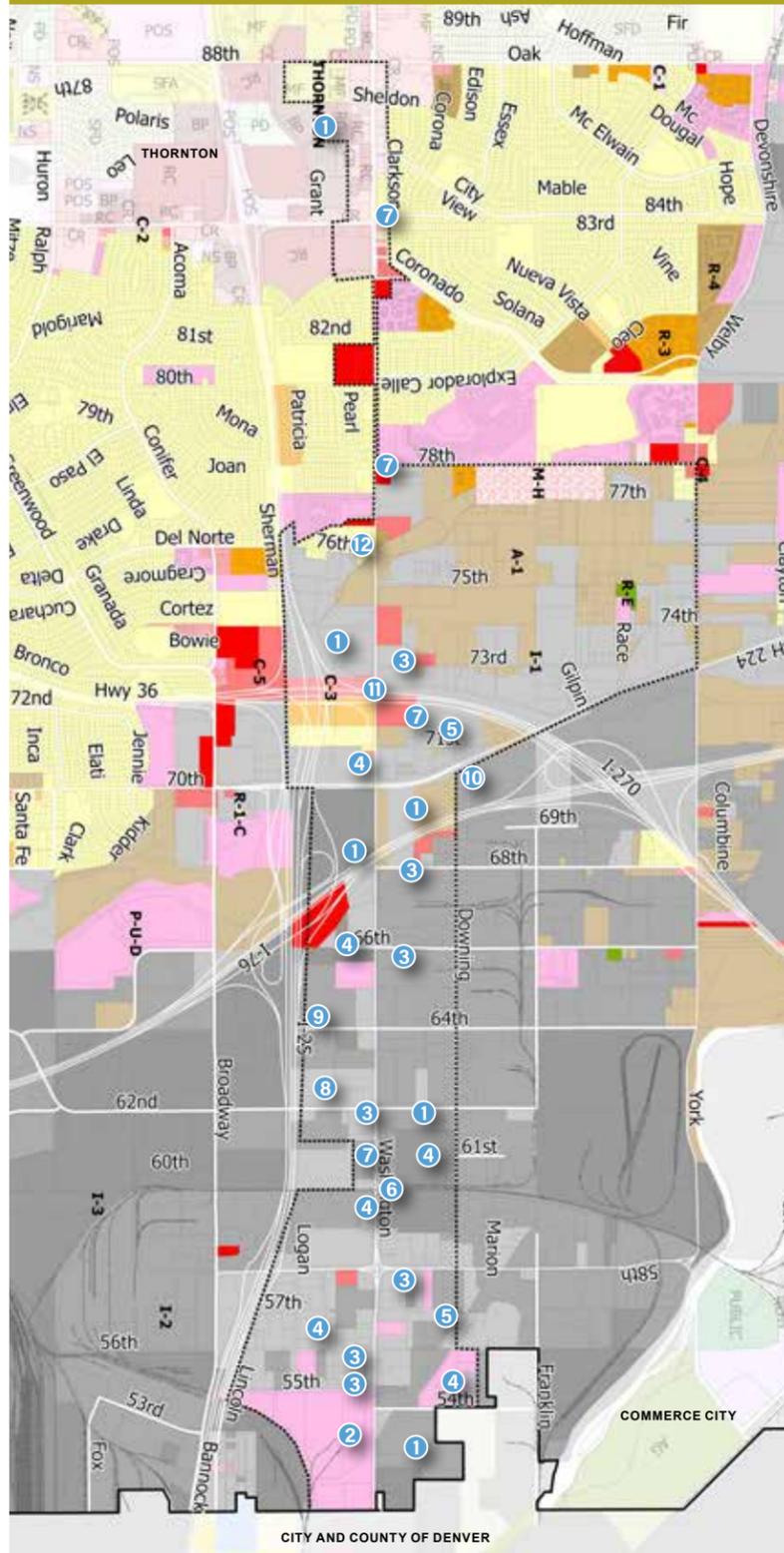
- » Higher density residential development could be introduced in the northern portion of the corridor, near Midtown, due to the strategic location between two freeways and the close connection to the transit station allowing for the development of a mixed-use transit-oriented development district that could include both neighborhood and regional uses to leverage nearby residential growth.
- » Careful consideration of appropriate land uses along the southern portion of the corridor is critical given the potential brownfield remediation that is required.
- » Pecos Street corridor has some exciting employment opportunities underway including the new Amazon facility and the Pecos Logistics Park. Combined with other industrial uses in this area, this will create an effective employment center for Adams County.
- » Landscape buffers could be better utilized and more substantial to assist in creating an equitable transition that supports livability and public health. Other ideas to create these placemaking transitions include the installation of public art, wayfinding, lighting, and street furniture.
- » There is an opportunity to improve pedestrian and bicycle connections to the RTD Pecos Station. Adams County Public Works is currently studying these items.
- » An off-road multi-use trail that includes pedestrian bridges over Clear Creek could be an alternative to pedestrian sidewalks

as a primary route from the Midtown Neighborhood and other nearby housing to the Pecos Street RTD station.

- » Low water use xeriscape landscaping is a strategy to introduce more plants to greenspace areas without reliance of excessive irrigation.
- » Bike lanes can be added to Pecos Street to create multimodal connections to Midtown.
- » Walkability can be improved through widening sidewalks, especially as they connect to the RTD station.
- » There is an opportunity to address the environmental flooding hazards by looking critically at the riparian health and habitat of Clear Creek.
- » There is an opportunity to expand a public art plan for this district at key locations like on the bridges, at transit stops, and as part of property redevelopment to enhance placemaking.



Figure 49: Industrial Activity Behind Residential Areas on West 67th Avenue Looking South



Data Source: Adams County, DRCOG, Design Workshop 1: 36,000

LEGEND

Adams County Zoning	
Thornton Zoning	
Commerce City Zoning	
Other	

Corridor Key Plan



Analysis Notes

- 1 Vacant lots
- 2 Crossroads Commerce Park PUD (business park)
- 3 CIP Projects
- 4 Industrial areas
- 5 Storage
- 6 Cross section goes from four to six lanes
- 7 Autocentric commercial strips or activity
- 8 Denver Merchandise Mart
- 9 Academy of Charter Schools campus
- 10 Clear Creek and Trail
- 11 I-270 Corridor Environmental Assessment (regional project)
- 12 Large residential lots with some vacancies

WASHINGTON STREET

EXISTING CONDITIONS AND ANALYSIS

Zoning and Land Uses

Washington Street is a north-south Principal Arterial with three distinct characters across its extent—1. the northern segment is primarily autocentric commercial; 2. the section next to Welby has a unique character with a mix of uses; and 3. south of I-270 is primarily light industrial.

The Welby area between East 78th Street and I-270 features primarily small-scale agriculture and light industrial from I-25 to the west and Welby Road to the east. Fragmented autocentric commercial parcels are present along Washington Street.

Despite the agricultural land uses in Welby, this area of Washington Street lacks adequate food access to serve the population. A new grocery store or year-round farmers market could satisfy this need.

About two miles south of the study area, Washington Street intersects with Brighton Boulevard in the River North Art District of the City and County of Denver, which is a

successful destination neighborhood with an industrial heritage and artful creative placemaking. The appeal of this district makes it an appropriate case study for Washington Street to consider.

Another nearby destination to the south is the National Western Center. With an agriculture heritage, the Welby area is well-suited to better align and connect to this destination and resource.

Environmental Justice

With such a strong focus on industrial uses, this corridor does not offer many residential units. While not directly on Washington Street, there are many residences in Welby that would be well-served by more commercial/neighborhood focused uses along Washington in the area of and to the north of East 73rd Avenue. There is also evidence of homeless persons populating the triangular land area between I-25, I-270 and I-76.

Transportation and Mobility

Overall, Washington Street is a road that accommodates large truck traffic associated with the adjacent industrial uses, especially south of I-76.

Very wide roads with high traffic volumes, high speeds, large trucks and noise create

an unpleasant experience for bicyclists and pedestrians.

To the north of Welby and near Thornton, the autocentric commercial strips feature frequent curb cuts creating conflicts for pedestrians. This area also includes narrower attached sidewalks that are less comfortable for pedestrians. Limited street trees further contribute to a lack of walkability.

Without a vegetated buffer between the sidewalk and the roadway, attached sidewalks create an uncomfortable pedestrian experience.

Many barriers for pedestrians and cyclists create challenges for connectivity such as highways, rivers and railroads. At grade crossings in the Welby area are especially difficult for pedestrians and cyclists without adequate space allocated for all mode users.

RTD's route 12 serves Washington Street at 30-minute frequency seven days per week. The existing bus stops on Washington Street do not provide riders with a comfortable place to wait for the bus. The attached sidewalks leading to the bus stops means that transit riders must wait for the bus adjacent to traffic.

Parks, Open Space and Trails

The Washington Street Corridor bisects the Clear Creek Trail. The Welby plan envisions another open space/park to improve connections to the South Platte River. Both the Clear Creek Trail and the South Platte Trail can serve as important amenities for both residents and employees in this area.

The proximity and heritage of the National Western Center would justify improved connections from Welby including a dedicated equestrian trail.

Environment

Streetscape planting with trees along Washington Street is a challenge because of the lack of irrigation for the right of way.

Wayfinding, Character and Image

The Washington Street corridor is in critical need of a bold vision and placemaking appeal.

The corridor has many assets like the small-scale agriculture in the Welby area and a strong industrial heritage south of I-76. Thoughtful policies for land and water rights will be required to protect the sense of heritage during the comprehensive planning process.

OPPORTUNITIES

- » With a unique mix of light industrial, residential, and agricultural character, Washington Street has the potential to strengthen its identity and become the Creative Center of Adams County that includes a dynamic food hub destination.
- » To support a creative destination, affordable artist live work units can be introduced.
- » A renewable energy production area solar farm is an innovative idea for this small wedge of land between I-76, I-270 and I-25.
- » Wider sidewalks that allow pedestrians more area to move could be added to this corridor. There is also an

opportunity to improve sidewalk conditions for ADA-compliance which would include adequate width, slope and curb ramps with detectable warning texture.

- » There is an opportunity for bus shelters and amenities along Washington Street, especially since there are a lack of trees and shade.
- » The road network can be improved between the Welby area and the National Western Center to better connect local small-scale farms with the heritage and resources at the Western Center. Some suggestions include adding equestrian trails or an unpaved multi-use path that links the National Western Center to the Riverdale Regional Park.
- » A walkable road diet with lane width and vehicle speed reduction is viable between East 73rd Avenue and East 78th Avenue.
- » Safe connections for pedestrian and bike access to the trails in this area could provide recreation and commuting opportunities. There are also opportunities for a public gathering space in Welby and within the industrial areas south of I-76. The typology of public spaces would follow a land use approach.
- » In terms of trails, there is an opportunity to connect to Clear Creek by creating at-grade trail connections from Washington Street.
- » There is an opportunity to improve drainage to Clear Creek



Figure 50: Autocentric Activity



Figure 51: Industrial Areas

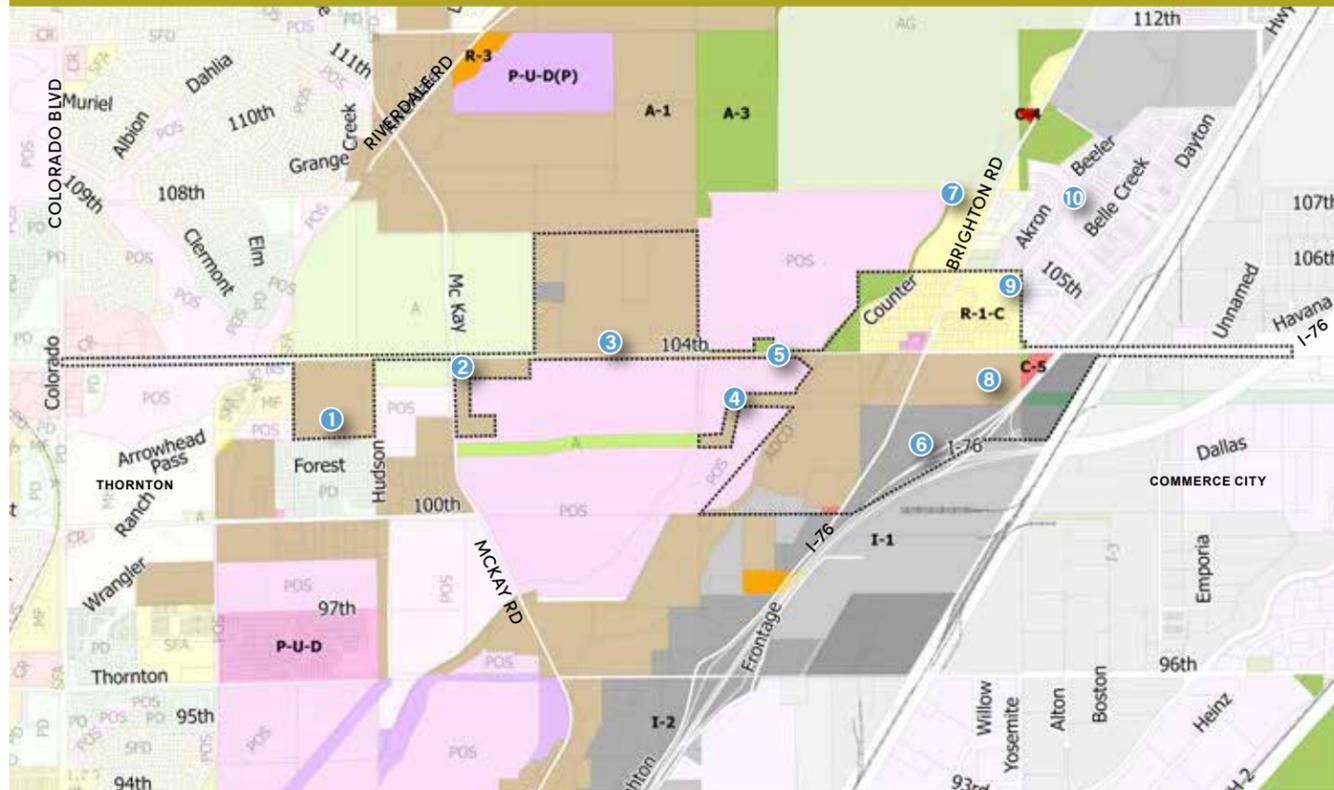


Figure 52: Residential Lots Near East 78th Avenue

through the use of surface-treatment stormwater BMPs such as bioswales and other systems that slow runoff and filter pollutants. In the event easements are created to support green infrastructure, additional off-road trails can also be introduced.

- » Typical elements the County funds in CIP projects have the opportunity to contribute to the sense of place. Placemaking elements like light fixtures, pavement surfaces, retaining walls, wayfinding, public art and bus shelters can all play a role in contributing to the brand of the Welby area and the Washington Street industrial area.

MAP 40: EAST WEST CORRIDOR - EAST 104TH AVENUE ZONING ANALYSIS



Data Source: Adams County, DRCOG, Design Workshop

LEGEND

Adams County Zoning

- Agricultural-1 (A-1)
- Agricultural-3 (A-3)
- Residential-1-C (R-1-C)
- Residential Moderate Density (R-3)
- Industrial-1 (I-1)
- Industrial-2 (I-2)
- Industrial-3 (I-3)
- Commercial-4 (C-4)
- Commercial-5 (C-5)

Thornton Zoning

- Single-Family Detached (SFD)
- Single-Family Attached (SFA)
- Multifamily (MF)
- Agricultural (A)
- Parks/Open Space (POS)
- Planned Development (PD)
- Community Retail (CR)

Commerce City Zoning

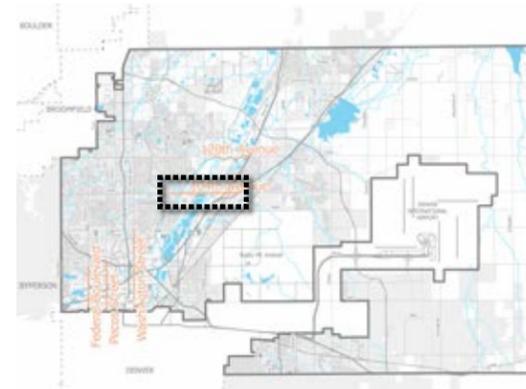
- Planned Unit Development (PUD)
- Agricultural (AG)
- Single-Family Detached Residential (R-1)
- Multi-Family Residential (R-3)
- Public (PUBLIC)
- Regional Commercial (C-3)
- Light Intensity Industrial (I-1)
- Medium Intensity Industrial (I-2)
- Heavy Intensity Industrial (I-3)

Other

- Corridor Area

1 : 36,000

Corridor Key Plan



Analysis Notes

- 1 Agricultural Land
- 2 Commercial and light industrial uses with areas that have piles of aggregates
- 3 Elaine T. Valente Park and Open Space
- 4 Empty and unused spaces
- 5 Connection to the South Platte trail
- 6 Light industrial uses and warehouses
- 7 Future nature playground and Adams County planned trail connection to South Platte Trail
- 8 Agricultural land that might be underutilized
- 9 Relatively large and undeveloped parcel
- 10 Belle Creek Neighborhood (Commerce City)

EAST 104TH AVENUE

EXISTING CONDITIONS AND ANALYSIS

Zoning and Land Uses

The East 104th Avenue corridor stretches between Colorado Boulevard to the west and I-76 to the east. This corridor also intersects with municipalities - Thornton to the west and Commerce City to the east.

The land uses within the unincorporated areas in the study area are primarily agriculture with some residential and industrial uses.

The residential units in this area are suburban-style and relatively low density. Primarily older residential units are located to the west and more recently built residential units are located to the east. Commercial uses are primarily strip malls.

Transportation and Mobility

East 104th Avenue is a high volume route and provides access to I-76, Highway 85, and Denver International Airport for passenger vehicles and truck traffic.

At the intersection of East 104th Avenue and Highway 85, a grade separated crossing is currently being considered. Issues with this intersection include a rapid decrease in speed limit from 65 miles per hour to 30 miles per hour upon approach at this intersection. The multiple turn lanes and wide right turns create an uncomfortable experience for pedestrians despite the presence of dedicated crosswalks.

The railroad crossing presents a challenge for pedestrian and cyclist traffic. Additionally, the Brighton Boulevard intersection presents safety challenges especially for cyclists.

Transit service on the corridor is provided by RTD's 104 route, which has relatively low ridership. Transit access on the corridor is limited due to both the existing low density land uses but also a lack of sidewalks and comfortable places to wait for the bus.

Overall, this corridor lacks a multi-modal approach, in particular for accessing Elaine T. Valente Open Space and the existing South Platte Trail. Some progress is currently

underway to create a trail connection from the Belle Creek Neighborhood (Commerce City) and the South Platte Trail.

Toward the east of the County, East 104th Avenue transitions to an unpaved dirt road east of Imboden Road.

Parks, Open Space and Trails

There are multiple trail projects underway in this area, including a new trail connection between the Front Range Trail and the South Platte Trail near Brighton Road and East 104th Avenue, as well as a trail connection between the Belle Creek Neighborhood and the South Platte Trail.

Environment

Environmental assets along East 104th Avenue includes the South Platte River. Some flooding and stormwater issues have the potential to be addressed.

Wayfinding, Character and Image

The character of this portion of East 104th Avenue is rural and park-like. This character can be built upon as redevelopment and roadway improvements occur over time.

The different jurisdictions along this corridor presents a challenge in developing a consistent land use vision, as well as coordinating transportation improvements. However, this also presents an

opportunity for partnerships and collaborations.

OPPORTUNITIES

- » Given the proximity of the local municipalities in this area, a key opportunity for this corridor is to foster partnerships with adjacent municipalities on a land use vision for this corridor.
- » Updated and new sidewalks, transit stop facilities and improved bicycle routes will all contribute to a multi-modal approach along this corridor.
- » Trail connections have the potential to be located along the East 104th Avenue roadway.
- » Given the current road configuration and existing character that is present between US 36 and Federal Boulevard, East 104th Avenue could become an east-west Parkway with planted medians and other elements that would support a smaller scale feel and more rural appeal.
- » Similar to East 120th Avenue, this corridor crosses the South Platte River. There is an opportunity to introduce a variety of stormwater BMPs and restoration projects via a Nature Park concept. This could assist with the periodic flooding that occurs around the river and build resilience into the ecosystem. Concepts related to the river should be coordinated with the planning group working on the South Platte River Corridor Plan.



Figure 53: Residential Area



Figure 55: Grandview Ponds



Figure 54: Access to trail and crossing of South Platte River



Figure 56: Undeveloped Spaces

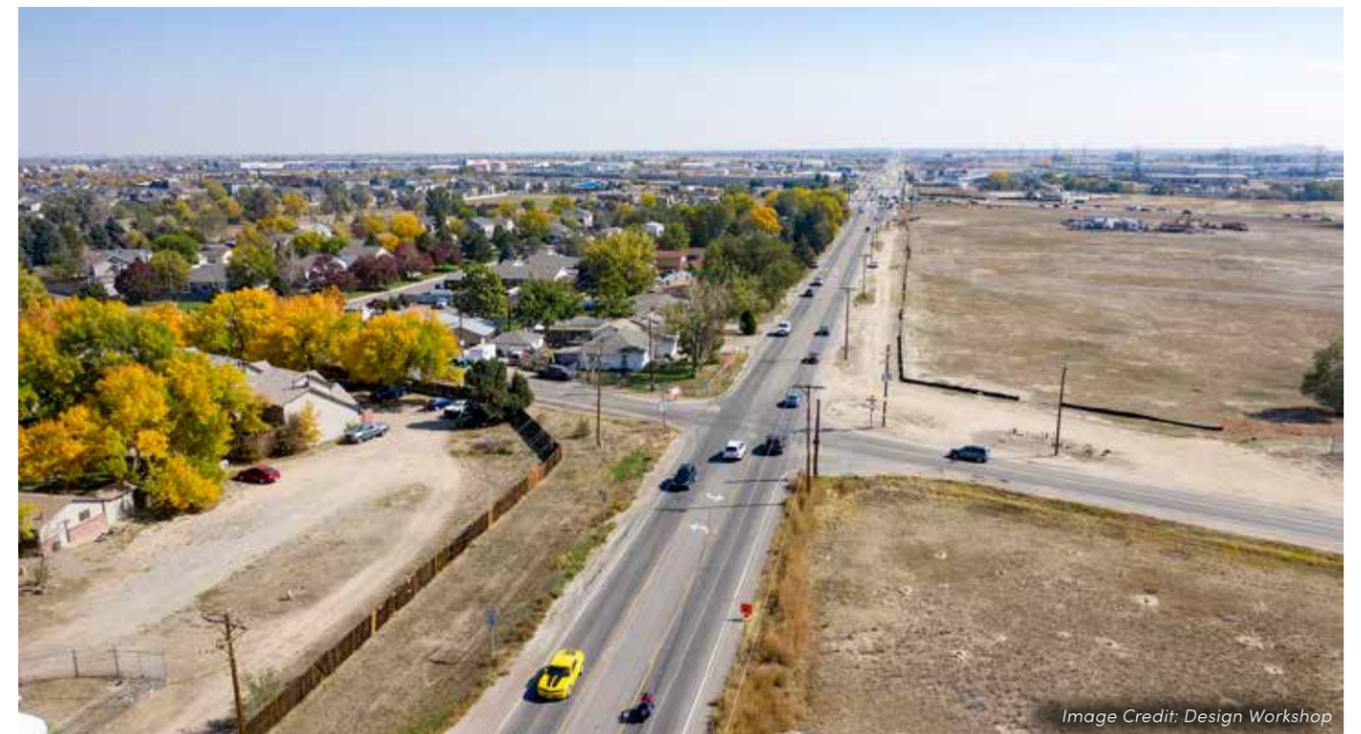


Figure 57: Brighton Road intersecting 104th Avenue

MAP 41: EAST WEST CORRIDOR - EAST 120TH AVENUE ZONING ANALYSIS



Data Source: Adams County, DRCOG, Design Workshop

1 : 22,000

LEGEND

Adams County Zoning

	Agricultural-1 (A-1)		Industrial-1 (I-1)
	Agricultural-2 (A-2)		Industrial-2 (I-2)
	Agricultural-3 (A-3)		Industrial-3 (I-3)
	Residential Estate (R-E)		Commercial-2 (C-2)
	Public Lands, Parks, Open Space, and Facilities (PL)		Commercial-3 (C-3)
	Planned Unit Development (P-U-D)		Commercial-4 (C-4)
			Commercial-5 (C-5)

Thornton Zoning

	Single-Family Detached (SFD)		Parks/Open Space (POS)
--	------------------------------	--	------------------------

Commerce City Zoning

	Planned Unit Development (PUD)
--	--------------------------------

Brighton Zoning

	Light Industrial (I-1)		Mixed-Density Residential (R-2)
	Public Lands (PL)		Restricted Retail and Services (C-2)
	Planned Unit Development (PUD)		

Other

	Corridor Area
--	---------------

Corridor Key Plan



Analysis Notes

- 1 Underutilized or undeveloped spaces
- 2 Connection to the South Platte Trail
- 3 Riverdale Regional Park
- 4 Vacant plot with potential; basin south of 120th Ave
- 5 Speer Inert Landfill Site. Large vacant areas around.
- 6 Agricultural land
- 7 Large lot with parked trucks
- 8 Some undeveloped parcels
- 9 Empty lot near Residential PUD
- 10 River Run Park

EAST 120TH AVENUE

EXISTING CONDITIONS AND ANALYSIS

Zoning and Land Uses

The East 120th Avenue corridor stretches between Riverdale Road to the west and Peoria Street to the east. This corridor also intersects with municipalities; Thornton to the west and Commerce City and Brighton to the east.

East 120th Avenue features mostly large lot estate residential development with some agriculture and the gateway access to Riverdale Regional Park.

Transportation and Mobility

East 120th Avenue is a roadway that traverses the entire width of Adams County from east to west. In this study area, it is a wide right of way that alternates between two and three lanes in each direction.

In the future, access to US 85 will be discontinued from East 124th Avenue, which will result in increased demand

for the access at US 85 and East 120th Avenue. Currently, US 85 and East 120th Avenue experience congestion during the morning commute. A potential solution has been studied to grade separate the intersection. Although the concept has support from the railroad, funding has not been allocated.

Pedestrian and cyclist connectivity issues prevent even nearby residents from visiting Riverdale Regional Park by foot or by bike.

Parks, Open Space and Trails

Riverdale Regional Park is a remarkable asset along this corridor. The 2012 Riverdale Regional Park Master Plan identified an opportunity to integrate civic amenities and facilities within the park such as the recent Animal Shelter. Other potential civic uses and developments can be explored to further establish Riverdale Regional Park as a destination for nature and culture.

Environment

Environmental assets along East 120th Avenue includes the South Platte River

and Riverdale Regional Park. Some flooding and stormwater issues have the potential to be addressed.

Wayfinding, Character and Image

There are unique opportunities along the East 120th corridor to define the character and image of the area. This stretch of corridor functions as a transition from east to west in the County especially for those travelling to and from Denver International Airport.

Additionally, Riverdale Regional Park is a major asset that serves as a destination that connects municipalities and neighborhoods along the corridor. The main entrance to the park is located directly off East 120th Avenue with gateway signage.

OPPORTUNITIES

- » A key opportunity for this corridor is to foster partnerships with adjacent municipalities to determine a common vision for the roadway, improve pedestrian and bicycle connections to Riverdale Regional Park and facilitate coordinated implementation. The corridor should feel more scenic in nature as it leads up to Riverdale Regional Park and intersects with the proposed scenic byway at Riverdale Road.
- » The County should confirm if this roadway is best suited as a State Highway since that consideration has been suggested by some County leaders.
- » Feasibility and funding should be established to grade separate

the interchange with US 85 to accommodate the increase in traffic anticipated in the area with the closure of the East 124th Avenue access to the highway.

- » The East 120th Avenue corridor area could be a potential connector portal for access to a variety of regional trail systems and destinations via a loop trail. Connections can be made to a variety of destinations of natural and cultural heritage and creating a memorable experience for residents and visitors. The regional trail loop would connect the Denver International Airport, the Rocky Mountain Arsenal, National Western Center, South Platte Trail, Clear Creek Trail and the Colorado Front Range Trail.
- » Similar to East 104th Avenue, this corridor crosses the South Platte River. There is an opportunity to introduce a variety of stormwater BMPs and restoration projects. This could assist with the periodic flooding that occurs around the river and build resilience into the ecosystem. Concepts related to the river should be coordinated with the planning group working on the South Platte River Corridor Plan.
- » East 120th Avenue has significant opportunity for a recognizable character which could be inspired by the area's history, a threshold between the eastern and western portion of the County as well as the environmental assets that include the South Platte River and Riverdale Regional Park.



Figure 58: Local Single-Family Housing



Figure 60: Scenic View from Riverdale Regional Park



Figure 59: Southern entrance to Riverdale Regional Park



Figure 61: Undeveloped Areas



Figure 62: Large Crossing at Brighton Road with Trail Access and Bus Stop

LOOKING FORWARD



Federal Boulevard Between
67th Ave and 70th Ave

This section includes the draft Land Use Framework and next steps relevant for Phase Two.

LAND USE ANALYSIS DRAFT FRAMEWORK

As the Advancing Adams process moves forward, the Comprehensive Plan team will explore potential development scenarios for the County, including along the five strategic corridors. While this will be detailed in Phase 2 with significant community input and guidance, two initial tools for a land use analysis framework have been identified as foundational aspects for the next Phase:

1. the Adams County Transect
2. 20-Minute Community

ADAMS COUNTY TRANSECT

The Adams County Transect represents the types of development patterns that can be found in Adams County and, to some degree, their ideal adjacencies that represent a sequence of logical density that transitions incrementally from high to low and low to high.

The least dense of the areas is Natural. This area is mostly undeveloped land and natural areas that may have a recreation component.

The next area is Rural. This area includes large lot residential and large-scale agriculture.

After Rural is Suburban. Suburban type development mostly consists of single-family homes and strip mall or big box store type commercial.

The next Adams County Transect is Urban Edge. This development pattern includes low-rise buildings with walkable block patterns. Residential typologies are all varieties of multi-unit housing.

The most dense of the Adams County Transect is the Urban Activity Center, which includes medium-rise building with walkable block patterns in a mixed-use context. Residential typologies are all multi-unit housing.

Campus Districts is another development pattern that is typical of a campus type appearance, a collection of related buildings such as a hospital or government center.

The final Adams County Transect is Industrial. This type of development pattern is distinct for Adams County since it is such a prominent land use in some areas. By defining this development pattern in the Adams County Transect, criteria can be determined for where this is best suited and what planning considerations should be established such as buffers and adjacencies.

Review the "Adams County land use framework: Adams County Transect" on page 164 for more information.

Importantly, within each transect there are considerations for transportation and mobility, as well as parks, open space and trails, providing a critical linkage to the Transportation Master Plan and the Parks, Open Space, and Trails Master Plan are encompassed

in the Advancing Adams planning effort.

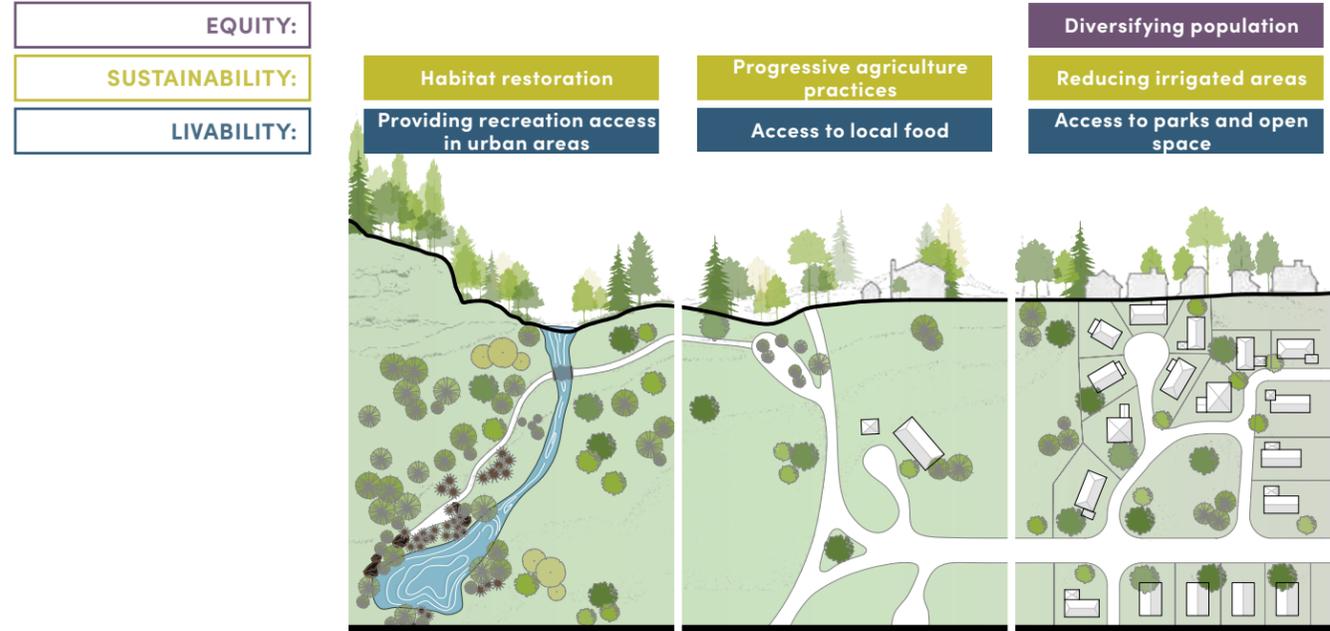


Figure 64: Pecos Street Between US-36 and 70th Ave



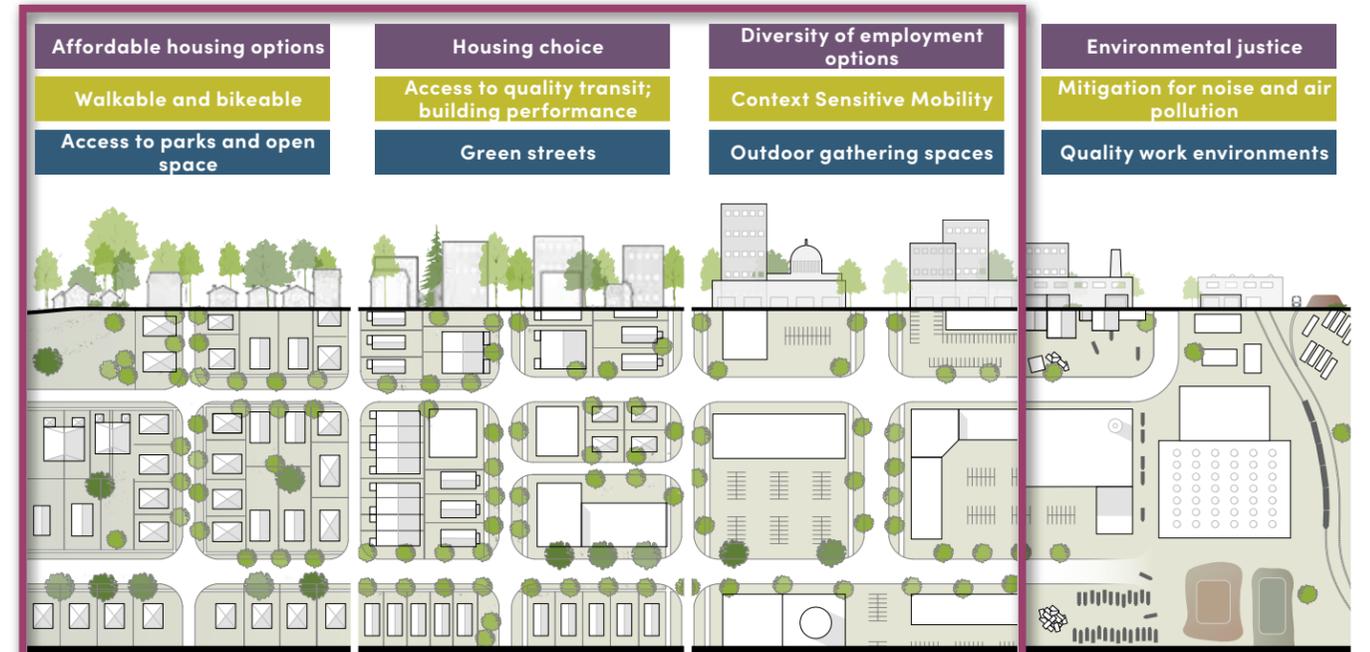
Figure 63: Industrial Areas on Washington Street between 54th Ave and I-76

VALUE LENS CONSIDERATIONS:



	NATURAL	RURAL	SUBURBAN
DESCRIPTION	Undeveloped and mostly intact lands generally reserved for parks and open space.	Areas located outside towns and cities that host a less dense population.	Residential areas often located at the periphery of urban areas.
LAND USES	» Parks and open space (and other protected lands)	» Large-scale agriculture » Residential Low » Parks and Open Space » Institutional	» Residential Medium » Residential Low » Commercial Regional » Commercial » Institutional » Industrial High » Industrial Low » Parks and Open Space » Small-scale Agriculture » Neighborhood Retail
DEVELOPMENT PATTERN	Naturalized area with some recreation development. Few small scale buildings or structures may be found for accessory uses.	Generally no rigid or strict urban form exists. Roads and parcels mostly follow a rural-scale grid or the topography. Buildings are typically set back from the road and mostly consist of residential homes and agriculture-related structures.	Block patterns are generally irregular with curvilinear streets. Alleys are not common. Buildings are typically set back from the street and range in scale. (Residential density will be determined in Phase 2)
PARKS, OPEN SPACE AND TRAILS	» Open space » Natural areas » Conservation lands » Trail Connections	» Open space » Natural areas » Conservation lands » Trail Connections	» Open space » Parks » Trail Connections
MOBILITY	Large areas within this transect may not be accessible by cars. Areas that are accessed by cars include small parking areas. Trails and bike paths may be found. Availability of transit may be limited to some trailheads or nodes.	Mostly reliant on cars. Availability of pedestrian and bicycle infrastructure might be limited. Transit services most likely unavailable.	More reliant on cars, but with areas that are walkable, accessible and bikeable with access to transit along major roadways and access to parks and open space.

20-Minute Community Aspiration Areas (see page 166)



	URBAN EDGE	URBAN ACTIVITY CENTER	CAMPUS DISTRICTS	INDUSTRIAL
DESCRIPTION	Transitional density between the Urban Activity Center and Suburban areas.	The most dense areas of the County with a high mix of different uses typically in multi-story, mixed-use building forms in a walkable environment.	Areas that serve a specific purpose, usually highly specific based on uses that could range from institutions to creative districts.	Industrial lands that host a variety of different industrial uses.
LAND USES	» Residential High » Residential Medium » Commercial » Institutional » Mixed Use » Parks and Open Space » Neighborhood Retail	» Residential High » Commercial » Institutional » Activity Center » Mixed Use » Parks and Open Space » Transit Oriented Development » Neighborhood Retail	» Residential High » Residential Medium » Commercial » Institutional » Activity Center » Mixed Use » Industrial High » Industrial Low » Parks and Open Space	» Commercial Regional » Industrial High » Industrial Low
DEVELOPMENT PATTERN	Walkable regular block patterns with a mix of alley access (as available) and street access. Buildings are lower scale and built along the street with minimal setback that allows for a small front yard or porch. A mix of residential building types and some neighborhood-scale commercial and retail. (Residential density will be determined in Phase 2)	Walkable block patterns are regular with consistent alley access (as available). A minimum of two-story buildings with minimal setback and/or building "build to" line. Shops and businesses on first floor with offices or residences on upper floors. Open space takes the form of urban plazas. (Residential density will be determined in Phase 2)	Block patterns, building form, and building scale vary based on the specific use. Some campus districts will present in the form of a campus and others may appear more like an Urban Activity Center pattern.	No consistent urban pattern, building form, or building scale. Each varies based on the specific use.
PARKS, OPEN SPACE AND TRAILS	» Parks » Trail Connections	» Parks » Trail Connections	» Open space » Parks » Trail Connections	
MOBILITY	Some reliance on cars, but still walkable and bikeable with access to transit, parks and open space.	Minimal reliance on cars, a "park once and walk district" with high levels of pedestrian and bicycle use and good access to high-capacity transit. On street parking with parking garages or surface lots within the core of the blocks.	The transportation network varies by district, typically responding to specific conditions due to land use, built form and surrounding context.	Heavy reliance on cars and trucks. Relatively lower level of pedestrian and bicycle activity even though sidewalk and bicycle access are important in these areas. Some areas may have good access to high-capacity transit.

20-MINUTE COMMUNITY ASPIRATION AREAS

Many communities across the world, big and small, are using the 20-minute city¹ as a strategy to implement livability and equity-minded policies that also support sustainability goals. Governments at various scales are embracing the forward-thinking concept at the national level down to the city level including Boulder; Melbourne, Australia; Detroit, Michigan; and Portland, Oregon. Communities like Ottawa and Minneapolis are also aspiring to this concept but by a different name - Intensification.

¹ The 20 Minute City was jointly authored by adjunct professor John Stanley from the Institute of Transport and Logistics Studies at the University of Sydney Business School, Dr Janet Stanley social policy adviser for Stanley & Co, and Stephen Davis, industry development and planning manager for BusVic

What is a 20-minute community?

The 20-minute community is an urban planning concept where essential services (such as grocery stores) and amenities (such as public parks) are accessible within a 20-minute low stress walk, bike ride or transit ride.

In reference to the Adams County Transect, the 20-minute community is an appropriate goal for more dense areas of Adams County including the Urban Activity Center and Urban Edge. These two areas represent the 20-minute community inner ring as depicted in Figure 65. Campus Districts are included in the outer ring since those areas are primarily where institutions such as hospitals and higher education campuses can be found.

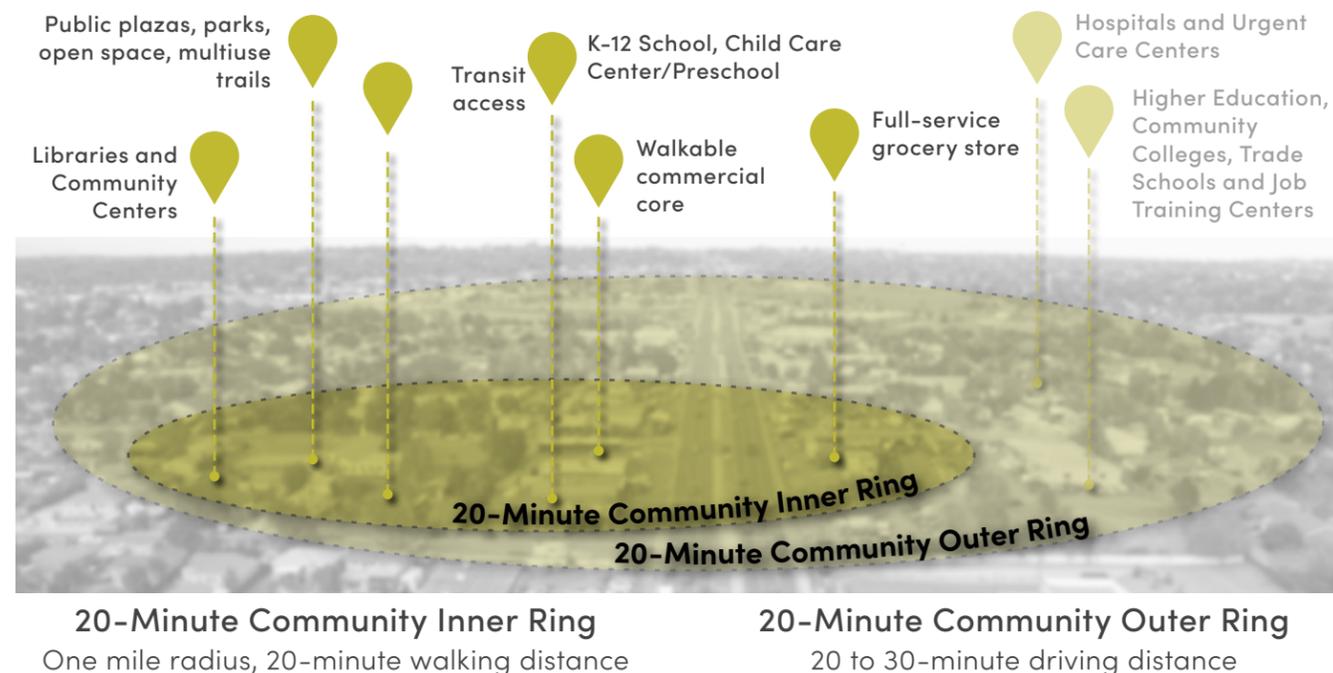
The 20-minute community concept aligns with the intent to achieve an equitable distribution of amenities, services, facilities and low stress multi-modal transportation facilities that provide access to those destinations. The 20-minute community is one framework to achieve the County's goal and measure progress over time.

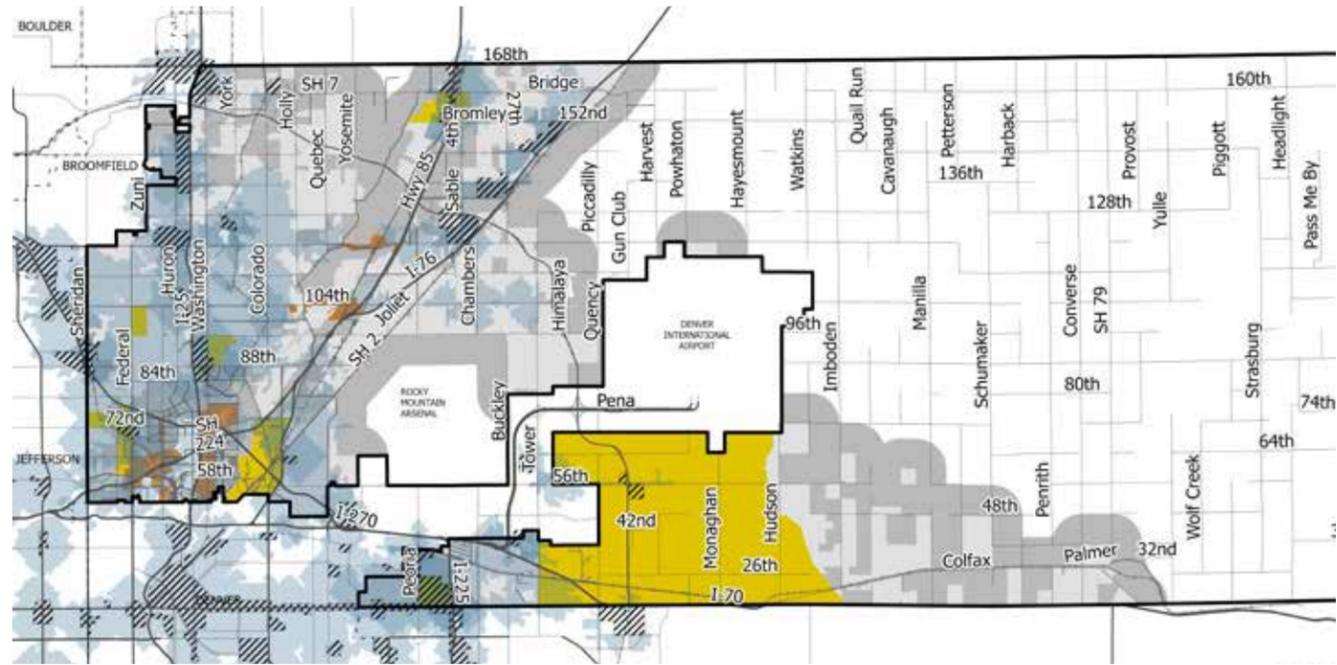
20-Minute Community and the Five Strategic Corridors

The Planning team is in the process of evaluating the County as a whole for successful communities and gaps in the 20-Minute Community framework, and this work will be advanced in Phase 2 of Advancing Adams. When this analysis is complete, we can then identify how land use changes can assist in promoting the effort to equitably distribute essential services and amenities throughout the County.

Initially gaps in parks service areas and accessibility to transit stations were indicated as two equity and livability concerns for the three North South corridors.

Figure 65: Adams County Land Use Framework 20-Minute Community Aspiration Areas





Data Source: Adams County, DRCOG, Design Workshop

NOT TO SCALE 

LEGEND

-  Urban Centers Service Area (1 Mile)
-  Bus Service Area (1 Mile)
-  Rail Service Area (1 Mile)
-  DRCOG Urban Centers
-  Opportunity Zones by Census Tract
-  Corridor Subareas
- Buffer
-  1 Mile
-  Municipal Boundaries
-  Adams County Boundary
-  Railroads
-  Roads

POTENTIAL AREAS FOR GROWTH AND CHANGE DRAFT FRAMEWORK

Phase 1 represents the existing conditions and opportunities for the land use analysis component of the Comprehensive Plan. Some initial opportunities for growth areas include: areas in proximity to urban centers, transit stops, opportunity zones, strategic corridor areas and/or areas within one mile of municipal areas. These are initial ideas about where growth can occur and where density can be focused for the future of Adams County. These generalized ideas for growth areas will be analyzed further in Phase 2 in collaboration with the client, stakeholders and general public.

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NEXT STEPS

This Existing Conditions Report concludes Phase One of the Comprehensive Plan planning effort. It lays the groundwork for Phase Two where recommendations will be crafted that will forge a path forward to help achieve the vision for Adams County to be “...the most innovative and inclusive County in America for all families and businesses.”

In Phase Two of the planning process, this baseline information will be paired with feedback from the public. Additionally, recommendations will be coordinated across concurrent planning efforts including the Transportation Master Plan and Parks, Open Space and Trails Plan. Projects, programs and policies will be prioritized with guidance for implementation.

Future land use categories and land use scenarios will be used as a tool to evaluate various strategies for managing growth in a way that is proactive and aligned with the County values of equity, sustainability and livability.

Additionally, new data from the 2020 Census is anticipated to be available later in 2021. Phase Two will integrate the most recent data in the Adams County Comprehensive Plan.

Phase Two and the updated Adams County Comprehensive Plan is expected to be complete in December 2021.

Phase Two of the Comprehensive Plan Process will explore three main questions for the community at-large through the lenses of the County’s values:

1. How does the County want to grow?

The population of Adams County will increase by about 200,000 people in 20 years. In Phase Two, land use frameworks will be evaluated through multiple growth scenarios to determine the best option for Adams County.

2. What are the tools to keep Adams County on track?

Policies, recommendations, programs and projects are all pieces of the puzzle that help Adams County accommodate growth into the future while staying true to the core values.

3. How can we get there?

In Phase Two, an action plan will be developed that provides clear implementation steps and ongoing reporting guidance to keep the Comprehensive Plan moving the County forward with equity, sustainability and livability in mind.



Figure 66: Core Value Lenses

PHASE TWO OF THE COMPREHENSIVE PLAN PROCESS CONSISTS OF THREE MAIN STEPS WHICH INCLUDES:

- CONFIRMING FUTURE LAND USE CATEGORIES AND FRAMEWORKS THAT ALIGN WITH THE VALUES OF THE COMMUNITY AND EVALUATING GROWTH SCENARIOS;
- DETERMINING POLICIES, RECOMMENDATIONS, PROGRAMS AND PROJECTS;
- DEVELOPING AN ACTION PLAN WITH IMPLEMENTATION AND ONGOING REPORTING GUIDANCE.

The Comprehensive Plan process is expected to conclude in December 2021 with a formally adopted plan.



ADVANCING **ADAMS**
PLANNING FOR A SHARED FUTURE



APPENDIX B:

OUTREACH AND ENGAGEMENT SUMMARY



PUBLIC OUTREACH AND ENGAGEMENT

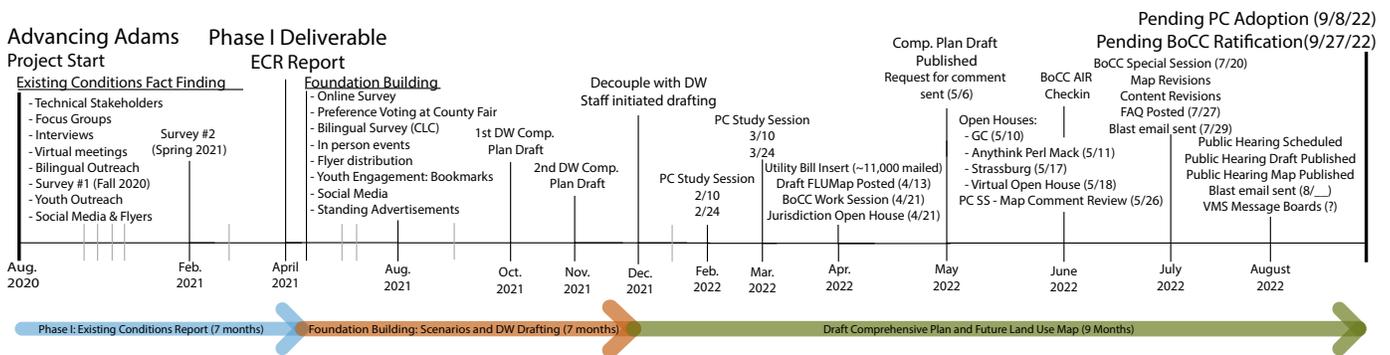
The public outreach and engagement process for Advancing Adams began in August 2020 during the COVID-19 pandemic and continued through July 2022. Flexibility in how Adams County approached outreach and engagement was the key ingredient to this process, whether it was virtual, hybrid or in-person.

The overall Advancing Adams (AA) project was divided into three phases:

- I. **Existing Conditions** - Established the core value lenses for all three plans, the 20-minute community concept, and explored five strategic corridors within Adams County.
- II. **Foundation Building** - Provided a basis for developing the goals, policies, and strategies for each theme.
- III. **Draft Comprehensive Plan and Future Land Use Map** - Established new Future Land Use Map and categories, as well as the goals, policies, and strategies for each chapter.

This report details the outreach and engagement in each phase in three main components:

1. *Public Outreach.* This component demonstrates the public outreach and engagement efforts and incorporates metrics where possible.
2. *Takeaways.* This component summarizes the key themes and feedback as a result of the outreach effort.
3. *Outcomes.* This component is the synthesis of the planning efforts into a deliverable for each phase and how that deliverable informed the next phase of the planning process.



PHASE I: EXISTING CONDITIONS REPORT (SUMMER 2020 – SPRING 2021)

Performing an existing conditions analysis is considered standard planning practice when initiating a comprehensive planning process. Existing conditions analyses may consider quantitative sources such as demographic data, population trend estimates, maps, environmental data, land-uses, and property information. Qualitative sources like focus groups, community input, surveys, and existing plan policy are also evaluated. Generally, the findings of the analysis are synthesized into an Existing Conditions Report (ECR).

PUBLIC OUTREACH AND ENGAGEMENT

A series of virtual meetings, surveys, and outreach occurred throughout Phase I to introduce Advancing Adams as a trio of long-range master plans for land use, transportation, and parks, as well as to obtain input from the public about the existing conditions of the built and natural environments and the county's strengths and weaknesses. Listening sessions were held on several topic areas. Participants varied and ranged from business owners, landowners, representatives from nonprofit groups, residents, and the development community. Overall, outreach efforts in this phase had approximately 264 number of live interactions, 161 survey responses or submitted comments, and 43,000 number of impressions. A list of the individual outreach activities is included below (with approximate participants where available):

VIRTUAL MEETING (# OF INTERACTIONS)

Winter 2021 (1 hour in English, 1 hour in Spanish) (48 of interactions)

TWO PUBLIC SURVEYS (~150 RESPONSES)

Two surveys with general questions regarding growth were available along with explanatory narrative and graphics. The website, social media posts, and press release received an estimated 1,000 impressions.

Survey #1: Fall 2020–Winter 2021 (311 of responses [how many were sent out or where accessed?])

Survey #2: Winter 2020–Spring 2021 (~50 responses via Zoom Poll)

FOUR LISTENING SESSIONS ON FOUR TOPIC AREAS: (42 OF INTERACTIONS)

- Access to Recreation, Trails, and Parks
- Affordable Housing
- Small Business Success
- Celebrating Heritage and Culture

BILINGUAL OUTREACH

- “Meet People Where They Are” (~427 impressions)
- Met people at 12 existing meetings/events with a Spanish-language focus
- Distributed flyers in various communities where Spanish is the primary language
- Held one Spanish language radio interview with follow-up interview

- Bilingual listening sessions

YOUTH ENGAGEMENT

Online Youth Engagement Workbook (Winter 2020/21)

- Distributed to 13 schools within Adams County and online at the project website

Student Activity Worksheet (Spring 2021) (13 responses)

- Distributed to schools via email

MEETING ADVERTISEMENTS AT FOUR

ADAMS COUNTY OUTREACH EVENTS (~250 IMPRESSIONS)

- Electronics Recycling Events
- Farmer Food Box Distribution

SIX FOCUS GROUPS ON SPECIFIC THEMES (~ 84 OF INTERACTIONS)

- Agriculture
- Open Space
- Recreation
- Housing
- Corridors

SOCIAL MEDIA OUTREACH (FACEBOOK, TWITTER, AND INSTAGRAM):

- 43 Posts
- 41,333 Impressions
- 784 Engagements
- 270 Link Clicks

PHASE I: EXISTING CONDITIONS

STAKEHOLDER, REFERRAL & JURISDICTIONAL OUTREACH

The County worked with jurisdictions and referral agencies in and adjacent to the county along with representative members of the community totaling over 250 members. Focused conversations with these partners helped to lay the foundation for the goals, values, and themes. Focus groups, listening sessions, and individual interviews in English and Spanish evaluated regional conditions and opportunities.

Stakeholder technical kickoff meeting (# of interactions)

- September 2020

Stakeholder Interviews (10 interactions)

- November/December 2020
- November 2020-January 2020

Survey to Key Stakeholders/Leadership (42 sent with 11 responses)

Meeting with Jurisdictional Long-Range Planners, Directors, and Transportation Contacts

Referral and Jurisdictional Review of the Draft Phase I Report

- March 2021

Phase I Board of County Commissioners (BoCC) Meetings			
Meeting Date	Topic Presented	Feedback from BoCC	Direction/Outcome
September 15, 2020 (AIR)	Advancing Adams Plans Branding	BoCC had questions and comments about media buys for marketing and interest in knowing when the branding information goes public.	BoCC directed staff to move forward on the branding elements.
October 6, 2020	Overview of Advancing Adams, including mission statements, key themes, analyses, and a proposed timeline for the overall project.	BoCC showed interest in connectivity to the region with trails that service equestrians and cyclists as a mode of transportation (E-470, Stock Show connections to Riverdale Regional Park), pedestrian safety interest along Federal, and discussion of creating a county water analysis.	TMP and POST Plans ultimately emphasized connectivity. Water Analysis estimated to be initiated in 2023.
February 9, 2021	Phase I Summary Update, which included two concepts informing the Comprehensive Plan: The Adams County Transect and 20-Minute Community.	Follow up Study Session requested.	
March 16, 2021	An Overview of the three Phase I Reports, common themes for each Plan, types of outreach and lessons learned, and next steps for Phase II	BoCC provided feedback on sharing outreach outcomes and recommendations on groups to invite to additional engagement and outreach opportunities.	BoCC directed staff to perform outreach to all suggested groups. All Phase I reports were posted to the AA website for public viewing.

TAKEAWAYS:

Participants described Adams County as “growing, diverse and progressive,” establishing the three value lenses for all three plans of equity, livability, and sustainability. In addition, the feedback helped to develop the key themes of the Comprehensive Plan: Community and Housing, Natural Environment, Built Environment and Connections, Economic Development, and Cultural Heritage. A strengths, weaknesses, opportunities, and threats (SWOT) analysis was performed for the county’s gateways and corridors, as those were identified by the County Commissioners as specific areas of focus.

OUTCOMES:

The ECR (included by reference to the Comprehensive Plan as Appendix A) is the primary output of Phase I. The ECR was the culmination of extensive quantitative and qualitative analysis, as well as inclusive engagement efforts. The initial planning phases recognized and refined the three core values of equity, livability, and sustainability and utilized the values to vet, filter, and examine available data.

Findings from the ECR further identified the proposed plan chapter topics, as well as the focus on the five strategic corridors. The report detailed and incorporated strengths, weaknesses, opportunities, and threats (SWOT analysis) related to the plan topics and corridors. The SWOT analysis was subsequently referenced when drafting goals and policies in the Comprehensive Plan.

The ECR identified geographic locations throughout the county with opportunities, constraints, and hazards to build upon the findings of the 2012 Imagine Adams Plan. Mapping analysis indicated two planning models were appropriate to guide the Comprehensive Plan draft. The 20-Minute Community Model is an urban planning concept, where essential services (such as grocery stores) and amenities (such as public parks) are accessible within a 20-minute low-stress walk, bike ride or transit ride. The Transect Model is a planning concept that identifies land-use patterns, uses, and transportation options that define the built-environment and proposes transitions between intensities and design. Map analysis in conjunction with the core values and models have been applied to the drafting of development scenarios, future land use designations, and plan policies.



PHASE II: FOUNDATION BUILDING

PHASE II: FOUNDATION BUILDING (SUMMER 2021 – FALL 2021)

Upon finalizing the ECR, foundational outreach began for the Comprehensive Plan. This included a number of in-person events, including fairs, concerts, and festivals. The main focus of this outreach was to determine how Adams County should grow based on population projections (current pattern of growth, town centers, urban center preferences) and how transportation and parks planning are addressed within these various growth scenarios. Engagement efforts also sought public confirmation of the findings in the ECR, the core values, and buy-in for the 20-Minute Community Model. Overall, outreach efforts in this phase had approximately 750 of interactions, 500+ survey responses or comments submitted, and 39,776 of impressions. A more detailed illustration of the growth scenarios can be found as Appendix C to the plan, a summary of the three growth scenarios are as follows:

Scenario A: "Stay the Course" - keep the current pattern of growth in place (i.e., through market forces)

Scenario B: "Many Focused Centers" - to establish neighborhood/town centers throughout Adams County in areas that can build nodes of 20-minute community growth (i.e., walkable blocks with medium-density residential development, shopping, parks, and other neighborhood-friendly amenities)

Scenario C: "Larger Areas of Concentrated Development" - to establish a few larger activity centers around transit areas (i.e., high-density residential development with pocket parks, multi-modal transportation options within a mile or less of the area, and vertical mixed-use buildings)

In Fall 2021, the County's bilingual consultants, Community Language Cooperative (CLC), offered engagement opportunities to "meet people where they are." The consulting group worked with participants by calling, emailing, and meeting people at their homes, resulting in 150 responses to the surveys.

PUBLIC OUTREACH AND ENGAGEMENT

VIRTUAL MEETING

- Fall 2021

SURVEYS (TOTAL RESPONSES)

- Survey #1: July-August 2021 (Growth Scenarios) (# 299 Total Responses)
- Survey #2: October-November 2021 (Bilingual via CLC) (# ___ Total Responses)

PUBLIC OUTREACH AT EVENTS (~30,000 IMPRESSIONS AND ~1,290 INTERACTIONS)

- Brighton Summerfest (~200 impressions/interactions)
- Bennett Party in the Park (~ 20 interactions)
- Stars & Stripes Festival (~200 interactions)
- Adams County Fair (~600 interactions)
- Mapleton School Backpack Giveaway Event (~250 interactions)
- Welby Days (~75 impressions/~20interactions)

FLYER DISTRIBUTION (~200 IMPRESSIONS)

- Barr Lake Clean Up
- Farm Box Distribution Events
- Bennett Days

YOUTH ENGAGEMENT: SUMMER YOUTH BOOKMARK CONTEST (~600 IMPRESSIONS, 85 CONTESTANTS)

- Anythink Libraries
- Public Outreach events

BILINGUAL OUTREACH

- Direct outreach (Phone calls, emails)
- Video to Advertise Focus Groups

SOCIAL MEDIA OUTREACH (FACEBOOK, TWITTER, AND INSTAGRAM):

- 58 Posts
- 60,901 Impressions
- 1,471 Engagements
- 249 Link Clicks

Standing advertisements with poster board and tabletop displays at Government Buildings (Department of Motor Vehicles, Human Services Center, Adams County Government Center, Anythink Libraries)

STAKEHOLDER, REFERRAL & JURISDICTIONAL OUTREACH

Foundational outreach included conversations with focus groups that included experts in the topics of: Agricultural and Rural Interests, Transportation and Trails, Housing Types and Affordability, Washington Street, and 104th Avenue. Participants of the focus groups were varied, ranging from neighboring jurisdiction staff members, business owners, transportation planners and providers, landowners, representatives from nonprofit groups, residents, and the development community (See attached list).

Six Presentations to Commissions and External Agencies

Five Focus Groups

- August-September 2021

Phase II BoCC Meetings			
Meeting Date	Topic Presented	Feedback from BoCC	Direction/Outcome
June 29, 2021	Phase II overview, presentation and facilitation exercise on scenario planning, and an overview of areas of stability and areas of change.	From a discussion on scenario preferences, BoCC preferred Scenarios B (town centers) and C (urban centers); they showed interest in preserving mobile home parks, ensuring hazardous areas are not near development, promoting affordable housing, and expanding opportunity zones.	BoCC gave direction to focus Comprehensive Plan future land use mapping on Scenarios B & C for development nodes in Adams County.
July 20, 2021 (AIR)	Overview on results from an ongoing survey on scenario planning.	Informational only.	
September 21, 2021	Phase II, initial survey results, Future Land Use categories overview, and initial Future Land Use Map conversations	BoCC discussed the proposed Future Land Uses and how they will align with the future Development Standards Overhaul. BoCC expressed interest in incentives for affordable housing, economic development, live/work mixed use. Improving transportation connections for all (ped, bike, horse), and concern about gentrification along corridors was also discussed.	BoCC directed staff to schedule a work session to go through a Future Land Use mapping exercise.
November 3, 2021	Special Study Session and exercise on Future Land Use mapping	BoCC suggested adding an Industrial High category. BoCC was interested in balanced development is provided in Eastern Adams County; they showed interest in being aligned with the urban growth boundaries and interest in updating the Berkeley Subarea Plan, Welby Plan, and areas along Federal.	Staff created an Industrial High category and clarified what the Comprehensive Plan covers versus future Development Standards and Regulations overhaul. Funding for subarea and corridor planning has been requested in the 2023 budget.

PHASE II: FOUNDATION BUILDING



TAKEAWAYS:

Over 60% of participants preferred Scenario B for both livability and shopping/work, thus allowing the Advancing Adams team to create a draft future land use map reflecting this intention. The future land use categories of mixed-use, residential medium, and commercial are present in areas where the pattern of growth can focus on town centers. The additional support for Scenario C confirmed the preference for additional housing density, services, and employment opportunities, especially around transit.

General comments emphasized the need for greater housing diversity in reference to both affordability and type of housing product, bike lanes and connectivity, extending the trail network, creating more accessible parks/open spaces, improving transit services and connections. Concerns included the rise in unsheltered residents, a need for more neighborhood commercial (with an emphasis on grocery stores in underserved areas), concerns about water scarcity, and preservation of agricultural lands.

In response to survey feedback, the Advancing Adams Comprehensive Plan identifies policies and strategies to address: housing affordability, water monitoring, and encourages the provision of goods and services throughout the county to support complete communities. The future land use map reflects the nature and intent of Scenario B with the introduction of multiple mixed-use town centers in key areas, as well as Scenario C, which promotes housing affordability with the introduction of higher residential densities in transit-served areas.

From the bilingual outreach, the most supported goal statement was, “the redevelopment process of Adams County will support stabilizing existing neighborhoods and incentivize redevelopment.” Participants supported town centers in Eastern Adams County, as well as town and urban centers near transportation hubs. The top challenges to growth included land use conflicts, a lack of amenities, local business displacement, sprawl, lack of affordable housing, and loss of open space.

Feedback from this stage of outreach was used to draft the Future Land Use Map (“FLUM”), as well as the goals and policies for each chapter. Key comments from stakeholders related specifically to Agricultural and Rural Interests, Transportation and Trails, Housing Types and Affordability, Washington Street, and 104th Avenue include:

Agricultural and Rural Interests:

- Exploration of innovative agricultural practices
- Economic development strategies that include agritourism and solar
- Water conservation and ensuring that water rights do not become untethered from agricultural conservation
- Preservation of cultural assets through open space
- Partnerships with schools and other initiatives to preserve land and honor farming practices and rural heritage

Transportation and Trails:

- Prioritization of safe multi-modal connections for schools, parks, and recreation
- Enhance the wayfinding system for trails/walks
- Rail and highways serve as a barrier to users on bikes/foot
- Access to Clear Creek and the South Platte are challenging
- E-bikes should be considered as a vehicle on trails on-street bike facility implementation

Housing Types and Affordability:

- Lack of housing choices for affordability
- Context is key for the types of housing offered in various areas of the county
- Mobile homes are an important source of affordable housing
- Balanced housing development may need to be promoted through public-private partnerships and incentives
- Adjustments to the Zoning Code through incentives could help support Transit-Oriented Development (“TOD”) and multi-generational housing programs

Washington Street:

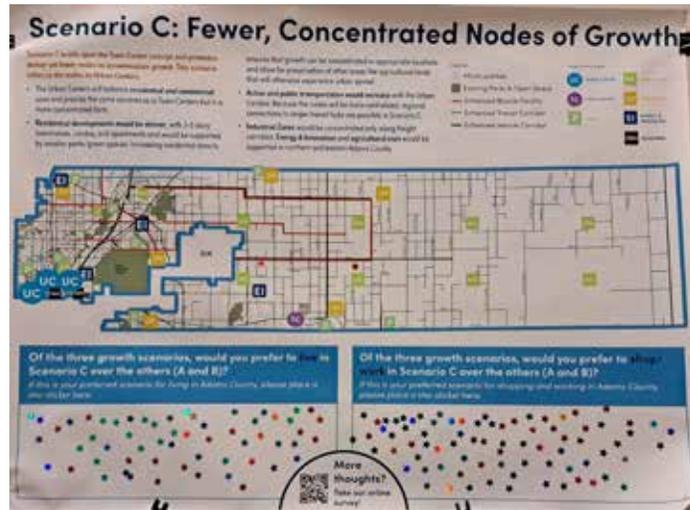
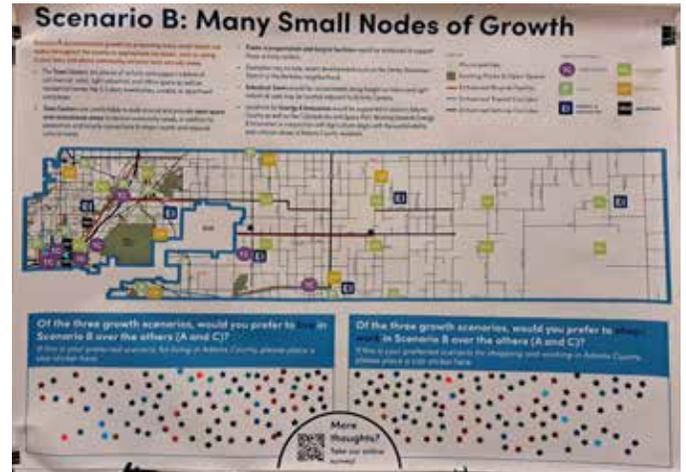
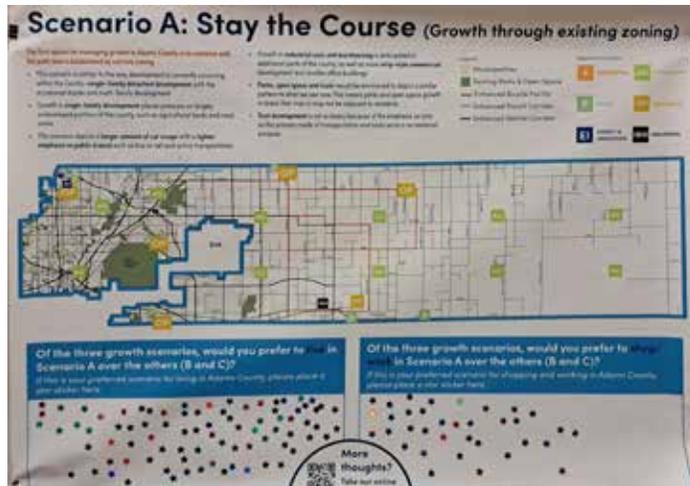
- Land uses along the corridor do not promote a destination
- Support for a road diet from 73rd to 78th Avenues with enhanced pedestrian crossings
- Mixed uses are the preferred land use type followed by commercial
- Maintain some of the industrial character while transitioning spaces to ‘maker spaces’, art spaces, warehouses and other creative uses (in reference to the road diet/Welby area)
- Build transit supportive land uses to make the corridor more transit friendly

104th Avenue:

- Promote multi-modal connections and act as a parkway between parks and residential development
- Jurisdictional partnerships for land uses and parks and open space should be supported
- More pedestrian crossing treatments at signalized intersections was perceived as a need



PHASE II: FOUNDATION BUILDING



OUTCOMES:

The feedback from the outreach and engagement efforts significantly reinforced conclusions from the ECR and provided a foundation for drafting the policies for the Comprehensive Plan. The support for the 20-Minute Community Model influenced draft future land-use categories and their placement on the FLUM. Community input supporting growth Scenario B and interest in additional services, mixed use development, and employment opportunities influenced the expansion of the Mixed Use and Mixed Use Commercial designations, especially on the strategic corridors. The feedback on the Transect Model guided mapping decisions to transition future land-uses based on intensity, proximity to incompatible uses, and transportation needs.

Feedback from the community strongly influenced written policies, that were then grounded in best practices and professional planning standards. Policy statements were written to reflect and reinforce the core values of equity, livability, and sustainability. County goals and the strategies to achieve them are informed by community feedback and reflect the community's desires for the following: livable communities, employment opportunities, affordable and diverse housing, safe and reliable mobility, accessible neighborhoods, a healthy natural and built environment, corridors that reinforce a sense of place, and preservation of viable agriculture in the county, among other things.

PHASE III: DRAFT COMPREHENSIVE PLAN AND FUTURE LAND USE MAP (FLUM) (WINTER 2021 – SUMMER 2022)

The Foundations Building phase concluded by confirming public support for key themes that would be refined into goals, policies and strategies in the draft plan. Based on the foundations established in Phase I and Phase II, the County began drafting the narrative and policy components of the plan in December 2021. The County also utilized public support for the 20-Minute Community and Growth Scenario B to guide future land-use map recommendations. County staff held several study sessions with the Planning Commission to review draft goals, policies, and strategies as they were ready in the drafting process, as well as a session reviewing the draft FLUM. Staff held a similar work session with the BoCC on April 21, 2022 to review draft policies. The draft FLUM was published to Advancing Adams website on April 13, 2022 with accompanying information on category changes from 2012 to 2022, a slide map to compare the 2012 FLUM to the 2022 draft FLUM, and a map to collect comments on specific properties. All commentor's who provided an email address were responded to with staff's recommendation and added to the project contact list. The draft Comprehensive Plan was published on the website on May 6, 2022.

PUBLIC OUTREACH AND ENGAGEMENT

The 'public comment' draft of the Comprehensive Plan (also known as the 90% draft) was presented in a series of open houses for the general public and other stakeholders such as local government partners, businesses, and community organizations. Draft goals, policies, strategies, and the FLUM were available to view online and in person.

Five in-person open houses and one virtual briefing were held in May 2022 with encouragement for the public to comment in-person or by following up online. The individual outreach activities includes:

PUBLIC EVENTS

- Neighbors Connect - April 16, 2022
- Eastern Adams County Town Hall - May 4, 2022

OPEN HOUSES

- Central County - May 10, 2022 (Government Center, Brighton) (15 interactions)
- Western County - May 11, 2022 (Perl Mack) (10 interactions)
- Eastern County - May 17, 2022 - (Strasburg) (4 interactions)
- Virtual Open House - Recorded and hosted on YouTube (7 attendees and 66 views)

WEBSITE

- Draft Future Land Use Map with comment feature and explanatory 'story map' (55 comments)
- Draft Comprehensive Plan
- Open House Event Advertising (~1,594 Impressions)

COMMUNICATIONS

- Storm-water utility bill mailer: March, 30 (~11,000 impressions)
- Press Release/Social Media Launch in Late April/Early May
- Information to Jurisdictional Newsletters: Late April/Early May
- Absolutely Adams Email Newsletter: May 1, 2022 (~1,355 impressions)
- I-70 Scout: May 9, 2022 (~2,500 impressions per week on website, 8,100 papers mailed)

BILINGUAL OUTREACH

- Five Focus Groups (34 interactions)
- Ongoing discussions for additional feedback on public comment draft (6 interactions)
- Communications - Press Release and Social Media Translations
- Translation services provided at three geographic open-houses
- Goals and policies translated and made available

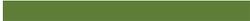
SOCIAL MEDIA OUTREACH (FACEBOOK, TWITTER, AND INSTAGRAM):

- 6 Posts
- 12,548 Impressions
- 541 Engagements
- 38 Link Clicks

Standing advertisements with poster board and tabletop displays at Government Buildings (Department of Motor Vehicles, Human Services Center, Adams County Government Center, Anythink Libraries, Riverdale Regional Park, Bennett Town Hall, Strasburg Recreation Center)

- Gathering Places (restaurant/retail/institutions in Commerce City, Bennett, Strasburg, Byers)

Blast email notifying of FAQ posted to website sent to 773 interested stakeholders July 29, 2022) and August 12, 2022 for scheduled public hearing dates.



PHASE III: DRAFT COMPREHENSIVE PLAN & FUTURE LAND USE MAP

STAKEHOLDER, REFERRAL & JURISDICTIONAL OUTREACH

The County elicited comments from its jurisdictional and referral partners as part of the standard referral process for project review. In addition, the County hosted a Jurisdiction Open House on April 21, 2022 along with follow-up meetings for those who couldn't attend. The County received 16 written comments and two verbal comments expressing support. A summary of the comments is included in the public hearing documents.

TAKEAWAYS:

The County received valuable community feedback through the multiple engagement channels. The in-person open houses were attended by various stakeholders and provided an opportunity for staff to interact directly after many remote engagements throughout the pandemic. Responses to the goals and policies at the meetings indicated support for the direction of the Comprehensive Plan.

The County received valuable comments on the draft FLUM from both referral agencies and the public. The majority of comments focused on areas designated for Mixed Use Commercial, primarily along I-76 south of E. 104th Avenue and the area along Washington Street north of E. 52nd Avenue. All comments were reflected on the map, and staff responded to comments with recommendations as applicable. Staff further presented map comments to Planning Commission for additional direction. Some changes were made and are reflected in the public hearing version of the map (A full list of changes from the public comment version and public hearing version is included in the public hearing documents). Comments regarding industrial uses reflected concern with the potential direction for lighter and vertically integrated industrial uses that are envisioned in the Mixed Use Commercial category, along with comments about the existing I-2 and I-3 zoning, which allow more intensive industrial uses. Additional language was added to the draft plan to reinforce that the plan is advisory and not regulatory in nature. An additional Frequently Asked Questions (FAQ) document was added to the project website to address concerns and potential implications of the plan. The remainder of comments reinforced the community's desire for parks and support for mixed use development.

The County received two comments from the public recommending specific changes to the language in the Comprehensive Plan. The recommendations were considered, and text additions were made with County Attorney assistance to reinforce the advisory nature of the plan and when existing conditions, such as landfills, may be at odds with development expectations.

OUTCOMES:

The County received written responses, mapping recommendations, and verbal feedback that supported the policies, community vision, and FLUM designations. A full record of referral comments can be found in the public hearing documents. Referral partners who commented generally lauded the clarity and direction of the Comprehensive Plan. Some technical mapping corrections were commented on and made. Other recommendations to future land use categories on the FLUM were noted, and staff sought additional direction. Any modifications to the FLUM are noted in the public hearing documents along with staff recommendations addressing designations that did not change. In addition, staff added additional detail around Denver International Airport regarding Federal Aviation Administration sensitive uses to further limit potential schools or residential uses.

Staff diligently reviewed mapping comments received by the public and responded when contact information was provided. Staff revised some of its recommendations on certain designations based on feedback, especially along the I-76 corridor south of E. 104th Ave. A complete record of comments and map changes is included in the public hearing documents.

PHASE III: DRAFT COMPREHENSIVE PLAN & FUTURE LAND USE MAP

Phase III BoCC Meetings			
Meeting Date	Topic Presented	Feedback from BoCC	Direction/Outcome
April 21, 2022	Draft Goals, Policies, and Strategies.	Supportive of goals and policies in the draft plan. Indicated the policies around housing, employment and landuse would guide the county to achieve the 20-Minute Community aspiration and growth preferences from Phase II.	BoCC gave direction that the content of the draft is ready for design and a public draft.
June 28, 2022 (AIR)	Update on the draft plan, community comments received	Additional information to address common questions would be useful.	Staff developed and posted an FAQ and possible scenarios to the website to address questions about plan implications for uses and zoning regulations.
July 20, 2022	Summary of engagement timeline, draft FAQ and property scenarios, map considerations for I-76 corridor.	Informational only.	Posted content to the website.

The County has performed an extensive and robust outreach and engagement process throughout the drafting of the comprehensive plan. Various methods were used to notify and engage residents, property owners, and businesses. The County sought ways to overcome constraints posed by the pandemic and creatively find opportunities to make sure the voice of the community was heard and reflected in the plan. Thank you to everyone who has engaged in this process to establish and realize the vision for the county.



ADVANCING ADAMS
PLANNING FOR A SHARED FUTURE



STAKEHOLDER & FOCUS GROUP LIST

- 9 to 5
- 9Health Fair en Español
- ACCESS Housing
- ACREP
- Adams County Community Safety & Well-Being
- Adams County Economic Development
- Adams County Human Services Center
- Adams County Open Space Advisory Board
- Adams County Public Works
- Adams County Regional Economic Partnership
- Adams County Veteran's Services
- Adelante Board member
- Adelante Community Development
- Adventure Dental
- Almost Home
- Alyssa Wooten
- Arapahoe County
- Arvada Economic Development
- Atlantis Community
- Aurora Housing Authority
- Aurora Public Schools
- Aurora Science and Tech
- Barr Lake State Park
- Berry Patch Farms
- Bird Conservancy of the Rockies
- Brighton EDC
- Brighton Housing Authority
- Brookfield
- Brothers Real Estate Development
- Brothers Redevelopment
- CASA
- CDOT
- Chanda Plan Foundation
- City and County of Denver
- City of Arvada Planning and Economic Development, Parks and Recreation
- City of Aurora International Cross-Cultural Network
- City of Brighton
- City of Commerce City Economic Partnership, Planning
- City of Federal Heights
- City of Northglenn Planning & Economic Development
- City of Thornton
- City of Westminster, Planning and Economic Development
- Colorado Agrivoltaic Center
- Colorado Air & Space Port (CASP)
- Colorado Front Range Trail
- Colorado Poverty Law Project
- Comitis
- Commerce City Housing Authority
- Community Resources and Housing Development Corporation
- Compare Grocery Store and Restaurant
- Conservation Fund
- CREA Results
- Cultivando
- Delwest
- DIA
- DOTI
- DRCOG
- E-470
- East Denver Food Hub
- EFG Denver
- Elevation Community Land Trust
- ESPUFFIN, Adelante Board Member
- Exdo Management
- Family Tree
- GOCO
- Gorman & Company
- Hal Fairbanks, Real Estate Investor
- HDR Consultants for Federal Blvd. Corridor Study
- Hispanic Chamber of Commerce
- Hyland Hills Park and Recreation District
- Iglesia Amistad
- Image Impressions
- Impact Charitable/Left Behind Workers Fund
- Interfaith Alliance
- Jack's Solar Garden
- Jefferson County
- Koelbel Company
- La Pinata del Aprendizaje
- La Red Evangélica
- Latino Community Foundation
- Maiker Housing Authority
- Mexican Cultural Center
- Mi Pueblo Market
- National Western Center
- Norma Frank, Resident
- Norris Design
- OEDIT Minority Business Office
- PK Management
- RISE -Colorado
- Robin O'Dorisio, Resident
- Root Policy
- RTD
- Salud Family Health Clinic – Brighton
- Sand Creek Greenway
- SARCO - salvadoreños Residiendo en Colorado
- Smart Commute Metro North
- State of Colorado - DOLA, Historic Preservation Office, State Engineer's Office, CPW
- Strasburg Parks and Recreation District
- Thrive Home Builders
- Town of Bennett
- Trust for Public Land
- Trust for Public Land
- Urban Land Conservancy
- Vasa Fitness
- Village Exchange Center
- Walk2Connect
- Warriors Club Vive En Control
- Water Conservation Board
- Westfield

Adams County Growth Scenarios

Adams County is anticipated to grow by 220,000 people by the year 2040.

Advancing Adams is focused on the unincorporated portions of Adams County, where the population growth is anticipated to be nearly 40,000 people by the year 2040. As Adams County looks to the future and strategizes different ways to accommodate growth and provide a high quality of life for residents, we are using **scenario planning** as an opportunity to get creative and test big ideas.

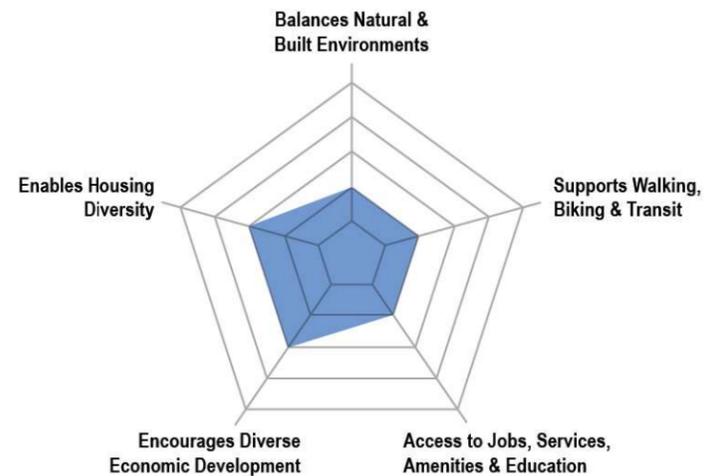
Performance Measures

Performance measures help to explore the impacts, benefits, and trade-offs that are associated with different development patterns. These performance measures tie back to the plans' three overarching values – equity, sustainability, and livability.

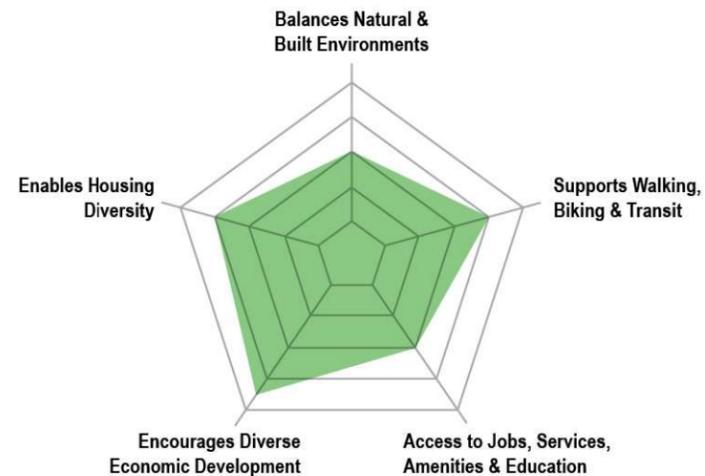
In the graphics to the right:

- priorities and trade-offs of each scenario are displayed as colored shapes within pentagon-shaped charts
- each of the five points of the pentagon-shaped charts represents a different priority
- the closer the colored shapes are to the outer ring of the pentagon, the more that value is prioritized in the scenario

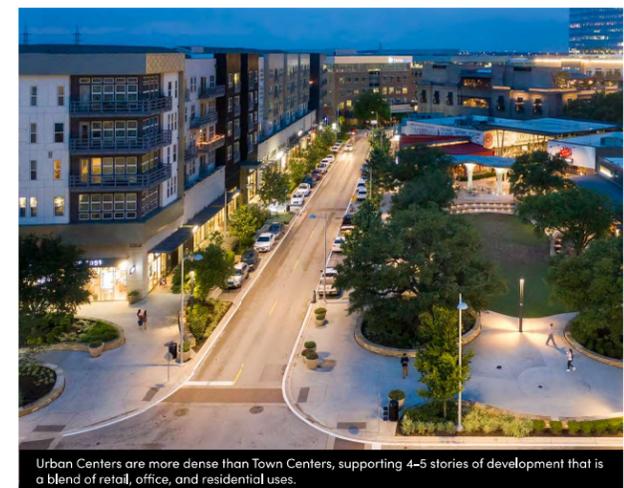
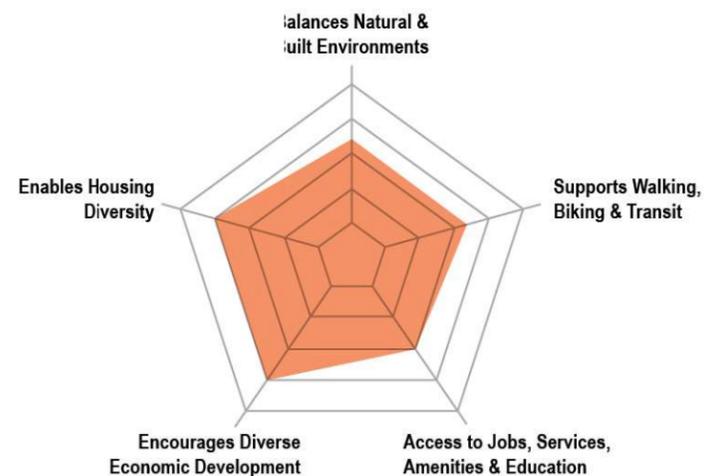
Scenario A: Stay the Course



Scenario B: Many Small Nodes of Growth



Scenario C: Fewer, Concentrated Nodes of Growth



Scenario A: Stay the Course (Growth through existing zoning)

The first option for managing growth in Adams County is to continue with the path that is established by current zoning.

- This scenario is similar to the way development is currently occurring within the County—**single-family detached development** with the occasional duplex and multi-family development.
- Growth in **single-family development** places pressure on largely undeveloped portions of the county, such as agricultural lands and rural areas.
- This scenario depicts a **larger amount of car usage** with a **lighter emphasis on public transit** such as bus or rail and active transportation.

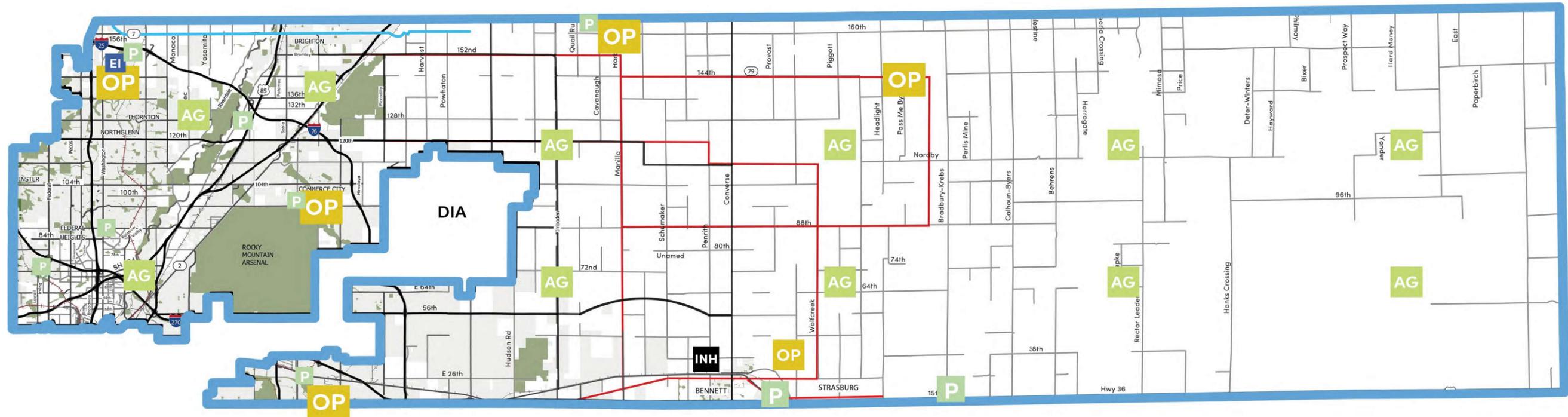
- Growth in **industrial uses and warehousing** is anticipated in additional parts of the county, as well as more **strip-style commercial** development and smaller office buildings.
- **Parks, open space and trails** would be envisioned to depict a similar pattern to what we see now. This means parks and open space growth in areas that may or may not be adjacent to residents.
- **Trail development** is not as heavy because of the emphasis on cars as the primary mode of transportation and trails serve a recreational purpose.

Legend:

- Municipalities
- Existing Parks & Open Space
- Enhanced Bicycle Facility
- Enhanced Transit Corridor
- Enhanced Vehicle Corridor

Opportunity Areas:

- R** RESIDENTIAL
- AG** AGRICULTURE
- P** PARKS
- OP** OPEN SPACE
- EI** ENERGY & INNOVATION
- INH** INDUSTRIAL



Of the three growth scenarios, would you prefer to **live in Scenario A** over the others (B and C)?

If this is your preferred scenario for living in Adams County, please place a star sticker here.

Of the three growth scenarios, would you prefer to **shop/work in Scenario A** over the others (B and C)?

If this is your preferred scenario for shopping and working in Adams County, please place a star sticker here.



More thoughts?
Take our online survey!

Scenario B: Many Small Nodes of Growth

Scenario B accommodates growth by proposing many small mixed-use nodes throughout the county in appropriate locations, such as along transit lines and where community services exist already today.

- The **Town Centers** are places of activity and support a blend of commercial, retail, light industrial, and office space as well as residential homes like 2-3 story townhomes, condos, or apartment complexes.
- Town Centers** are comfortable to walk around and provide **open space and recreational areas** to service community needs, in addition to pedestrian and bicycle connections to major county and regional natural areas.

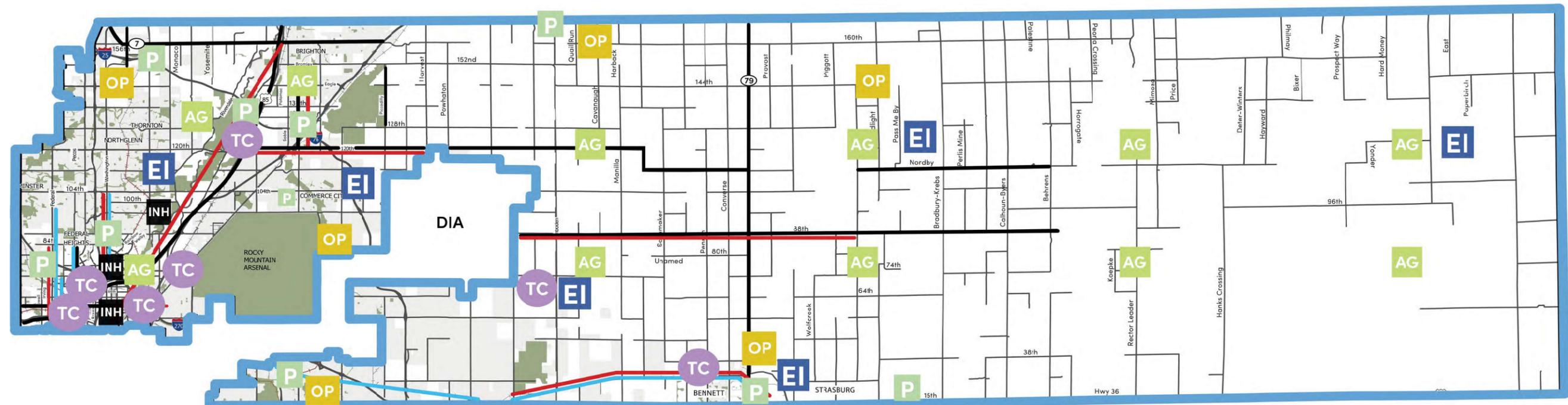
- Public transportation and bicycle facilities** would be enhanced to support these activity centers.
- Examples may include recent developments such as the Derby Downtown District or the Berkeley neighborhood.
- Industrial Zones** would be concentrated along freight corridors and light industrial uses may be located adjacent to Activity Centers.
- Locations for **Energy & Innovation** would be supported in eastern Adams County as well as the Colorado Air and Space Port. Working towards Energy & Innovation in conjunction with Agriculture aligns with the sustainability and cultural values of Adams County residents.

Legend:

- Municipalities
- Existing Parks & Open Space
- Enhanced Bicycle Facility
- Enhanced Transit Corridor
- Enhanced Vehicle Corridor

Opportunity Areas:

- TC** TOWN CENTER
- AG** AGRICULTURE
- P** PARKS
- OP** OPEN SPACE
- EI** ENERGY & INNOVATION
- INH** INDUSTRIAL



Of the three growth scenarios, would you prefer to **live in Scenario B** over the others (A and C)?

If this is your preferred scenario for living in Adams County, please place a star sticker here.

Of the three growth scenarios, would you prefer to **shop/work in Scenario B** over the others (A and C)?

If this is your preferred scenario for shopping and working in Adams County, please place a star sticker here.

More thoughts?
Take our online survey!



Scenario C: Fewer, Concentrated Nodes of Growth

Scenario C builds upon the Town Center concept and promotes denser yet fewer nodes to accommodate growth. This scenario refers to the nodes as Urban Centers.

- The Urban Centers will balance residential and commercial uses and provide the same services as in Town Centers but in a more concentrated form.
- Residential developments would be denser, with 3-5 story townhomes, condos, and apartments and would be supported by smaller parks/green spaces. Increasing residential density

ensures that growth can be concentrated in appropriate locations and allow for preservation of other areas like agricultural lands that will otherwise experience urban sprawl.

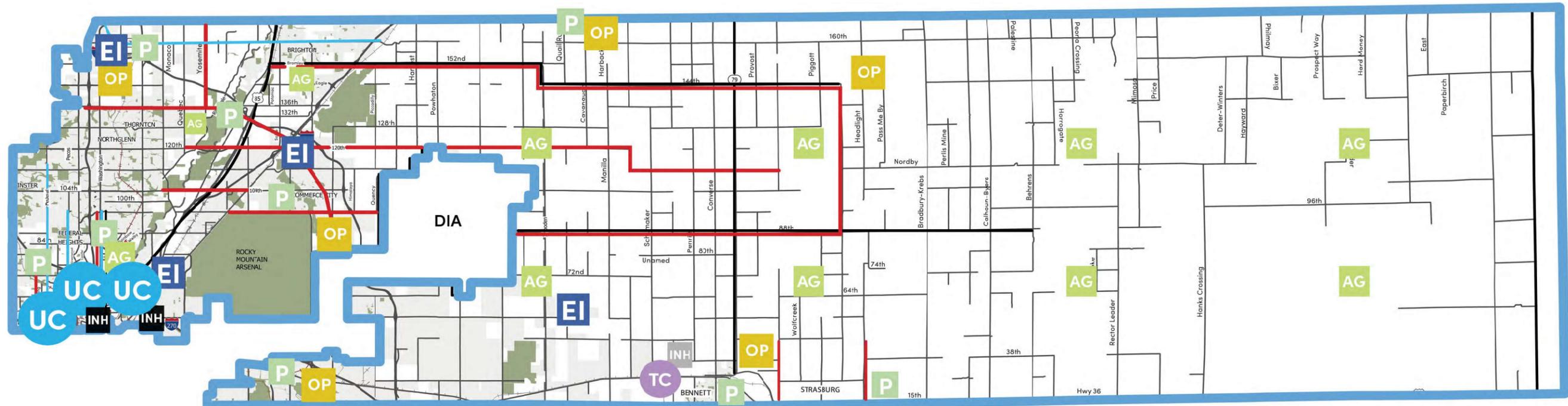
- Active and public transportation would increase with the Urban Centers. Because the nodes will be more centralized, regional connections to larger transit hubs are possible in Scenario C.
- Industrial Zones would be concentrated only along freight corridors. Energy & Innovation and agricultural uses would be supported in northern and eastern Adams County.

Legend:

- Municipalities
- Existing Parks & Open Space
- Enhanced Bicycle Facility
- Enhanced Transit Corridor
- Enhanced Vehicle Corridor

Opportunity Areas:

- UC URBAN CENTER
- TC TOWN CENTER
- P PARKS
- AG AGRICULTURE
- OP OPEN SPACE
- EI ENERGY & INNOVATION
- INH INDUSTRIAL



Of the three growth scenarios, would you prefer to **live** in Scenario C over the others (A and B)?

If this is your preferred scenario for living in Adams County, please place a star sticker here.

Of the three growth scenarios, would you prefer to **shop/work** in Scenario C over the others (A and B)?

If this is your preferred scenario for shopping and working in Adams County, please place a star sticker here.

More thoughts?

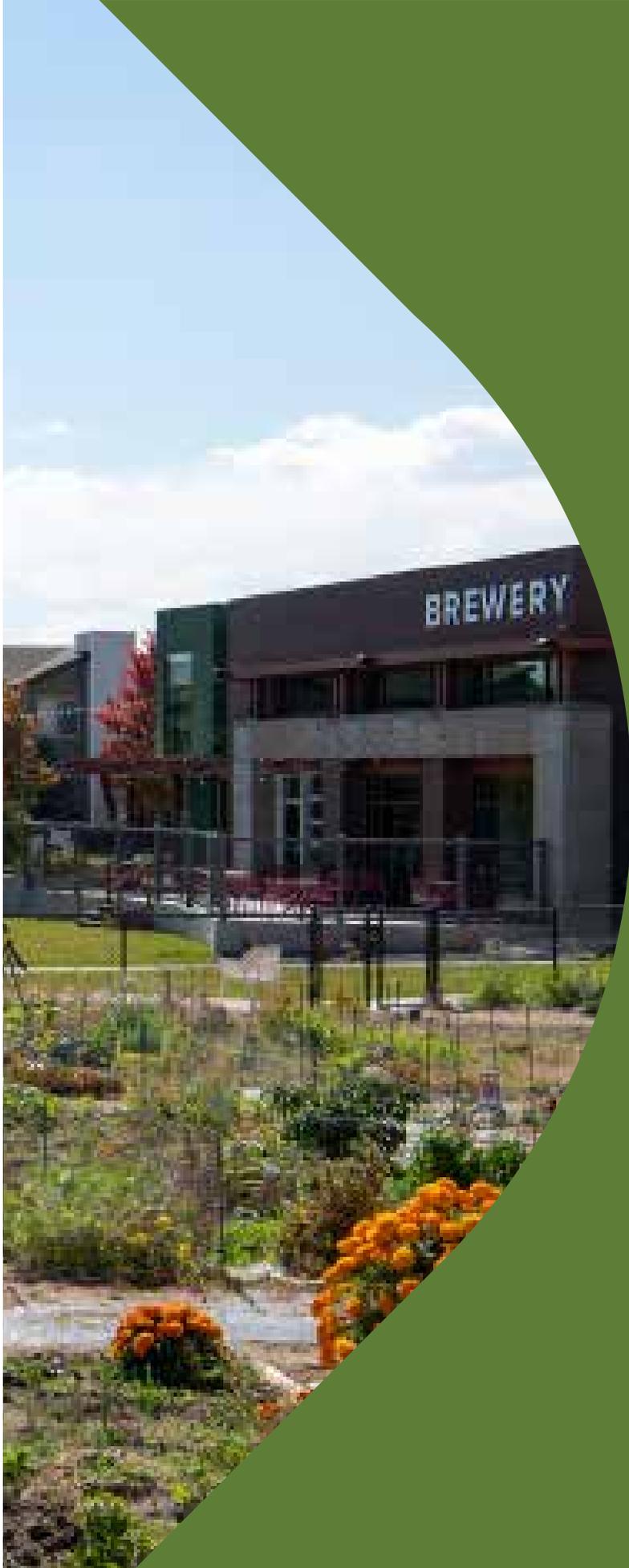
Take our online survey!



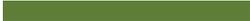
APPENDIX D:

TECHNICAL MEMORANDUM:

SUPPORTING DATA AND ANALYSIS FOR ECONOMIC DEVELOPMENT CHAPTER OF 2022 ADVANCING ADAMS COMPREHENSIVE PLAN



Economic Development



INTRODUCTION

Colorado counties produce comprehensive plans to both coordinate a variety of long-range plans and to implement land use policy. A comprehensive plan articulates the vision and goals necessary to provide for orderly growth and development in both the short and long-run. (See C.R.S. 30-28-106 and 31-23-206.) Plan elements typically address a variety of topics that present ongoing challenges to achieving the vision or represent a desired future state component of the vision.

Adams County's last comprehensive plan update was completed in 2012. Since 2012, the county's population and employment base have grown significantly. The impact of these trends is observable in not only changes to the built environment, but also in the context of broader economic, social and environmental changes within the county. It is this growth and change that necessitates an update to the comprehensive plan.

The purpose of this memorandum is to provide background and supporting information and analysis for the economic development element of the 2022 comprehensive plan update. Through the use and analysis of local employment data this memorandum includes information on the economic profile of the county. Specifically, industry growth and size, industry concentration, wages, and projected job growth. This memorandum does not include any policy recommendations; those are reserved for the comprehensive plan itself, specifically in Chapter 6 on Economic Development. In addition, the level of analysis in this memorandum is intentionally general in nature. Industries and employment are examined at a "super-sector" level. A more detailed analysis, as related to both specific geographies within the county, and for specific industry sectors, is more appropriate as a part of plan implementation and/or as part of an explicit economic development strategy in support of the comprehensive plan goals and objectives.

STUDY AREA AND GEOGRAPHY

The study area for this analysis includes data reflecting Adams County as a whole, both unincorporated and incorporated places. This approach is appropriate for this comprehensive planning effort because:

- The purpose of Chapter 6 is to describe general economic trends, identify potential actions in support of land use objectives, and inform land use definitions articulated in Chapter 2. A forthcoming economic development strategic plan will address county economic conditions and trends at a more detailed industry level, for more specific geographies, and with respect to changes in economic conditions over time.
- Similar to watersheds and transportation systems, economic boundaries do not follow government jurisdictional boundaries. That is, what happens in one jurisdiction in the county impacts activities across municipal boundaries and in the unincorporated portions of the county.
- Economic investments in unincorporated and incorporated areas of the county have fiscal impacts for Adams County government, primarily through property tax revenues.
- As discussed in the next subsection of this memo, "super-sector" data is readily available at the county level, while more detailed data – as defined and reported as a part of the North American Industry Classification System (NAICS) – requires substantially more effort to acquire and analyze and will be used in the economic development strategic plan. In addition, the "super-sector" data provides sufficient explanatory information for a comprehensive planning effort.

DATA SOURCES AND INDUSTRY DEFINITIONS

Two primary sources of data are used for this analysis, the Quarterly Census of Employment and Wages or QCEW, and data from the annual U.S. Census Bureau’s report of Non-Employer Statistics (NES). Both are described in greater detail below.

QUARTERLY CENSUS OF EMPLOYMENT AND WAGES (QCEW)

QCEW data is published by the U.S. Bureau of Labor Statistics (BLS) and provides a quarterly, comprehensive accounting of employment and wages for workers covered by unemployment insurance. The data is then aggregated to various geographic and industry sector levels using the NAICS codes.

For this analysis, data at the Adams County level is used to identify and describe trends at the “super-sector” level. That is, groups of NAICS sectors that represent components of both the goods-producing and service-producing sectors. The relationship between respective super-sectors and NAICS sectors are shown in the table below.

QCEW High-Level Industry Crosswalk

Total	Domain	Super-Sector	NAICS-Sector	
10 Total, All Industries	101 Goods-Producing	1011 Natural Resources and Mining	NAICS 11 Agriculture, Forestry, Fishing, and Hunting NAICS 21 Mining	
		1012 Construction	NAICS 23 Construction	
		1013 Manufacturing	NAICS 31-33 Manufacturing	
	102 Service-Providing	1021 Trade, Transportation, and Utilities		NAICS 42 Wholesale Trade NAICS 44-45 Retail Trade NAICS 48-49 Transportation and Warehousing NAICS 22 Utilities
			1022 Information	NAICS 51 Information
			1023 Financial Activities	NAICS 52 Finance and Insurance NAICS 53 Real Estate and Rental and Leasing
			1024 Professional and Business Services	NAICS 54 Professional, Scientific and Technical Services NAICS 55 Management of Companies and Enterprises NAICS 56 Administrative and Waste Services
				1025 Education and Health Services
		1026 Leisure and Hospitality		NAICS 71 Arts, Entertainment, and recreation NAICS 72 Accommodation and Food Services
		1027 Other Services	NAICS 81 Other Services (Except Public Administration)	
		1028 Public Administration	NAICS 92 Public Administration	
		1029 Unclassified	NAICS 99 Unclassified	

Source: BLS Quarterly Census of Employment and Wages

One of the most significant limitations of QCEW data is that it does not include all jobs – that is, not all businesses have employees – specifically the self-employed are not included in QCEW data. Long-term studies of the relationship between employment covered by unemployment insurance (i.e. QCEW data) and non-employers who are self-employed indicate that employed workers represent approximately 80% to 85% of all jobs. To augment QCEW employment data, information from the annual census of Non-Employer Statistics is used to estimate total jobs.

RELEVANT MEASURES & ANALYTICS

NON-EMPLOYER STATISTICS (NES)

Non-employer statistics (NES) is an annual series of the U.S. Census Bureau that provides data for businesses that have no employees but are subject to federal income taxes. The majority of business establishments nationally are classified as non-employers but represent less than 4% of all sales and receipts. Most of these firms are sole proprietorships with no payroll. The primary data reported in this series includes number of businesses and total receipts by industry.

RELEVANT MEASURES AND ANALYTICS

DISTRIBUTION OF INDUSTRY ACTIVITY BY SECTOR AND INDUSTRY GROWTH

Total covered employment by industry super-sector and year from 2000 to 2020 are shown in Figure D-1, and growth by sector is shown in Figure D-2.

FIGURE D-1.1
Total Covered Employment* by Year and Industry Sector 2000 to 2010
Adams County, Colorado

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 Total, all industries	144,502	146,043	144,052	139,987	141,343	147,682	152,738	154,072	155,118	150,163	147,987
Federal Government	2,851	2,724	2,759	2,635	2,487	2,680	2,616	2,502	1,392	1,696	1,735
State Government	1,772	1,806	1,833	1,794	1,759	1,799	1,727	1,718	2,028	3,299	3,432
Local Government	12,982	13,520	14,559	14,938	15,351	15,787	16,353	16,556	16,818	17,078	16,947
10 Total, all <i>private</i> industries	126,897	127,993	124,902	120,620	121,747	127,417	132,042	133,296	134,881	128,090	125,873
101 Goods-producing	36,212	37,436	35,680	31,948	31,811	33,143	34,251	31,975	30,612	26,968	25,481
1011 Natural resources and mining	1,688	1,660	1,545	1,399	1,218	1,379	1,463	1,230	1,414	1,309	1,164
1012 Construction	17,892	20,159	19,471	17,346	17,249	17,738	18,685	17,232	16,678	14,857	13,578
1013 Manufacturing	16,631	15,617	14,664	13,204	13,344	14,026	14,103	13,514	12,519	10,803	10,739
102 Service-providing	90,685	90,558	89,223	88,672	89,936	94,274	97,791	101,321	104,269	101,122	100,392
1021 Trade, transportation, and utilities	45,174	44,681	43,427	42,226	42,219	44,056	44,564	45,872	46,269	43,699	43,113
1022 Information	2,809	2,530	1,974	1,903	-	1,983	2,059	2,149	2,204	2,199	1,992
1023 Financial activities	5,256	5,643	5,667	6,038	6,038	5,751	5,900	5,918	5,817	5,513	5,269
1024 Professional and business services	13,441	13,135	13,189	13,513	13,876	14,834	16,316	16,439	16,266	15,780	16,106
1025 Education and health services	8,539	9,050	9,337	9,836	10,348	11,051	11,780	13,143	15,291	16,028	16,500
1026 Leisure and hospitality	11,305	11,301	11,410	11,003	11,359	11,943	12,280	12,903	13,537	13,241	12,944
1027 Other services	4,157	4,217	4,218	4,149	4,345	4,652	4,878	4,885	4,870	4,653	4,459
1029 Unclassified	-	2	1	5	-	4	14	12	16	9	10

FIGURE D-1.2
Total Covered Employment* by Year and Industry Sector 2011 to 2020
Adams County, Colorado

Industry	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
10 Total, all industries	154,794	159,143	172,824	182,840	191,869	198,368	204,964	213,341	225,848	220,788
Federal Government	1,529	1,500	1,339	1,345	1,349	1,361	1,111	1,788	3,082	3,204
State Government	7,795	7,876	14,754	15,216	15,717	16,337	17,496	18,136	20,112	20,647
Local Government	16,752	17,098	17,426	17,836	18,215	18,575	18,746	19,335	20,064	19,276
10 Total, all <i>private</i> industries	128,718	132,670	139,305	148,443	156,588	162,096	167,612	174,083	182,589	177,662
101 Goods-producing	26,598	27,671	30,484	34,198	35,563	37,299	37,710	39,214	40,949	39,957
1011 Natural resources and mining	1,318	1,393	1,639	1,831	1,608	1,734	1,929	2,010	2,954	2,262
1012 Construction	13,808	14,492	16,899	19,257	20,199	21,961	22,323	23,446	23,640	23,510
1013 Manufacturing	11,472	11,787	11,946	13,110	13,756	13,604	13,459	13,759	14,355	14,186
102 Service-providing	102,120	104,999	108,821	114,245	121,025	124,797	129,902	134,869	141,640	137,705
1021 Trade, transportation, and utilities	43,704	44,662	46,607	48,691	51,252	52,265	53,816	57,728	60,566	63,979
1022 Information	2,462	2,313	2,457	2,501	2,565	2,703	2,775	2,548	2,564	2,176
1023 Financial activities	5,296	5,474	5,710	5,873	6,273	6,491	6,782	6,953	6,928	6,563
1024 Professional and business services	16,415	17,008	16,745	17,903	19,980	20,921	22,322	22,419	23,720	22,946
1025 Education and health services	16,381	17,237	17,633	18,495	19,111	19,751	20,573	20,863	21,479	19,333
1026 Leisure and hospitality	13,203	13,537	14,692	15,470	16,219	17,025	17,873	18,366	20,190	16,996
1027 Other services	4,657	4,756	4,963	5,290	5,604	5,630	5,748	5,978	6,177	5,697
1029 Unclassified	2	12	15	23	20	12	13	13	16	15

*Covered employment reference the primary data source used in state unemployment insurance programs.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

The largest sectors as measured by 2020 employment are:

- Trade, Transportation, and Utilities – The prevalence of this sector – roughly three times larger than the next largest sector – is attributable to the fact that all of the interstate highways in the state go through Adams County affording exceptional transportation access. In addition, the Denver International Airport (DEN) and several rail lines are also in, or proximate to, Adams County.
- Construction – Firms engaged in construction activity often require extensive outdoor operations. Historically, within the metro region, Adams County has offered a relatively low-cost alternative when compared to sites in other counties in the region. This trend is not expected to continue.
- Professional and Business Services – This sector includes professional, scientific, and technical subsectors, evidenced by firms such as Maxar, while also including administrative and waste services.
- State Government – The prominence of this sector in the county is somewhat unusual and largely attributable to growth at the Anschutz campus, where federal and state employees engaged in health-related activities are concentrated. This growth is reflective of a deliberate strategy to expand Health, Life Sciences and Education activities in Adams County/Aurora. This sector grew from 3,400 employees in 2010 to over 20,000 today.
- Education and Health Services – Employment in this sector also reflects growth at the Anschutz medical campus and University of Colorado Medical Center.

FIGURE D-2

**Percent Change in Covered Employment* by Year and Industry Sector 2010 to 2020
Adams County, Colorado**

Industry	2010	2020	% Change
10 Total, all industries	147,987	220,788	49.2%
Federal Government	1,735	3,204	84.7%
State Government	3,432	20,647	501.6%
Local Government	16,947	19,276	13.7%
10 Total, all <i>private</i> industries	125,873	177,662	41.1%
101 Goods-producing	25,481	39,957	56.8%
1011 Natural resources and mining	1,164	2,262	94.3%
1012 Construction	13,578	23,510	73.1%
1013 Manufacturing	10,739	14,186	32.1%
102 Service-providing	100,392	137,705	37.2%
1021 Trade, transportation, and utilities	43,113	63,979	48.4%
1022 Information	1,992	2,176	9.2%
1023 Financial activities	5,269	6,563	24.6%
1024 Professional and business services	16,106	22,946	42.5%
1025 Education and health services	16,500	19,333	17.2%
1026 Leisure and hospitality	12,944	16,996	31.3%
1027 Other services	4,459	5,697	27.8%
1029 Unclassified	10	15	50.0%

Among all super-sectors, the highest employment growth rates between 2010 and 2020 (Figure D-2) took place in the State Government; Natural Resources and Mining; Federal Government (related to the Veteran's Administration Hospital at the Anschutz complex); Construction; and Trade, Transportation, and Utilities sectors.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

Adams County and State of Colorado employment by sector are compared in Figure D-3. In addition, county employment is expressed as a percent of state employment by sector. As shown, Adams County employment in the Trade, Transportation, and Utilities; and Construction sectors, respectively, represent more than 13% of the state's total employment in those sectors. In addition, over 19% of statewide employment in the State Government sector is present in Adams County/Aurora.

FIGURE D-3
2020 Total Employment by Industry Sector in Number and Percent*
State of Colorado and Adams County, Colorado

Industry	State		County		County as % of State
	Number	Percent	Number	Percent	
10 Total, all industries	2,602,371	100.0%	220,788	100.0%	8.5%
Federal Government	54,667	2.1%	3,204	1.5%	5.9%
State Government	108,333	4.2%	20,647	9.4%	19.1%
Local Government	257,370	9.9%	19,276	8.7%	7.5%
10 Total, all <i>private</i> industries	2,182,001	83.8%	177,662	80.5%	8.1%
101 Goods-producing	362,836	13.9%	39,957	18.1%	11.0%
1011 Natural resources and mining	41,633	1.6%	2,262	1.0%	5.4%
1012 Construction	174,730	6.7%	23,510	10.6%	13.5%
1013 Manufacturing	146,473	5.6%	14,186	6.4%	9.7%
102 Service-providing	1,819,165	69.9%	137,705	62.4%	7.6%
1021 Trade, transportation, and utilities	465,887	17.9%	63,979	29.0%	13.7%
1022 Information	74,867	2.9%	2,176	1.0%	2.9%
1023 Financial activities	165,271	6.4%	6,563	3.0%	4.0%
1024 Professional and business services	430,367	16.5%	22,946	10.4%	5.3%
1025 Education and health services	332,209	12.8%	19,333	8.8%	5.8%
1026 Leisure and hospitality	271,680	10.4%	16,996	7.7%	6.3%
1027 Other services	76,766	2.9%	5,697	2.6%	7.4%
1029 Unclassified	2,118	0.1%	15	0.0%	0.7%

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

The average number of establishments by industry is shown in Figure D-4 from 2000 to 2010. As shown, not only do the Trade, Transportation and Utilities; Construction; and the Professional and Business Service sectors represent the largest employment concentrations within the county, they represent the greatest number of firms as well.

RELEVANT MEASURES & ANALYTICS

When compared to state wage averages, as shown in Figure D-7, Adams County's average wage across all industries is \$60,263, or 90.4 percent of the state average. Adams County does show average wages higher than the state averages in the Construction; Education and Health Services; Federal, State and Local Government sectors.

FIGURE D-4.1
Average Annual Establishment Count* by Year and Industry Sector 2000 to 2010
Adams County, Colorado

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 Total, all industries	7,906	8,347	8,363	8,490	8,637	8,987	9,267	9,356	9,282	9,106	8,973
Federal Government	30	33	31	28	27	27	28	45	42	46	46
State Government	20	20	19	18	19	19	19	22	25	26	28
Local Government	39	41	45	46	46	49	50	50	50	50	52
10 Total, all <i>private</i> industries	7,817	8,253	8,268	8,398	8,545	8,892	9,170	9,240	9,165	8,983	8,846
101 Goods-producing	1,821	1,978	1,996	1,967	1,953	2,018	2,065	2,029	1,944	1,859	1,754
1011 Natural resources and mining	88	88	86	83	77	77	83	81	85	87	83
1012 Construction	1,237	1,378	1,405	1,394	1,384	1,441	1,475	1,451	1,376	1,298	1,225
1013 Manufacturing	497	512	506	491	493	501	507	497	483	474	446
102 Service-providing	5,996	6,275	6,272	6,431	6,592	6,874	7,105	7,211	7,222	7,125	7,093
1021 Trade, transportation, and utilities	2,292	2,360	2,324	2,390	2,399	2,445	2,475	2,495	2,480	2,427	2,412
1022 Information	115	125	118	112	109	118	120	114	107	99	95
1023 Financial activities	767	817	820	867	906	931	977	997	963	920	878
1024 Professional and business services	1,090	1,174	1,160	1,178	1,213	1,327	1,429	1,492	1,530	1,542	1,572
1025 Education and health services	477	484	511	535	565	594	630	656	666	678	698
1026 Leisure and hospitality	591	627	639	648	683	714	720	721	734	746	734
1027 Other services	663	685	696	696	715	743	748	732	729	706	697
1029 Unclassified	-	4	5	6	4	4	7	6	14	8	8

FIGURE D-4.2
Average Annual Establishment Count* by Year and Industry Sector 2011 to 2020
Adams County, Colorado

Industry	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
10 Total, all industries	8,867	8,978	9,054	9,364	10,000	10,394	10,927	11,306	11,630	12,149
Federal Government	47	45	42	40	39	38	38	38	38	36
State Government	28	27	28	28	29	28	28	30	31	31
Local Government	54	55	54	56	56	56	56	57	58	59
10 Total, all <i>private</i> industries	8,738	8,852	8,931	9,240	9,876	10,271	10,805	11,181	11,504	12,023
101 Goods-producing	1,714	1,692	1,674	1,764	1,900	2,039	2,143	2,233	2,287	2,344
1011 Natural resources and mining	78	75	76	89	101	107	108	114	119	120
1012 Construction	1,196	1,174	1,148	1,212	1,320	1,449	1,552	1,633	1,679	1,735
1013 Manufacturing	440	442	450	462	479	482	484	487	490	489
102 Service-providing	7,024	7,160	7,257	7,476	7,976	8,233	8,662	8,948	9,217	9,679
1021 Trade, transportation, and utilities	2,361	2,361	2,408	2,478	2,595	2,664	2,725	2,781	2,856	2,921
1022 Information	94	92	92	92	99	121	131	137	151	163
1023 Financial activities	857	879	890	909	981	1,007	1,027	1,069	1,080	1,144
1024 Professional and business services	1,562	1,625	1,620	1,702	1,873	1,938	2,073	2,178	2,294	2,480
1025 Education and health services	718	746	770	788	818	841	967	990	1,007	1,058
1026 Leisure and hospitality	748	756	760	770	810	829	868	884	926	970
1027 Other services	680	693	708	726	792	827	867	902	896	938
1029 Unclassified	6	9	9	12	8	7	5	8	8	7

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

WAGES

Figures D-5 and D-6 provide current and constant dollar estimates of the average annual wages by industry sector for Adams County from 2000 to 2020. The constant 2020-dollar estimates shown in Figure D-6 reflect annual wages adjusted for inflation and, therefore, provide the most accurate picture of wage structure within the county. The highest wage sector is Information Technologies with wages in excess of \$115,000 annually. The concentration of employment in Federal and State Government Healthcare at the Anschutz campus reflects high wages as well, each more than \$97,000 annually.

FIGURE D-5.1
Annual Average Pay in Current Dollars by Year and Industry Sector 2000 to 2010*
Adams County, Colorado

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 Total, all industries	\$33,500	\$34,753	\$35,023	\$35,839	\$37,674	\$38,379	\$39,274	\$40,393	\$41,748	\$41,572	\$42,175
Federal Government	\$47,467	\$49,687	\$51,136	\$53,938	\$59,143	\$59,973	\$59,226	\$62,861	\$68,325	\$65,977	\$66,135
State Government	\$32,343	\$33,432	\$34,400	\$34,966	\$35,483	\$35,651	\$37,224	\$37,881	\$40,259	\$34,929	\$36,107
Local Government	\$29,174	\$31,458	\$32,452	\$33,881	\$35,121	\$35,854	\$36,697	\$38,465	\$40,560	\$41,827	\$42,351
10 Total, all <i>private</i> industries	\$33,645	\$34,802	\$34,976	\$35,699	\$37,589	\$38,276	\$39,224	\$40,244	\$41,644	\$41,386	\$41,986
101 Goods-producing	\$40,482	\$42,361	\$41,747	\$42,583	\$44,787	\$44,733	\$45,700	\$48,802	\$49,470	\$49,398	\$50,794
1011 Natural resources and mining	\$30,292	\$30,786	\$30,451	\$31,602	\$33,443	\$30,990	\$33,044	\$36,884	\$38,710	\$38,537	\$38,888
1012 Construction	\$37,770	\$40,011	\$39,829	\$38,907	\$40,671	\$41,676	\$42,372	\$45,022	\$45,719	\$45,795	\$46,543
1013 Manufacturing	\$44,433	\$46,626	\$45,484	\$48,576	\$51,144	\$49,949	\$51,422	\$54,706	\$55,682	\$55,668	\$57,459
102 Service-providing	\$30,915	\$31,677	\$32,269	\$33,219	\$35,043	\$36,006	\$36,956	\$37,543	\$39,346	\$39,249	\$39,750
1021 Trade, transportation, and utilities	\$33,888	\$35,241	\$35,861	\$36,547	\$38,629	\$39,927	\$40,826	\$41,593	\$42,373	\$41,712	\$41,818
1022 Information	\$73,545	\$52,774	\$55,281	\$50,830	\$-	\$62,890	\$63,140	\$64,728	\$67,887	\$63,597	\$67,191
1023 Financial activities	\$30,581	\$33,208	\$34,580	\$36,800	\$36,425	\$35,189	\$36,535	\$38,245	\$39,725	\$37,836	\$38,484
1024 Professional and business services	\$30,079	\$32,082	\$32,408	\$34,917	\$38,982	\$40,215	\$40,971	\$39,912	\$42,767	\$43,898	\$44,810
1025 Education and health services	\$30,160	\$32,407	\$34,432	\$35,215	\$36,498	\$36,239	\$37,774	\$39,348	\$44,993	\$45,961	\$46,420
1026 Leisure and hospitality	\$12,027	\$12,536	\$12,906	\$13,310	\$13,683	\$14,084	\$14,377	\$14,993	\$15,528	\$15,766	\$16,059
1027 Other services	\$25,841	\$27,683	\$28,554	\$28,599	\$30,015	\$30,753	\$32,530	\$33,444	\$34,266	\$34,250	\$34,846
1029 Unclassified	\$-	\$16,127	\$151,029	\$28,562	\$-	\$21,523	\$25,448	\$32,629	\$37,850	\$30,651	\$24,374

FIGURE D-5.2
Annual Average Pay in Current Dollars by Year and Industry Sector 2011 to 2020*
Adams County, Colorado

Industry	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
10 Total, all industries	\$43,464	\$44,304	\$47,144	\$48,667	\$50,106	\$51,197	\$53,163	\$54,751	\$56,639	\$60,263
Federal Government	\$71,292	\$75,042	\$71,208	\$75,057	\$76,948	\$77,728	\$88,269	\$99,217	\$94,654	\$98,152
State Government	\$50,421	\$51,636	\$73,909	\$77,598	\$81,697	\$86,752	\$89,078	\$91,884	\$94,662	\$97,034
Local Government	\$42,417	\$42,320	\$42,926	\$43,739	\$44,984	\$45,830	\$47,176	\$48,615	\$50,650	\$57,214
10 Total, all <i>private</i> industries	\$42,848	\$43,778	\$44,606	\$46,055	\$47,300	\$48,006	\$49,851	\$51,107	\$52,467	\$55,638
101 Goods-producing	\$51,718	\$52,303	\$53,648	\$55,242	\$56,936	\$57,720	\$59,142	\$61,671	\$64,118	\$66,241
1011 Natural resources and mining	\$37,869	\$35,070	\$47,339	\$50,753	\$48,436	\$47,238	\$48,761	\$50,919	\$66,204	\$61,002
1012 Construction	\$47,806	\$48,758	\$50,455	\$53,962	\$55,786	\$58,513	\$61,029	\$63,901	\$66,400	\$69,064
1013 Manufacturing	\$58,019	\$58,698	\$59,031	\$57,749	\$59,618	\$57,776	\$57,499	\$59,442	\$59,930	\$62,397
102 Service-providing	\$40,538	\$41,531	\$42,072	\$43,304	\$44,468	\$45,103	\$47,154	\$48,036	\$49,098	\$52,561
1021 Trade, transportation, and utilities	\$42,857	\$44,067	\$44,643	\$46,571	\$47,725	\$47,758	\$49,256	\$50,059	\$50,719	\$52,043
1022 Information	\$62,928	\$70,564	\$74,532	\$72,193	\$73,133	\$75,726	\$80,847	\$78,635	\$89,202	\$115,169
1023 Financial activities	\$40,193	\$42,149	\$42,872	\$45,497	\$48,483	\$49,837	\$50,873	\$53,652	\$57,173	\$66,686
1024 Professional and business services	\$44,546	\$45,214	\$46,608	\$48,471	\$49,699	\$51,394	\$56,727	\$56,726	\$57,140	\$63,453
1025 Education and health services	\$47,770	\$47,602	\$48,178	\$47,995	\$48,556	\$49,283	\$50,170	\$51,614	\$53,122	\$56,179
1026 Leisure and hospitality	\$16,533	\$17,111	\$17,031	\$17,457	\$18,282	\$19,081	\$20,250	\$21,690	\$24,043	\$24,269
1027 Other services	\$35,810	\$37,131	\$38,083	\$38,878	\$40,302	\$40,978	\$42,538	\$44,770	\$44,525	\$46,485
1029 Unclassified	\$61,075	\$74,846	\$39,194	\$37,125	\$36,474	\$33,362	\$33,696	\$51,265	\$50,745	\$42,818

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

FIGURE D-6.1
Annual Average Pay in Constant 2020 Dollars (1) by Year and Industry Sector 2000 to 2010*
Adams County, Colorado

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 Total, all industries	\$50,495	\$50,934	\$50,533	\$50,562	\$51,753	\$50,994	\$50,544	\$50,551	\$50,314	\$50,277	\$50,178
Federal Government	\$71,548	\$72,821	\$73,781	\$76,096	\$81,244	\$79,685	\$76,222	\$78,669	\$82,344	\$79,792	\$78,685
State Government	\$48,751	\$48,998	\$49,634	\$49,330	\$48,743	\$47,369	\$47,906	\$47,407	\$48,520	\$42,243	\$42,959
Local Government	\$43,974	\$46,105	\$46,823	\$47,800	\$48,245	\$47,639	\$47,228	\$48,138	\$48,882	\$50,585	\$50,388
10 Total, all <i>private</i> industries	\$50,714	\$51,005	\$50,465	\$50,364	\$51,636	\$50,857	\$50,480	\$50,364	\$50,189	\$50,052	\$49,953
101 Goods-producing	\$61,019	\$62,084	\$60,235	\$60,076	\$61,524	\$59,436	\$58,814	\$61,075	\$59,620	\$59,741	\$60,433
1011 Natural resources and mining	\$45,660	\$45,120	\$43,936	\$44,584	\$45,940	\$41,176	\$42,527	\$46,159	\$46,653	\$46,606	\$46,267
1012 Construction	\$56,931	\$58,640	\$57,467	\$54,890	\$55,869	\$55,374	\$54,531	\$56,344	\$55,100	\$55,384	\$55,375
1013 Manufacturing	\$66,975	\$68,335	\$65,626	\$68,531	\$70,256	\$66,367	\$66,178	\$68,463	\$67,107	\$67,324	\$68,363
102 Service-providing	\$46,599	\$46,425	\$46,559	\$46,866	\$48,138	\$47,841	\$47,561	\$46,984	\$47,419	\$47,467	\$47,293
1021 Trade, transportation, and utilities	\$51,080	\$51,649	\$51,742	\$51,561	\$53,064	\$53,050	\$52,542	\$52,053	\$51,067	\$50,446	\$49,754
1022 Information	\$110,855	\$77,345	\$79,762	\$71,711	\$-	\$83,561	\$81,259	\$81,006	\$81,816	\$76,914	\$79,941
1023 Financial activities	\$46,095	\$48,669	\$49,894	\$51,918	\$50,037	\$46,755	\$47,019	\$47,863	\$47,876	\$45,759	\$45,787
1024 Professional and business services	\$45,339	\$47,019	\$46,760	\$49,261	\$53,549	\$53,433	\$52,728	\$49,949	\$51,542	\$53,090	\$53,313
1025 Education and health services	\$45,461	\$47,495	\$49,680	\$49,682	\$50,137	\$48,150	\$48,614	\$49,243	\$54,225	\$55,585	\$55,229
1026 Leisure and hospitality	\$18,128	\$18,373	\$18,621	\$18,778	\$18,796	\$18,713	\$18,503	\$18,763	\$18,714	\$19,067	\$19,106
1027 Other services	\$38,951	\$40,572	\$41,199	\$40,348	\$41,231	\$40,861	\$41,865	\$41,854	\$41,297	\$41,422	\$41,458
1029 Unclassified	\$-	\$23,636	\$217,912	\$40,295	\$-	\$28,597	\$32,751	\$40,834	\$45,616	\$37,069	\$28,999

FIGURE D-6.2
Annual Average Pay in Constant 2020 Dollars (1) by Year and Industry Sector 2011 to 2020*
Adams County, Colorado

Industry	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
10 Total, all industries	\$50,178	\$50,132	\$50,041	\$52,471	\$53,264	\$54,745	\$55,224	\$56,138	\$56,439	\$57,346	\$60,263
Federal Government	\$78,685	\$82,228	\$84,759	\$79,254	\$82,147	\$84,072	\$83,842	\$93,208	\$102,276	\$95,836	\$98,152
State Government	\$42,959	\$58,156	\$58,322	\$82,260	\$84,928	\$89,260	\$93,576	\$94,062	\$94,717	\$95,844	\$97,034
Local Government	\$50,388	\$48,924	\$47,800	\$47,776	\$47,871	\$49,148	\$49,435	\$49,816	\$50,114	\$51,282	\$57,214
10 Total, all <i>private</i> industries	\$49,953	\$49,421	\$49,446	\$49,646	\$50,405	\$51,679	\$51,782	\$52,640	\$52,682	\$53,122	\$55,638
101 Goods-producing	\$60,433	\$59,652	\$59,075	\$59,710	\$60,460	\$62,207	\$62,261	\$62,451	\$63,572	\$64,918	\$66,241
1011 Natural resources and mining	\$46,267	\$43,678	\$39,611	\$52,688	\$55,547	\$52,920	\$50,954	\$51,489	\$52,489	\$67,030	\$61,002
1012 Construction	\$55,375	\$55,140	\$55,071	\$56,156	\$59,059	\$60,950	\$63,116	\$64,444	\$65,871	\$67,229	\$69,064
1013 Manufacturing	\$68,363	\$66,919	\$66,298	\$65,701	\$63,204	\$65,137	\$62,321	\$60,716	\$61,274	\$60,678	\$62,397
102 Service-providing	\$47,293	\$46,757	\$46,908	\$46,826	\$47,394	\$48,585	\$48,651	\$49,793	\$49,517	\$49,711	\$52,561
1021 Trade, transportation, and utilities	\$49,754	\$49,431	\$49,773	\$49,687	\$50,970	\$52,143	\$51,515	\$52,012	\$51,602	\$51,352	\$52,043
1022 Information	\$79,941	\$72,581	\$79,701	\$82,954	\$79,012	\$79,903	\$81,683	\$85,371	\$81,059	\$90,316	\$115,169
1023 Financial activities	\$45,787	\$46,359	\$47,607	\$47,716	\$49,795	\$52,971	\$53,757	\$53,720	\$55,306	\$57,887	\$66,686
1024 Professional and business services	\$53,313	\$51,380	\$51,068	\$51,874	\$53,050	\$54,300	\$55,437	\$59,901	\$58,475	\$57,853	\$63,453
1025 Education and health services	\$55,229	\$55,098	\$53,766	\$53,622	\$52,529	\$53,051	\$53,160	\$52,977	\$53,205	\$53,785	\$56,179
1026 Leisure and hospitality	\$19,106	\$19,069	\$19,327	\$18,955	\$19,106	\$19,974	\$20,582	\$21,383	\$22,359	\$24,343	\$24,269
1027 Other services	\$41,458	\$41,303	\$41,939	\$42,386	\$42,550	\$44,033	\$44,202	\$44,918	\$46,150	\$45,081	\$46,485
1029 Unclassified	\$28,999	\$70,444	\$84,537	\$43,623	\$40,632	\$39,851	\$35,986	\$35,581	\$52,845	\$51,378	\$42,818

*Based on covered employment.

(1) December 1977 = 100. Adjusted for inflation using the Bureau of Labor Statistics Consumer Price Index Research Series (CPI-U-RS).

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

When compared to state wage averages, as shown in Figure D-7, Adams County's average wage across all industries is \$60,263, or 90.4 percent of the state average. Adams County does show average wages higher than the state averages in the Construction; Education and Health Services; Federal, State and Local Government sectors.

Figure D-8 compares Adams County average annual wage across all industries with the average annual wage for other counties in the metro region. As shown, Adams County has the lowest average annual wage among all metro counties but has shown the most rapid growth in employment from 2010 to 2020 at just over 49 percent.

FIGURE D-7
2020 Annual Average Pay by Industry Sector*
State of Colorado and Adams County, Colorado

Industry	State	County	County as % of State
10 Total, all industries	\$ 66,649	\$ 60,263	90.4%
Federal Government	\$ 87,291	\$ 98,152	112.4%
State Government	\$ 69,688	\$ 97,034	139.2%
Local Government	\$ 54,355	\$ 57,214	105.3%
10 Total, all <i>private</i> industries	\$ 67,431	\$ 55,638	82.5%
101 Goods-producing	\$ 74,557	\$ 66,241	88.8%
1011 Natural resources and mining	\$ 91,879	\$ 61,002	66.4%
1012 Construction	\$ 68,209	\$ 69,064	101.3%
1013 Manufacturing	\$ 77,207	\$ 62,397	80.8%
102 Service-providing	\$ 66,010	\$ 52,561	79.6%
1021 Trade, transportation, and utilities	\$ 55,719	\$ 52,043	93.4%
1022 Information	\$ 123,495	\$ 115,169	93.3%
1023 Financial activities	\$ 97,276	\$ 66,686	68.6%
1024 Professional and business services	\$ 90,744	\$ 63,453	69.9%
1025 Education and health services	\$ 55,198	\$ 56,179	101.8%
1026 Leisure and hospitality	\$ 28,424	\$ 24,269	85.4%
1027 Other services	\$ 45,642	\$ 46,485	101.8%
1029 Unclassified	\$ 87,352	\$ 42,818	49.0%

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

FIGURE D-8
Covered Employment Growth (2010 to 2020) and 2020 Annual Average Pay by County within the Denver-Boulder Metropolitan Area

County	2010	2020	% Change	Annual Average Pay
Adams	147,987	220,788	49.2%	\$ 60,263
Arapahoe	270,339	319,739	18.3%	\$ 74,850
Boulder	152,118	179,056	17.7%	\$ 78,383
Broomfield	29,919	38,820	29.8%	\$ 99,066
Denver	420,505	491,687	16.9%	\$ 81,974
Douglas	89,826	127,016	41.4%	\$ 71,092
Jefferson	202,557	232,079	14.6%	\$ 66,597
Total	1,313,251	1,609,185	22.5%	\$ 74,516

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

As shown in Figure D-9, after adjusting for inflation, Adams County and statewide average annual wages were flat during the period 2000 to 2010, even mildly negative when viewed in five-year increments. However, for the period 2010 to 2020, wages have increased by roughly two percent per year, after inflation, in Adams County.

FIGURE D-9
Annual Growth in Average Pay in Constant 2020 Dollars 2000 to 2020*
State of Colorado and Adams County, Colorado

<u>Year</u>	<u>State</u>	<u>AGR</u>	<u>County</u>	<u>AGR</u>
2000	\$ 56,084	-	\$ 50,495	-
2005	\$ 55,275	-0.29%	\$ 50,994	0.20%
2010	\$ 56,952	0.60%	\$ 50,178	-0.32%
2015	\$ 59,198	0.78%	\$ 54,745	1.76%
2020	\$ 66,646	2.40%	\$ 60,263	1.94%

***Based on covered employment.**

Source: Colorado Department of Labor, Colorado Demographer's Office, Adams County Community and Economic Development Department, January 2022.

INDUSTRY CONCENTRATION AND GROWTH

A common way to measure the relative importance of an industry to a local economy is through the calculation of a "location quotient" or LQ. The LQ measures the degree to which an individual industry is concentrated in a particular place, in this case, Adams County. It is expressed as a ratio of local employment to national employment. An LQ above 1.0 means that industry is more concentrated locally than in the nation as a whole and is, therefore, a net exporter of goods or services. Identification of these export industries provides information on the local economic assets upon which economic growth strategies can be built. Figure D-10 provides location quotients by Adams County industries from 2000 to 2020. As of 2020, Adams County's net export industries included State Government in the form of healthcare services connected to the Anschutz campus; Construction; and Trade, Transportation, and Utilities. These industries are more heavily represented in Adams County than when the state is compared to the United States as a whole Figure D-11.

RELEVANT MEASURES & ANALYTICS

FIGURE D-10.1
Employment Location Quotient Relative to the United States by Year and Industry Sector 2000 to 2010*
Adams County, Colorado

Industry	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
10 Total, all industries	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Federal Government	0.89	0.88	0.89	0.87	0.83	0.87	0.84	0.81	0.44	0.51	0.50
State Government	0.36	0.36	0.36	0.37	0.36	0.35	0.33	0.33	0.38	0.61	0.64
Local Government	0.92	0.91	0.97	1.01	1.04	1.03	1.04	1.04	1.03	1.03	1.04
10 Total, all <i>private</i> industries	1.04	1.04	1.03	1.03	1.03	1.03	1.03	1.03	1.04	1.03	1.02
101 Goods-producing	1.27	1.34	1.35	1.28	1.27	1.27	1.28	1.21	1.19	1.18	1.17
1011 Natural resources and mining	0.89	0.86	0.83	0.77	0.67	0.71	0.72	0.59	0.65	0.63	0.56
1012 Construction	2.42	2.64	2.59	2.37	2.28	2.17	2.15	2.00	2.03	2.14	2.14
1013 Manufacturing	0.86	0.85	0.86	0.83	0.86	0.88	0.88	0.86	0.81	0.78	0.81
102 Service-providing	0.97	0.95	0.95	0.96	0.96	0.96	0.96	0.98	1.00	0.99	0.99
1021 Trade, transportation, and utilities	1.57	1.55	1.53	1.54	1.53	1.53	1.50	1.53	1.54	1.52	1.52
1022 Information	0.70	0.63	0.52	0.55	0.00	0.58	0.59	0.62	0.64	0.67	0.64
1023 Financial activities	0.62	0.65	0.65	0.70	0.70	0.64	0.63	0.64	0.63	0.62	0.61
1024 Professional and business services	0.73	0.71	0.74	0.78	0.78	0.78	0.82	0.81	0.80	0.82	0.83
1025 Education and health services	0.53	0.54	0.54	0.57	0.59	0.60	0.61	0.66	0.74	0.75	0.76
1026 Leisure and hospitality	0.86	0.84	0.85	0.83	0.83	0.84	0.83	0.85	0.88	0.87	0.86
1027 Other services	0.90	0.89	0.88	0.89	0.93	0.96	0.98	0.97	0.94	0.91	0.89
1029 Unclassified	0.00	0.01	0.00	0.02	0.00	0.01	0.05	0.05	0.07	0.04	0.06

FIGURE D-10.2
Employment Location Quotient Relative to the United States by Year and Industry Sector 2011 to 2020*
Adams County, Colorado

Industry	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
10 Total, all industries	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Federal Government	0.45	0.44	0.37	0.37	0.36	0.35	0.28	0.44	0.72	0.69
State Government	1.43	1.44	2.53	2.50	2.50	2.56	2.65	2.69	2.83	2.83
Local Government	1.01	1.03	0.98	0.97	0.96	0.95	0.94	0.94	0.92	0.89
10 Total, all <i>private</i> industries	0.99	0.99	0.96	0.96	0.96	0.96	0.96	0.96	0.95	0.95
101 Goods-producing	1.17	1.18	1.19	1.26	1.25	1.28	1.25	1.23	1.21	1.19
1011 Natural resources and mining	0.58	0.58	0.63	0.66	0.58	0.66	0.72	0.71	1.00	0.80
1012 Construction	2.11	2.15	2.25	2.36	2.29	2.35	2.26	2.22	2.08	2.06
1013 Manufacturing	0.82	0.82	0.77	0.81	0.81	0.79	0.76	0.75	0.74	0.74
102 Service-providing	0.96	0.95	0.91	0.90	0.90	0.90	0.90	0.90	0.89	0.90
1021 Trade, transportation, and utilities	1.47	1.46	1.41	1.39	1.40	1.38	1.39	1.44	1.44	1.52
1022 Information	0.77	0.71	0.70	0.68	0.68	0.69	0.70	0.62	0.59	0.51
1023 Financial activities	0.60	0.60	0.58	0.57	0.58	0.58	0.59	0.58	0.55	0.50
1024 Professional and business services	0.79	0.79	0.70	0.70	0.74	0.75	0.77	0.74	0.73	0.71
1025 Education and health services	0.72	0.74	0.68	0.67	0.66	0.65	0.65	0.63	0.61	0.55
1026 Leisure and hospitality	0.83	0.82	0.80	0.79	0.78	0.78	0.79	0.78	0.80	0.84
1027 Other services	0.88	0.87	0.93	0.93	0.95	0.92	0.91	0.91	0.89	0.91
1029 Unclassified	0.01	0.06	0.07	0.08	0.06	0.03	0.04	0.07	0.08	0.07

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

By examining industry concentration as represented through the location quotient with industry employment growth rates, it is easier to see those industries that represent the greatest significance to Adams County's economic base.

That is, those that are highly concentrated and rapidly growing. These are shown in Figure D-12. As shown, the following industries have doubled, or more than doubled in size, since 2010:

- Trade, Transportation and Utilities
- Construction
- Federal Government
- Natural Resources and mining
- State Government

In addition, Trade, Construction and State Government sectors are all highly concentrated.

FIGURE D-11
2020 Employment Location Quotient Relative to the United States by Year and Industry Sector*
State of Colorado and Adams County, Colorado

Industry	State	County
10 Total, all industries	1.00	1.00
Federal Government	1.00	0.69
State Government	1.26	2.83
Local Government	1.01	0.89
10 Total, all <i>private</i> industries	0.99	0.95
101 Goods-producing	0.92	1.19
1011 Natural resources and mining	1.25	0.80
1012 Construction	1.30	2.06
1013 Manufacturing	0.65	0.74
102 Service-providing	1.00	0.90
1021 Trade, transportation, and utilities	0.94	1.52
1022 Information	1.48	0.51
1023 Financial activities	1.08	0.50
1024 Professional and business services	1.13	0.71
1025 Education and health services	0.80	0.55
1026 Leisure and hospitality	1.13	0.84
1027 Other services	1.04	0.91
1029 Unclassified	0.82	0.07

*Based on covered employment.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

FIGURE D-12

Percent Change in Covered Employment by Year and Selected Industry Sectors 2010 to 2020; and 2020 Location Quotient (LQ) by Industry (Sorted by Percent Change in Employment)

Adams County, Colorado

Industry	2010	2020	% Change	LQ
Information	1,992	2,176	9.2%	0.51
Local Government	16,947	19,276	13.7%	0.89
Education and health services	16,500	19,333	17.2%	0.55
Financial activities	5,269	6,563	24.6%	0.50
Other services	4,459	5,697	27.8%	0.91
Leisure and hospitality	12,944	16,996	31.3%	0.84
Manufacturing	10,739	14,186	32.1%	0.74
Professional and business services	16,106	22,946	42.5%	0.71
Trade, transportation, and utilities	43,113	63,979	48.4%	1.52
Construction	13,578	23,510	73.1%	2.06
Federal Government	1,735	3,204	84.7%	0.69
Natural resources and mining	1,164	2,262	94.3%	0.80
State Government	3,432	20,647	501.6%	2.83

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

PROJECTED EMPLOYMENT AND JOB GROWTH

This subsection provides data leading up to projected county-wide “covered employment” and “job” growth through 2050. As previously mentioned, “covered employment” represents approximately 80 percent to 85 percent of all “jobs.” Whereas covered employment measures employees of firms that report and pay quarterly employment taxes, “jobs” are a broader measure that includes the self-employed. While covered employment is readily available at the firm level, job estimates are only available at county geographies and higher. In addition, DRCOG only provides estimates of Total Jobs for the region and its constituent counties.

Figure D-13 compares covered employment to total jobs for Adams County from 2000 to 2020. Over this 20-year period, covered employment has represented 80.8 percent of all jobs.

FIGURE D-13
Covered Employment as a Percent of Total Jobs 2000 to 2020
Adams County, Colorado

<u>Year</u>	<u>Covered Employment</u>	<u>Total Jobs</u>	<u>Covered as % of Total</u>
2000	144,502	169,860	85.1%
2001	146,043	172,881	84.5%
2002	144,052	172,292	83.6%
2003	139,987	170,103	82.3%
2004	141,343	172,336	82.0%
2005	147,682	178,941	82.5%
2006	152,738	185,767	82.2%
2007	154,072	188,791	81.6%
2008	155,118	202,312	76.7%
2009	150,163	197,807	75.9%
2010	147,987	196,437	75.3%
2011	154,794	199,838	77.5%
2012	159,143	205,112	77.6%
2013	172,824	213,687	80.9%
2014	182,840	225,249	81.2%
2015	191,869	236,314	81.2%
2016	198,368	244,033	81.3%
2017	204,964	252,815	81.1%
2018	213,341	263,275	81.0%
2019	225,848	277,734	81.3%
2020	220,788	272,517	81.0%

80.8% 20-year avg.

Source: Colorado Department of Labor, Colorado Demographer's Office, Adams County Community and Economic Development Department, January 2022.

Figure D-14 provides DRCOG’s estimates of total jobs for the region and Adams County through 2050. By applying the 20-year average ratio of 80.8 percent to the total jobs projection, we can calculate an estimate of covered employment for the county through 2050 (Figure D-15).

FIGURE D-14
Projected Total Jobs for Adams County and the Denver-Boulder Metropolitan Area*
2025 to 2050

<u>Year</u>	<u>County</u>	<u>Region</u>
2025	307,825	2,271,673
2030	323,004	2,383,693
2035	338,199	2,495,827
2040	348,376	2,586,646
2045	359,873	2,655,774
2050	368,520	2,719,586

*Defined as the 7-county region - Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson Counties.

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), U.S. Bureau of Census Non-Employer Statistics, Denver Regional Council of Government (DRCOG), Adams County Community and Economic Development Department, January 2022.

FIGURE D-15
Projected Covered Employment and Total Jobs 2025 to 2050
Adams County, Colorado

<u>Year</u>	<u>Covered Employment</u>	<u>Total Jobs</u>
2025	248,722	307,825
2030	260,987	323,004
2035	273,264	338,199
2040	281,487	348,376
2045	290,777	359,873
2050	297,764	368,520

Source: Colorado Department of Labor, Colorado Demographer's Office, U.S. Bureau of Labor Statistics Quarterly Census of Employment and Wages (QCEW), U.S. Bureau of Census Non-Employer Statistics, Denver Regional Council of Government (DRCOG), Adams County Community and Economic Development Department, January 2022.

RELEVANT MEASURES & ANALYTICS

Finally, the average annual growth rate for jobs in Adams County is shown in Figure D-16 through 2050. In general, projected job growth exceeds one percent annually through 2025 then drops below one percent annually through 2050.

FIGURE D-16
Historic and Projected Total Jobs and Annual Growth Rate (AGR) in 5-year Increments 2000 to 2050
State of Colorado and Adams County, Colorado

<u>Year</u>	<u>State</u>	<u>AGR</u>	<u>County</u>	<u>AGR</u>
2000	2,684,444	-	169,860	-
2005	2,768,385	0.62%	178,941	1.05%
2010	2,783,900	0.11%	196,437	1.88%
2015	3,161,300	2.58%	236,314	3.77%
2020	3,301,600	0.87%	272,517	2.89%
2025	3,713,419	2.38%	307,825	2.47%
2030	3,910,222	1.04%	323,004	0.97%
2035	4,100,649	0.96%	338,199	0.92%
2040	4,258,417	0.76%	350,506	0.72%
2045	4,383,881	0.58%	359,873	0.53%
2050	4,499,757	0.52%	368,520	0.48%

Source: Colorado Department of Labor, Colorado Demographer's Office, Adams County Community and Economic Development Department, January 2022.



ADVANCING ADAMS
 PLANNING FOR A SHARED FUTURE



Exhibit 4 – Referral Agency Comments

- 4.1 Adams County Regional Economic Partners (ACREAP)
- 4.2 Arapahoe County
- 4.3 Brighton
- 4.4 City of Arvada
- 4.5 City of Commerce City
- 4.6 CORE Electric Co-op
- 4.7 Denver International Airport (DEN)
- 4.8 Denver Water
- 4.9 Department of Water Resources
- 4.10 I-70 Regional Economic Advancement Partnership
- 4.11 Regional Transportation District
- 4.12 South Adams County Water & Sanitation District
- 4.13 City of Thornton
- 4.14 Todd Creek Village
- 4.15 Town of Bennett
- 4.16 Tri-County Health Department
- 4.17 City of Westminster
- 4.18 Xcel Energy

Referral Agency Response	Comments	Staff Recommendation
4.1 Adams County Regional Economic Partners (ACREAP)	Text recommendations	Staff modified parts of Chapter 6 to clarify based on recommendations
4.2 Arapahoe County	General comments in support	Staff made formatting adjustments based on feedback
4.3 Brighton	See map comments	See staff recommendation in map comments
4.4 City of Arvada	No comment	N/A
4.5 City of Commerce City	No comment	N/A
4.6 CORE Electric Co-op	No comment	N/A
4.7 Denver International Airport (DEN)	Map comments	Additional symbology was added for parcels formerly in the <i>Airport Reserve</i> 2012 Imagine Adams Category and others around the airport noting that FAA sensitive uses are not supported. Additional language was added to the Public category to differentiate from Institutional category.
4.8 Denver Water	No comment	N/A
4.9 Department of Water Resources	No comment	N/A
4.10 I-70 Regional Economic Advancement Partnership	General comments in support	N/A
4.11 Regional Transportation District	No comment	N/A
4.12 South Adams County Water & Sanitation District	No comment	N/A
4.13 City of Thornton	General comments in support	N/A
4.14 Todd Creek Village	General comments in support	N/A
4.15 Town of Bennett	Map comments	Subject properties were annexed between Public Comment version and Public Hearing version and have been removed from consideration.
4.16 Tri-County Health Department	General comments in support	N/A
4.17 City of Westminster	Map comments, text recommendations	See map recommendation responses. Staff does not recommend adding a residential density cap to the Mixed Use category. The Mixed Use category is intended to apply to both individual lots or creating a mixed use corridor or district. An individual property may rezone to the MU zone district which has associated densities to accommodate a vertical mixed use building. However, a mixed-use corridor or district may be a mix of single uses spread horizontally to achieve the mixed-use character. In this instance, a set density in the Future Land Use category of Mixed Use would be difficult to administer and may actually undermine the intent of the Mixed Use

		<p>category. Staff respectfully does not agree with this edit and would instead defer to the zoning regulations to establish proposed densities.</p> <p>Staff reviewed language in the plan and felt it was sufficient and finds the county Hazard Mitigation Plan is more appropriate for addressing specific hazards like wildfire. The county will also seek to address wildfire hazards in the Development Standards and Regulations during the Development Standards Overhaul planned after adoption of the Advancing Adams Comp Plan.</p>
4.18 Xcel Energy	No objection	N/A
County Department Comments	Map comments	Noted in 6.4 Map Change Log

Jen Rutter

From: Advancing Adams
Sent: Thursday, July 7, 2022 8:42 AM
To: Jen Rutter; Chase Evans; Karl Onsager; Libby Tart
Cc: Jenni R. Hall
Subject: FW: Comments on 2022 Advancing Adams Comprehensive Plan

FYI all...

From: Lisa Hough <lisa.hough@adamscountyrep.com>
Sent: Wednesday, July 6, 2022 5:49 PM
To: Advancing Adams <AdvancingAdams@adcogov.org>; Jenni R. Hall <JRHall@adcogov.org>
Subject: Comments on 2022 Advancing Adams Comprehensive Plan

Please be cautious: This email was sent from outside Adams County

Good afternoon – I just realized that my laptop had several emails pending in my draft folder. I apologize for this late submission of comments on the Advancing Adams Comprehensive Plan. I look forward to the final document but thought you might want to make a few clarifying comments in Chapter 6 – Economic Development.

Chapter 6 – Economic Development

Page 56 – Overview

AC-REP would suggest adding partnerships with regional economic development organizations to the first sentence in paragraph three.

We would also suggest specifically adding that Adams County Regional Economic Partnership or AC-REP manages the Enterprise Zones in Adams County, another resource to encourage beneficial development in underserved areas of the County.

We would also note that regional and city-specific non-profit economic development organizations continue to play a vital role in economic development. Regionally you can look to organizations like Metro Denver EDC, Aurora EDC, Upstate Colorado, Jefferson County EDC, Boulder Economic Council, and Denver South that continue to lead business attraction and serve as business champions in their respective regions, just like AC-REP serves the Greater Adams County area. Perhaps you could include a paragraph about the importance of regionalism and working specifically with non-profit partners to achieve mutual goals?

Page 57 – Role of the County

AC-REP suggests adding “regional economic development partners” in the third sentence along with municipalities.

Page 59 – Adams County Profile

AC-REP suggests adding “non-profit” in the last sentence as part of the economic development strategic planning.

Comments regarding the Goals, Policies, and Strategies

AC-REP supports the County’s stated goals for economic development. We look forward to working with the Economic Development Division (EDD) on the separate Economic Development Strategy & Implementation Plan to explore ways to partner and support these goals. In the economic development profession, a business sometimes prefers to work directly with a non-governmental entity such as a site selector, non-profit economic development organization, or a real estate broker before discussions with the governmental division. AC-REP wants to be that conduit to attract interested prospects to the Adams County region and spark new conversations.

We look forward to developing a straightforward process for managing such relationships. In addition, AC-REP looks forward to enhancing our Development Council programming to support and develop strong marketing around the critical industries for Adams County. Working with the EDD, we can help tell the stories, make introductions and strengthen the efforts through solid partnerships.

Thank you for accepting these late comments. Please let me know if you have any questions.

Lisa



LISA HOUGH | President/CEO
1870 W. 122nd Ave., Suite 300
Westminster, CO 80234
303.902-6920

lisa.hough@adamscountyrep.com | www.adamscountyrep.com

SCHEDULE A MEETING WITH ME - <https://calendly.com/acrephough>



BRYAN D. WEIMER, PWLF
Director

Lima Plaza
6924 South Lima Street
Centennial, Colorado 80112-3853
720-874-6500
arapahoegov.com

June 16, 2022

Jennifer Rutter, AICP
Planning & Development Manager
Community & Economic Development Department
Adams County
4430 South Adams County Parkway, Suite W2000B
Brighton, CO 80601-8218



RE: Comments on Advancing Adams – Comprehensive Plan

Dear Jennifer:

Arapahoe County appreciates the opportunity to provide comments on the Advancing Adams Comprehensive Plan. Overall, I thought this is a very good Plan and it is engaging to read. Integrating and having the cross-connections between the three Advancing Adams plans is a wonderful approach and I think the Plan is successful in linking the goals, policies, and strategies in the various chapters. I particularly liked the focus on the 20-Minute Community framework. Another element I appreciated is the focus on Equity and Sustainability, including identifying that Adams County will need to plan for the future while considering changing climate. The sections on Agriculture and Cultural Heritage are comprehensive, thoughtful, and have some innovative strategies.

Arapahoe County's comments on the draft Comprehensive Plan are as follows:

- On page 99 of the draft Comprehensive Plan, policies and strategies to update the Strasburg Plan are identified as well as "Next Steps" to coordinate with Arapahoe County on a plan update. We are looking forward to working with your staff on an update to the Strasburg Plan in the future. We are starting the process to update the Byers Sub-Area Plan, which was approved by the Arapahoe County Planning Commission in 2003, and there is the possibility we will reach out to your staff if the area of interest extends into Adams County.
- We have no comments on the Future Land Use Map (FLUM). We have reviewed the Research Map to identify the changes in the land use categories for parcels north of Arapahoe County and noted the continuation of the agricultural land use categories in the eastern part of Adams County. We are familiar with the Colorado Air and Space Port Subarea Plan since we were a stakeholder involved in the planning process.
- I may have missed this, but I didn't see a population number for the unincorporated part of Adams County and growth projections for the unincorporated area. In Arapahoe County, our population in 2021 for the unincorporated area was 98,539. I believe that the unincorporated part of Adams County has generally about the same population.
- Following are some general comments on the formatting:

- The Plan requires a Table of Contents and a definitions section at the end of the document may be helpful. The “Future Land Use” chapter needs to have “Chapter 2” added to the title page so that it is consistent with the other title pages.
- I was confused by the content in the charts on pages 14-16. Are the headings over the correct columns?
- Figure 5-1: 20-Minute Community should have a legend since it is hard to interpret.
- It is difficult to read the legend and map for Figure 7-2: Cultural & historic places.

Thank you for the opportunity to comment on the draft Comprehensive Plan, and please let me know if you have any questions about my comments.

Yours truly,



Loretta Daniel, AICP
Long Range Planning Program Manager

Exhibit 4.3

Comment on the future land use	Suggest a future land use type	Jurisdiction	Staff Comments
This parcel 0172102123001 is within the Commerce City city limits. It should not be shown on the Future Land Use map.		City of Brighton	Technical correction made
This is an odd location for a park (0172102000021) in that it is immediately adjacent to a major arterial and surrounded by right-of-way on 3 sides.	Residential Low	City of Brighton	Changed to recommendation to Commercial per PC input to match Imagine Adams FLUM
An industrial designation on 0157136002001 look toward the future uses of this area and would be more appropriate as Mixed Use. The incorporated area east of here is potentially developing into a large sports complex that will host tournaments and be a travel-to destination. The Adams Crossing area to the east is proposed to be developed as a dense, mixed-use development with retail and residential uses.	Mixed Use	City of Brighton	Recommended designation changed to Mixed Use to match surrounding area
Parcels -156920000038, 156920000039, 0156920000015, 0156920000010, 0156920000011, and 0156920000012 are or will be Parks and Open Space for the City of Brighton.	Parks Open Space	City of Brighton	Properties are subject to the Splendid Valley District Plan. Future land uses are administered through that plan.
Brighton objects to the change in designation from Local District Mixed Use to Agriculture for parcels 0157123000026, 0157124000015, 0157126000004, and 0157125200001. These properties are part of the gateway into the Historic Splendid Valley and Brighton and will be one of the first things travelers see past E-470 along Highway 85. These are large, very visible parcels. In addition, Second Creek runs through these lands and will eventually have a trail connection which would help connect the South Platte River Trail to the Historic Splendid Valley via the trailhead and Willow Bay property west of Brighton Road.		City of Brighton	Property is adjacent to the Splendid Valley District Plan but not within the plan boundary. Plan. Staff recommends maintaining Agriculture Smal Scale designation
We are unclear as to why this property has been designated Institutional. This is a private residence. Please consider returning this to residential.	Residential Low	City of Brighton	Technical correction made
The Mixed Use Commercial area now designated northeast of Brighton Road and 124th Avenue is served by City of Brighton water utilities due to groundwater quality issues for wells in this area. As the water service provider, Brighton has concerns with the potential for mixed use development here as we have limited water resources that should be focused within City limits. If water is available for such a use, it is likely that water will be required to be dedicated to the City in order to obtain a new water tap or increase the size of an existing tap. The future change in access at the Highway 85 and 124th Avenue intersection would also make it harder for a commercial uses to remain viable due to limited traffic from and access to Highway 85 in the future. We would suggest low density residential as a better long-term land use designation.	Residential Low	City of Brighton	Comment noted. No change to staff recommendation of Mixed Use Commercial per Planning Commission direction.
The Mixed Use Commercial area now designated southwest of Brighton Road and 124th Avenue is served by City of Brighton water utilities due to groundwater quality issues for wells in this area. As the water service provider, Brighton has concerns with the potential for mixed use development here as we have limited water resources that should be focused within City limits. If water is available for such a use, it is likely that water will be required to be dedicated to the City in order to obtain a new water tap or increase the size of an existing tap. The future change in access at the Highway 85 and 124th Avenue intersection would also make it harder for a commercial use to remain viable due to limited traffic from and access to Highway 85 in the future. We would suggest low density residential as a better long-term land use designation.	Residential Low	City of Brighton	Comment noted. No change to staff recommendation of Mixed Use made Planning Commission direction.

Jen Rutter

From: Patty McCartney <pmccartney@arvada.org>
Sent: Tuesday, June 21, 2022 4:18 PM
To: Libby Tart
Cc: Jen Rutter; Layla Bajelan
Subject: Advancing Adams - Comprehensive Plan Update Land Use Draft

Please be cautious: This email was sent from outside Adams County

Good afternoon.

Thank you for the virtual meeting to discuss and the opportunity to review the Draft Comprehensive Plan - Land Use Update for Adams County. We have no comments for the proposed draft land use plan at this time.

Please let me know if you have any questions and apologies for the delayed response.

Respectfully,

Patty McCartney
Long Range Senior Planner
City of Arvada, Community and Economic Development
pmccartney@arvada.org
Phone: 720.898.7456

MEMO

Exhibit 4.5

COMMUNITY DEVELOPMENT
DEPARTMENT

To: Jenn Rutter, AICP

From: Omar Yusuf, City Planner

Subject: Advancing Adams - Comprehensive Plan

Date: July 11, 2022

To the Adams County Planning Commission

Thank you for allowing Commerce City to comment on the comprehensive plan amendment to adopt the Advancing Adams Comprehensive Plan that may have an impact on our jurisdiction. The city has no comments:

If you have any questions, please contact me at oyusuf@c3gov.com or (303) 227-7187



Jen Rutter

From: Brooks Kaufman <BKaufman@core.coop>
Sent: Tuesday, May 17, 2022 2:51 PM
To: Jen Rutter
Subject: RE: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Please be cautious: This email was sent from outside Adams County

Dear Ms. Rutter

CORE Electric Cooperative has no comments.

Respectfully

Brooks Kaufman
Lands and Rights of Way Manager

800.332.9540 MAIN
720.733.5493 DIRECT
303.912.0765 MOBILE

www.core.coop



From: Jen Rutter <JRutter@adcogov.org>
Sent: Friday, May 6, 2022 3:36 PM
To: Jen Rutter <JRutter@adcogov.org>
Subject: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

CAUTION:

This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon,

Attached is the request for comments for the draft Comprehensive Plan – Advancing Adams (Case #PLN2022-00007). The draft Plan and draft Future Land Use Map can be found at www.AdvancingAdams.org. You can also view the request for comments at <http://www.adcogov.org/planning/currentcases>.

We have entered the last public outreach phase for Advancing Adams. There will be several outreach events in various parts of the County, a virtual event, and are welcoming comments through the [online Comment Map](#). I have attached a flyer with information about upcoming Open Houses.

Comments on the draft Plan and Map are due by **Tuesday, May 31, 2022**. Please send your comments and questions to me at jrutter@adcogov.org. Thanks in advance for your review of this case.

Thank you,
Jen



Jen Rutter, AICP

Planning & Development Manager, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams County Parkway, 1st Floor, Suite W2000A

Brighton, CO 80601

o: 720.523.6841 | jrutter@adcogov.org

www.adcogov.org

County operating hours: Tuesday through Friday, 7 a.m. to 5:30 p.m.



June 3, 2022

VIA Email (JRutter@adcogov.org)

Adams County Community & Economic Development Department
4430 South Adams County Parkway
1st Floor, Suite W2000B
Brighton, CO 80601-8218

RE: Denver Comments to the Advancing Adams County Comprehensive Plan

Dear Ms. Rutter:

Thank you for the opportunity to provide comments to the Advancing Adams Comprehensive Plan (the “Plan”). We appreciate the ongoing partnership and regional collaboration. As Denver International Airport (“DEN”) and Adams County continue to grow, we are uniquely positioned for increased economic development while ensuring that Adams County residents have a high quality of life. Adams County is home to nearly 5,000 of our badged employees and over 200 certified businesses at DEN.

DEN appreciates that Adams County has specifically noted that one of its goals for the Plan is to “Avoid new residential development in areas impacted by airport-related development or within aviation easements.¹” DEN continues to believe that it is critically important that the region recognize, and avoid, incompatible land uses near the airport. Those incompatible land uses include residential and other sensitive uses, such as schools². DEN suggests that the Plan not allow for land use zoning that would allow such incompatible land uses near the airport.

In February 2021, the Federal Aviation Administration (“FAA”) released the analysis of its Neighborhood Environmental Survey (“Survey”). I am including a copy of the Survey for your convenience.³ The survey was designed and undertaken by the FAA to understand the annoyance of aircraft noise for residential dwellings. While the FAA is still analyzing the Survey results, it may be helpful to consider the Survey findings when you address possible land use changes under the Plan. Generally, the Survey suggests that aircraft noise continues to be a concern for residential quality of life. Those issues seem avoidable by ensuring that incompatible residential land uses are not located near an airport.

I’ve also included an additional map for your consideration: an overlay of the DEN noise contours on the Plan’s Future Land Use Map (the “FLUM”).

Some of our specific concerns with the Plan, with respect to incompatible land uses, are as follows:

¹ While we’re unsure what is meant by the term “aviation easements” in the context of the Plan, Denver would welcome to work with Adams County to clarify the intent of the goal.

² The Federal Aviation Administration (“FAA”) defines noise-sensitive land uses as housing units, schools, churches, nursing homes, hospitals, and libraries.

³ Because of the file size, we are not including any of the appendices. The full report can be found at the FAA’s website: <https://www.airporttech.tc.faa.gov/Products/Airport-Safety-Papers-Publications/Airport-Safety-Detail/ArtMID/3682/ArticleID/2845/Analysis-of-NES>



- **Mixed Use Commercial (MUC):** Much of the lands around DEN have been identified in the Plan as Mixed Use Commercial (MUC). The proposed MUC land use category includes possible residential development. The Plan notes that “Limited residential uses may be acceptable in a vertical mixed-use setting if all environmental conditions and concerns have been remediated and land-use adjacencies are mitigated.” DEN suggests that rather than considering remediation and mitigation measures with respect to residential development near DEN, the Plan should affirmatively declare that residential use should simply not be allowed adjacent to DEN.
- **Public Institutional:** DEN suggests making clear in the Plan that the airport overlay applies in the area, and that sensitive land uses, such as schools, should be prohibited in areas adjacent to DEN.

Separately, DEN continues to work with Adams County with respect to updating Adams County’s zoning code to reflect the land uses for the Clear Zone as updated in the 2016 amendment to the original 1988 New Airport IGA. DEN continues to be available to help in this process.

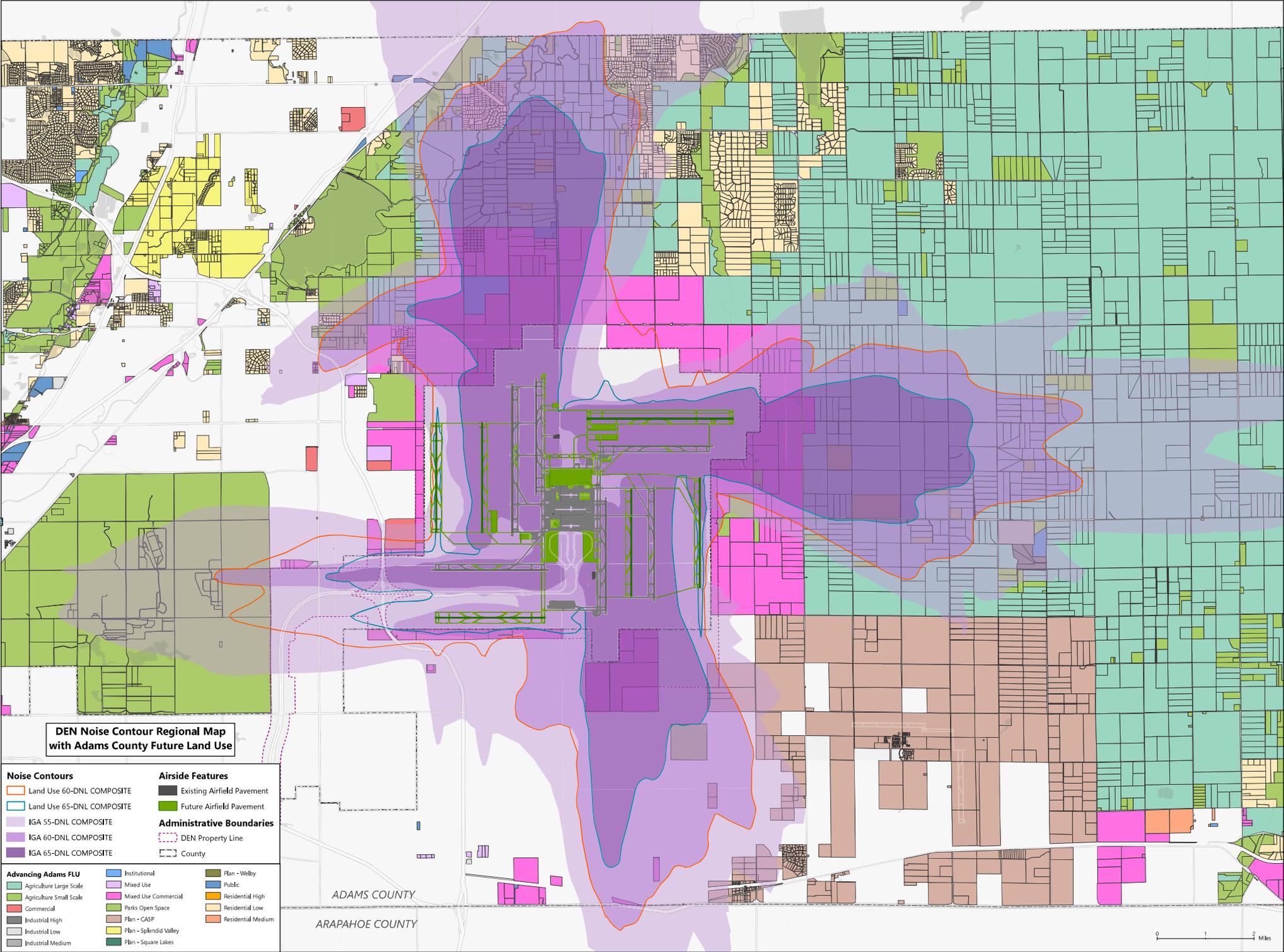
Finally, noise is an important issue for both Adams County and DEN. We believe thoughtful land use planning is the most effective way to ensure that residential encroachment and incompatible land uses are not permitted around the airport while maintaining a high quality of life for Adams County residents now and into the future. We want to collaborate with you to preserve DEN operations and maintain a high quality of life for Adams County residents.

We appreciate the ability to submit these comments. We acknowledge the ongoing work between our two jurisdictions regarding Adams County zoning. Thank you again for the opportunity and please feel free to reach out to me or my team with any questions.

Respectfully,

A handwritten signature in black ink that reads "Phillip A. Washington". The signature is fluid and cursive, with the first name being the most prominent.

Phillip A. Washington
Chief Executive Officer



**DEN Noise Contour Regional Map
with Adams County Future Land Use**

Noise Contours		Airside Features	
	Land Use 60-DNL COMPOSITE		Existing Airfield Pavement
	Land Use 65-DNL COMPOSITE		Future Airfield Pavement
	IGA 55-DNL COMPOSITE	Administrative Boundaries	
	IGA 60-DNL COMPOSITE		DEN Property Line
	IGA 65-DNL COMPOSITE		County

Advancing Adams FLU					
	Agriculture Large Scale		Institutional		Plan - Welby
	Agriculture Small Scale		Mixed Use		Public
	Commercial		Mixed Use Commercial		Residential High
	Industrial High		Parks Open Space		Residential Low
	Industrial Low		Plan - CASP		Residential Medium
	Industrial Medium		Plan - Splendid Valley		
			Plan - Square Lakes		

ADAMS COUNTY
ARAPAHOE COUNTY



DOT/FAA/TC-21/4

Federal Aviation Administration
William J. Hughes Technical Center
Aviation Research Division
Atlantic City International Airport
New Jersey 08405

Analysis of the Neighborhood Environmental Survey

February 2021

Final Report

This document is available to the U.S. public through the National Technical Information Service (NTIS), Springfield, Virginia 22161.

This document is also available from the Federal Aviation Administration William J. Hughes Technical Center at actlibrary.tc.faa.gov



U.S. Department of Transportation
Federal Aviation Administration

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This report is available at the Federal Aviation Administration William J. Hughes Technical Center's Full-Text Technical Reports page: actlibrary.tc.faa.gov in Adobe Acrobat portable document format (PDF).

Errata

Report No. DOT/FAA/TC-21/4

Analysis of the Neighborhood Environmental Survey

January 2021
Final Report

Page replaced	Change made
23	Table 6-1, footnote superscripts made visible/corrected.
E-16 (Appendix E)	Figure E-1 replaced.
E-17 (Appendix E)	Figure E-2 replaced.

Released February 23, 2021

Analysis of the Neighborhood Environmental Survey

Volume 1 of 4

Contracts DTFAC-15-D-00008 and DTFAC-15-D-00007

HMMH Report No. 308520.004.001

January 2021

Prepared for:

Federal Aviation Administration
William J. Hughes Technical Center
4th Floor, M26
Atlantic City International Airport
Atlantic City, NJ 08405



Analysis of the Neighborhood Environmental Survey

Contracts DTFAC-15-D-00008 and DTFAC-15-D-00007

HMMH Report No. 308520.004.001

January 2021

Prepared for:

Federal Aviation Administration
William J. Hughes Technical Center
4th Floor, M26
Atlantic City International Airport
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Acknowledgements

The authors acknowledge Mr. James M. Fields for his significant contribution to this project. As a subcontractor to HMMH for his subject matter expertise in dose-response surveys, he played a key role in the design of the Neighborhood Environmental Survey's questionnaire. Jim also reviewed technical documents upon which this report is based.

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List of Acronyms and Abbreviations

Acronym*	Definition
AAPOR	American Association for Public Opinion Research
ACE	Central Region
ACRP	Airport Cooperative Research Program
ACS	American Community Survey
AEA	Eastern Region
AEDT	Aviation Environmental Design Tool
AEE	FAA's Office of Environment and Energy
AFE	Above Field Elevation
AGL	Above Ground Level (altitude) or Great Lakes Region
ANE	New England Region
ANM	Northwest Mountain Region
ARTCC	Air Route Traffic Control Center
ASNA	Aviation Safety and Noise Abatement Act
ASO	Southern Region
ASW	Southwest Region
ATADS	Air Traffic Activity Data System
ATCT	Air Traffic Control Tower
AWP	Western Pacific Region
BTS	Bureau of Transportation Statistics
CART	Categorization and Regression Tree
CATI	Computer-Assisted Telephone Interviewing
CDD	Cooling Degree Days
CDSF	Computerized Delivery Sequence File
CFR	Code of Federal Regulations
CI	Confidence Interval
CSV	Comma-separated Value
CTL	Community Tolerance Level
dB	Decibel, A-weighted
DM	Data Management
DNL	Day-Night Average Sound Level
EO	Executive Order
EFA	Exploratory Factor Analysis
EPA	Environmental Protection Agency
ETMS	Enhanced Traffic Management System
F or °F	Fahrenheit
FAA	Federal Aviation Administration
FAQ	Frequently Asked Question
FICAN	Federal Interagency Committee on Aviation Noise
FICON	Federal Interagency Committee on Noise
FWA	Federalwide Assurance
GPS	Global Positioning System

Acronym*	Definition
GSSD	Global System for Sustainable Development
HA	Highly Annoyed
HDD	Heating Degree Days
HMMH	Harris Miller Miller & Hanson Inc.
ICR	Information Collection Request
Intl	International
ICBEN	International Commission on Biological Effects of Noise
IFR	Instrument Flight Rules
INM	Integrated Noise Model
IRB	Institutional Review Board
ISO	International Organization for Standardization
L _{max}	Maximum A-weighted Sound Level
LMS	Learning Management System
MSL	Mean Sea Level
NA	Number of Events (at or) Above a Specified (single-event) Sound Level
NAS	National Airspace System
NASA	National Aeronautics and Space Administration
NCDC	National Climatic Data Center
NEPA	National Environmental Policy Act
NES	Neighborhood Environmental Survey
NM or nm	Nautical Miles
NOAA	National Oceanic and Atmospheric Administration
NOP	National Offload Program
OHRP	Office for Human Research Protection
OMB	Office of Management and Budget
PAF	Principle Axis Factoring
Percent HA	Percent Highly Annoyed
PDARS	Performance Data Analysis and Reporting System
PII	Personally Identifiable Information
PND	Postal Non-Deliverable
PO	Post Office
PRA	Paperwork Reduction Act
PUF	Public Use File
QC	Quality Control
RNAV	Area Navigation
RNP	Required Navigation Performance
RR1	Response Rate 1
RR2	Response Rate 2
RSS	Residual Sum of Squares
RUF	Restricted Use File
SEL	Sound Exposure Level
SID	Standard Instrument Departure
SQL	Structured Query Language
STAR	Standard Terminal Arrival Route

List of Acronyms

Neighborhood Environmental Survey Analysis, Volume 1 of 4

Acronym*	Definition
TCH	Arrival Threshold Crossing Height
TFMS	Traffic Flow Management System
TFMSC	Traffic Flow Management System Counts
TNO	Netherlands Organisation for Applied Scientific Research
TOW	Takeoff Weight
TRACON	Terminal Radar Approach Control Facility
TRC	Telephone Research Center
VFR	Visual Flight Rules
US	United States
USGS	United States Geological Survey
USPS	United States Postal Service
UTC	Coordinated Universal Time
WBAN	Weather Bureau Army Navy

*See Table 3-1 for airport abbreviations.

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Executive Summary

The Federal Aviation Administration (FAA) has undertaken a multi-year research effort to quantify the impacts of aircraft noise exposure on communities around commercial service airports in the United States (US). Community annoyance is the impact of interest covered by this report. Researchers typically determine an individual's annoyance to noise through sociological surveys that measure subjective reactions to cumulative noise exposure. To be a scientifically valid evaluation of aircraft noise, the survey and resulting analysis should query respondents experiencing a wide range of noise exposure from airports with variations in aircraft operations using an identical methodology (i.e., survey timeframe, survey instruments, and survey focus). Such efforts typically provide a dose-response curve that pairs the surveyed annoyance of many individuals to their noise exposure.

The Federal Interagency Committee on Noise (FICON) performed the most recent in-depth US Government agency review of human annoyance to noise in 1992. The dose-response curve that FICON developed in 1992 confirmed the appropriateness of Federal policy at that time. The FICON curve suggests that 12.3 percent of persons are “highly annoyed” by a Day-Night Average Sound Level (DNL) of 65 dB (FICON 1992). Research published in the two decades since the release of the FICON report suggests the FICON curve might under-estimate annoyance due to aircraft noise exposure. More recent dose-response curves from data collected outside the US have shown increased levels of annoyance at a given noise exposure level; further, the FICON curve included multiple modes of transportation, not just aircraft.

The overall goal of this research effort was to produce an updated and nationally representative civil aircraft dose-response curve for the US. To meet this goal, the research team designed and conducted a national survey, known as the Neighborhood Environmental Survey,¹ with an appropriate number of residents around an objectively selected sample of airports in the US. This report provides details on the Neighborhood Environmental Survey as well as an analysis of the mail questionnaire administered as a part of the Neighborhood Environmental Survey. The result of this effort is an update to the scientific evidence on the relationship between aircraft noise exposure and the annoyance of individuals living in airport communities.

The number of airports, and the mail survey sample size for each airport, were selected to provide an accurate estimation of the dose-response curve describing the relationship between annoyance (in terms of percent highly annoyed) and aircraft noise exposure. With criteria specified by the FAA, a multi-stage and statistically rigorous process was used to select a representative sample of US airports. Eligibility criteria were established to define a sampling frame consisting of airports in the contiguous US with at least 100 annual average daily jet operations, at least 100 people exposed to DNL greater than or equal to 65 dB, and at least 100 people exposed to DNL between 60 dB and 65 dB. Applying the eligibility criteria to all airports in the contiguous US resulted in a sampling frame of 95 airports. A subset of 20 airports was selected from the 95-airport set using a balanced sampling approach on a set of FAA-chosen factors. The Federal Interagency Committee on Aviation Noise (FICAN) reviewed the methods used to select the 20 surveyed airports and stated, “the balanced sampling methodology that was employed is the correct choice given the purpose of the study and the number and range of airports available for selection” (FICAN 2013).

The national survey utilized multiple independent reviews of the employed methods as well as a pilot study. Airport Cooperative Research Program (ACRP) Project 02-35 (Miller et al. 2014a) was a pilot study that enabled real-world testing of the methods used in the national survey. In addition to the FICAN review of the national survey's methodology, external review groups examined the methods underlying the data collection and analysis process and the resulting data. These reviews took place at three separate points during the ACRP study and during this research effort. Further, the statistical analysis methodologies were approved by the Bureau of

¹ Although the survey issued to respondents was titled the “Neighborhood Environment Survey”, the official title as recorded by the Federal Office of Management and Budget (OMB) is the “Neighborhood Environmental Survey”, i.e., “environmental” instead of ‘environment’. The official OMB record of the survey can be found under OMB Control Number: 2120-0762 at: https://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201409-2120-002.

Transportation Statistics (BTS) and data collection was approved the Office of Management and Budget (OMB). Finally, an Institutional Review Board also reviewed all the methodologies used in conducting the national survey.

The research team used the FAA Integrated Noise Model (INM), version 7.0d, to compute the aircraft noise exposure for the 20 airports selected for the national survey.² The computations used a twelve-month sample of radar flight tracks and associated flight specific information, (e.g., aircraft type, time of operation, distance flown). DNL contours were computed for each airport based on operational data spanning June 2012 to May 2013 [November 2013 to October 2014 for Chicago O’Hare International Airport (ORD)]. The noise contours were used by the research team to stratify residential locations around each airport into groups based on DNL ranges. Five DNL strata were developed based on contour lines of DNL 50, 55, 60, 65 and 70 dB. The DNL values ultimately paired with the survey responses to create the dose response curve were computed for each respondent location by adjusting for the calendar year 2015 operations counts from the FAA’s Air Traffic Activity Data System (ATADS). The radar flight tracking data analysis for the 2012-2013 period (the 2013-2014 period for ORD) was applied to the modeling for 2015.

Two survey instruments were administered to adult residents within the Neighborhood Environmental Survey: a mail questionnaire and a follow-up telephone interview for the mail respondents. A previous test survey of populations around three US airports, conducted by the research team through the ACRP Project 02-35, was used to inform the survey methods used here. The ACRP Project 02-35 results indicated that the response rate for the mail survey was greater and the cost was less than a phone survey. While the ACRP 02-35 results were inconclusive in determining if the mail survey data was significantly different from the telephone survey data, the mail survey was chosen to maximize the number of responses that could be attained for the funding available for the overall effort. The Neighborhood Environmental Survey’s resultant national dose-response curve was based solely on the annoyance responses from the mail survey. The mail survey was administered to the individuals in the selected airport communities in six separate “waves” over a 12-month period starting in October 2015. The use of a 12-month period ensured seasonal effects did not influence the resulting dose-response curve.

All mail survey respondents were invited to complete a follow-up telephone interview, which asked detailed questions on several areas including respondents’ opinions on noise, exposure to aircraft noise, relationship to the airport, concerns about aircraft operations, views on airport community relations, among others. The telephone survey data could aide in understanding why some people are highly annoyed by aircraft noise at a particular noise exposure while others at the same noise exposure are not; further, the information may help explain differences in annoyance responses among airports. The detailed questions used for the phone questionnaire were not appropriate for the mail questionnaire because the subject matter would have disclosed the purpose of the survey and potentially biased responses to the aircraft annoyance question. The phone survey data was not used to calculate the national dose-response curve as all responding households were already represented in the mail survey.

The mail questionnaire followed the recommendations of the International Commission on the Biological Effects of Noise (ICBEN) (Fields et al. 2001) and used a single question that read: “Thinking about the last 12 months or so, when you are here at home, how much does [noise from aircraft] bother, disturb or annoy you?” This primary question was embedded among 13 other questions on various sources of noise and other aspects of the respondent’s community to mask the purpose of the survey and minimize potential response bias. Consistent with ICBEN recommendations, the respondent was given choices of “not at all,” “slightly,” “moderately,” “very,” or “extremely.” A respondent was identified to be ‘highly annoyed’ if they answered either of the latter two choices. Over 10,000 people responded and completed the mail questionnaire – a response rate of 40 percent. Bias checks were conducted during and after the data collection and none was detected.

² Although INM was superseded in 2015 by the FAA’s Aviation Environmental Design Tool (AEDT), the initial phases of this project had started prior to 2015. Further, INM had been used to select the respondents. The use of INM was maintained for consistency throughout the project.

Analysis of the 'highly annoyed' responses and the associated DNL was used to generate dose-response curves for each individual airport and a national dose-response curve. The analysis used the same form of the logistic regression model used by FICON in 1992, not only for historic consistency but because it was found to require the fewest assumptions, offer the greatest flexibility, and provide a good fit³ to the observed data. The research team deemed the choice of logistic regression the most appropriate, compared to other curve fitting techniques. The national curve is applicable in the range of DNL 50 dB to DNL 75 dB; however, caution should be exercised in predicting annoyance for DNL greater than 70 dB, due to the relative lack of respondents at these exposure levels.

The dose-response curve created from the mail questionnaire shows considerably more people are highly annoyed by aircraft noise at a given noise exposure level compared to historical FICON data. In general, between 9 and 22 percent of those surveyed for the Neighborhood Environmental Survey were highly annoyed by the various items listed in the mail questionnaire. However, 42 percent of the respondents were highly annoyed by aviation noise (at any DNL). The percentage of those surveyed who were highly annoyed by aircraft noise increased monotonically with increasing noise exposure. The national dose-response curve shows that nearly two-thirds of people are highly annoyed at DNL 65 dB. The national dose-response curve also has a greater percent highly annoyed for a given noise exposure than recent European standards from the Netherlands Organization for Applied Scientific Research (TNO, see Janssen and Voss, 2011) and the International Organization for Standardization (ISO) (2016). While the national dose-response curve shows more people being highly annoyed at a given noise exposure level than the historical FICON data or more recent international standards, it is similar to results obtained in Europe since 2000. Caution should be exercised when comparing the national dose-response curve to the TNO and ISO standards, as the national curve provides the community response for a recent time frame whereas the TNO and ISO standards incorporate survey data taken over the last 50 years. As previously mentioned, the FICON data, which is included in the newer European standards, shows a lower level of percent highly annoyed for a given noise exposure. Differences between the national curve and the dose-response curves taken previously could be due to changes in people's attitudes toward noise; changes in the nature of the noise exposure; differences in the cultures of those being surveyed; differences in study design, implementation, or measurement; or a combination of these factors.

This report also presents several additional analyses to explore the heterogeneity of the individual airport relationships. The six factors analyzed were climate, three flight event characteristics, race/ethnicity, and income.⁴ The 'Noticeable' flight event characteristic, (i.e., the number of events having a maximum sound level at or above 50 dB, $NA50L_{max}$), demonstrated marginal significance and should be investigated further because of the high correlation of $NA50L_{max}$ with DNL. None of the other five factors showed a statistically significant relationship with percent highly annoyed after accounting for the noise exposure as measured by DNL.

Overall, this research effort accomplished its goal, as it provides an updated and nationally representative dose-response curve of civil aircraft noise exposure and community annoyance for the US.

³ "Fitting" or "fit" refers to the process whereby statistical techniques are used to produce a curve that best represents or "fits" the underlying data.

⁴ Climate was characterized in terms of "degree days." The three flight event characteristics were (1) whether the aircraft was 'visible' at its point of closest approach to the respondent, (2) whether an event was 'noticeable' (related to the event's maximum sound level), and (3) the aircraft noise event's 'relative importance' (whether the event's DNL was part of the hierarchical list of events which contributed all but 1 dB of the respondent's total DNL). Income was characterized by percentage of population below the poverty level. For race/ethnicity, each respondent was characterized as minority (Hispanic, black or African American, American Indian, or Alaska Native, Asian, or Native Hawaiian or Other Pacific Islander) or nonminority (white non-Hispanic).

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1 Introduction

Research published by Schultz (1978) informs several aspects of aviation noise policy in the United States (US). This includes land-use compatibility guidelines around airports and the factors that determine noise mitigation funding. Schultz developed a correlation between transportation noise exposure levels in terms of a relatively large range of Day-Night Average Sound Levels (DNL) and the percent of the population highly annoyed (the so-called “Schultz curve”) using social surveys on noise annoyance conducted in the 1960s and 1970s from a variety of countries. Not only is Schultz’s work 40 years old, but the research also included multi-modal transportation (air, rail, and road) and was conducted at a time when aircraft operations were louder and less frequent.

Through the Aviation Safety and Noise Abatement Act (ASNA) of 1979, Congress directed the Federal Aviation Administration (FAA) to establish a single metric for assessing land use compatibility with respect to noise from aircraft operations, and to establish standards and methods for assessing the noise environment associated with ongoing aircraft operations near airports. In 1981, the FAA implemented the ASNA provisions; these are published at 14 Code of Federal Regulations (CFR), Part 150 (“Part 150”) ⁵. This regulation adopted the DNL metric, established land use compatibility guidelines for aircraft noise, specifying 65 A-weighted decibels (dB) of DNL as a threshold of noncompatibility for certain land uses, including residential, and established standardized methods for assessing the noise environment (FAA 2007). Currently, the FAA uses DNL 65 dB to support a variety of policy objectives, including assessment, identification, and mitigation of noncompatible land uses in the vicinity of civil airports, and evaluation of environmental consequences, (i.e., changes to the noise setting), that would occur if changes to aircraft operations or airfield infrastructure near an airport were implemented.

In 1992, the Federal Interagency Committee on Noise (FICON) compared Schultz’s polynomial curve fit ⁶ with a logistic regression curve fit of 400 points, consisting of Schultz’s 161 points plus 239 additional points. FICON arrived at a curve with very similar shape within the range of commonly encountered aviation noise (FICON 1992). Equation (1.1) is the general expression for the logistic regression model used by FICON relating DNL to percentage “highly annoyed” (percent HA). FICON’s curve, Equation (1.2), has $\beta_0 = -11.13$ and $\beta_1 = 0.141$ and DNL is expressed in dB.

$$\text{Percent HA} = \frac{100 \exp(\beta_0 + \beta_1 \text{DNL})}{1 + \exp(\beta_0 + \beta_1 \text{DNL})} \quad (1.1)$$

$$\text{Percent HA}_{\text{FICON 1992}} = \frac{100 \exp(-11.13 + 0.141 \text{DNL})}{1 + \exp(-11.13 + 0.141 \text{DNL})} \quad (1.2)$$

From the FICON curve, a DNL of 65 dB corresponds to 12.3 percent of people being highly annoyed. FICON also re-evaluated the use of DNL as the primary descriptor for long-term noise exposure of civil and military aircraft operations, and the particular level of DNL 65 dB, and recommended its continued use for the purpose outlined in the ASNA. Note that several researchers, including Schultz, suggested that DNL 65 dB was the practical, feasible threshold for acceptable noise exposure in residential areas (EPA 1974). The FICON effort was the last in-depth government agency review on the metric and measure. FICON re-affirmed Schultz’s work, yet stated, “This work is continuing and may provide a basis for an improved understanding of community response to noise.”

⁵ 14 CFR Part 150 was first promulgated as an Interim Rule at 46 Federal Register (FR) 8316 on January 19, 1981. The Final Rule was published at 49 FR 49260. Subsequent clerical and substantive amendments have occurred in the intervening years, the most recent of which was published at 72 FR 68475 in 2007.

⁶ “Fitting” or “fit” refers to the process whereby statistical techniques are used to produce a curve that best represents or “fits” the underlying data.

Before this research effort, the largest systematic scientific study of multiple airports in the US was conducted between 1967 and 1971 at nine airports, the so-called “Tracor” study in 1973 (Connor and Patterson 1973); which found substantial differences among human responses. More recent surveys of airport communities have been conducted largely on a case-by-case basis; survey results published through 2008 are cataloged (Fields 1991; Bassarab, Sharp, and Robinette 2009). A number of these surveys were performed to evaluate the effects of specific events such as runway repairs or noise abatement procedures (Fidell et al. 1985). Other surveys of airport communities were summarized in 2011 (Fidell et al. 2011). Recent studies in the US and in Europe suggest that the attitude towards noise may have changed with time (Janssen et al. 2011; Groothuis-Oudshoorn and Miedema 2006; Miedema and Vos 1998; Fidell and Silvati 2004). In addition, continued negative public reactions to aircraft noise at exposures less than DNL 65 dB suggest that a re-examination of the dose-response relationship is appropriate.

Noise is often the most immediately objectionable community effect of aviation and one that the FAA continues to investigate ways to address. Therefore, it is crucial to the FAA to collect updated community annoyance data for US airports. An updated dose-response curve would also provide FAA the scientific background to make informed decisions regarding aviation noise.

The overall goal of this research effort was to produce an updated and nationally representative dose-response curve that quantifies the relationship of peoples’ surveyed annoyance response to aircraft produced noise exposure in the US. The study surveyed people living near 20 airports in the contiguous US regarding their annoyance with aircraft noise – the Neighborhood Environmental⁷ Survey (NES). By combining survey results with modeled aircraft noise exposures in terms of DNL at each respondent’s location, the outcome of the NES permits derivation of a nationally applicable dose-response relationship between aircraft noise and annoyance. This relationship is conceptually similar to the “Schultz Curve.” Additional information collected through the surveys may also provide information about underlying causes of annoyance, such as climate or attitudes toward the airport.

Historical surveys on aircraft annoyance (e.g., Schultz and others) were primarily administered by telephone. Technological and respondent behavior changes in recent years has become a concern as survey response rates for telephone surveys have dropped considerably, increasing the potential for bias. Concurrently, address-based sampling with high coverage of the US population has become viable through the commercial availability of US Postal Service data, such that mail survey response rates today are substantially higher than telephone survey response rates. In order to determine the best mode for this research, a test survey of populations around three US airports in Airport Cooperative Research Program (ACRP) Project 02-35 (Miller et al. 2014a) was conducted. ACRP Project 02-35 is hereafter referred to as “ACRP 02-35” or “the ACRP 02-35 study”. ACRP 02-35 indicated that the response rate for the mail survey was three times greater than the telephone survey and at lower cost. Due to the study’s small sample size, it was not possible to be fully conclusive, but the ACRP study did not indicate that there were statistically different annoyance responses between the mail and telephone surveys. Additionally, web and in-person methodologies were considered but ruled out due to viability and cost concerns, respectively. Therefore, the NES’s resultant national dose-response curve was based solely on a mail survey.

This report documents the major technical components of the survey:

- Development of the survey instruments (Section 2),
- The statistical process of selecting the 20 airports from the relevant population (sampling frame) of US airports (Section 3),

⁷ Although the survey materials issued to respondents were titled the “Neighborhood Environment Survey”, the official title as recorded by the Federal Office of Management and Budget (OMB) is the “Neighborhood Environmental Survey”, i.e., “environmental” instead of ‘environment’. The official OMB record of the survey can be found under OMB Control Number: 2120-0762 at: https://www.reginfo.gov/public/do/PRAViewICR?ref_nbr=201409-2120-002.

- The sample design within airports wherein individual households were selected from the 20 airport communities (Section 4),
- Submission of survey method to the Office of Management and Budget (OMB) and Westat Institutional Review Board (IRB) (Section 5),
- The process used to sample residents, administer the questionnaires, and calculate response rates (Section 6),
- The process used to produce the aircraft noise exposure contours and respondent-specific noise levels (Section 7),
- The resultant national dose-response relationships (Section 8),
- Results of additional analyses attempting to explain differences among airports (Section 9), and
- Data files available for further analyses (Section 10).

A bibliography of the references cited herein and Appendices A through J containing supportive detailed information follows Section 10.

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2 Development of Survey Instruments

Carefully designed survey instruments were used to collect people's annoyance reactions to the aircraft noise they experience. The two instruments used in this 20-airport research effort – a mail questionnaire and a telephone questionnaire – were first developed and tested in ACRP 02-35. The selection of those two survey modes was based on considerations of cost, data quality, and complexity of the instrument and comparability of results with earlier annoyance surveys. The comparison assessed in-person, telephone, mail, and web survey formats. The in-person survey ranked highest in all considerations, including cost. The FAA judged the cost for the in-person mode too high for the current effort while mail and phone were rated acceptable in all categories.

Research of the success of web-based surveys concluded that a web survey, rather than a mail survey, would not permit adequate coverage of potential respondents that do not have access to the web. In addition, mail surveys yield significantly higher response rates than web surveys. Some consideration was given to providing the respondents a choice between a mail questionnaire and a web questionnaire. This was rejected because a number of studies have found that giving respondents a choice depresses response rates (Dillman, Smyth and Christian 2008; Messer and Dillman 2011; Manfreda et al. 2008; Millar and Dillman 2011).

A thorough review of the literature was conducted to support the selection and design of the instruments. The main annoyance questions used in the questionnaire were based on recommendations by the International Commission on Biological Effects of Noise (ICBEN) (Fields et al. 2001). The intent was to identify which factors are most likely to affect annoyance reactions to aircraft noise, and address these in the design of the instruments. Some broad conclusions about 30 hypotheses were reached. In general, demographic characteristics of residents (gender, age, education, socio-economic status, etc.) have no important impact on noise annoyance (Fields 1993; Miedema and Vos 1999). As a result, demographic characteristics do not explain differences between annoyance reactions in different geographical areas. Selected attitudes, on the other hand, have a consistently strong effect: fear of danger from the noise source, perception that authorities could better control the noise, and self-reported general sensitivity to noise. A change in noise exposure affects reactions for road traffic and railway noise, but the effect on aircraft noise annoyance is uncertain. Ambient noise levels and time spent at home do not have an important effect on annoyance (Miller et al. 2014b).

Two survey modes were developed and tested during ACRP 02-35: (1) a mail survey using a brief questionnaire, and (2) a telephone survey with an interview of approximately 20 minutes in duration. The mail questionnaire was shorter due to the exclusion of detailed questions on aircraft that would have been visible to respondents from the outset. Thus, their inclusion would have given away the nature of the survey and could have biased responses to the aircraft annoyance question. In the telephone survey, the annoyance questions were asked first, and thus not subject to bias from later questions about aircraft.

The ACRP 02-35 study proposed that a mail questionnaire should form the basis for an updated dose-response relationship because of the following reasons:

- The ACRP project's telephone survey had a response rate of only 12 percent compared to the mail survey's 35 percent;
- Mail surveys have fewer coverage issues compared to telephone;
- The majority of mail survey households adhered to the respondent selection protocol, providing evidence against the concern that those most annoyed would self-select into the survey;
- The mail survey respondents were closer to Census figures on demographic variables collected; and

- While acknowledging small sample sizes, there is no evidence that there was a difference in annoyance between respondents to the mail survey and respondents to the telephone survey. Further, in light of the above reasons, if any differences in annoyance existed, it could indicate improved data on the mail survey due to a more robust representation of the population.

The ACRP project also provided insight to the desired sample sizes. The number of addresses selected at each airport should be sufficient to determine a statistically significant difference (if there is one) between the revised relationship and the Schultz/FICON curve (Schultz 1978; FICON 1992). The derived dose-response relationship will certainly vary from airport to airport; consequently, the number of addresses selected must be sufficient to explore any heterogeneity across airports. A detailed analysis showed that 500 completed mail questionnaires are required for each of the 20 airports. Similar methods were used to determine the precision of responses to 100 completed telephone interviews for each of the 20 airports.⁸

All mail survey respondents were invited to complete a follow-up telephone interview, which asked detailed questions on a number of areas including respondents' opinions on noise, exposure to aircraft noise, relationship to the airport, concerns about aircraft operations, views on airport community relations, among others. The telephone survey data could aid in understanding why some people are highly annoyed at a particular noise exposure while others at the same noise exposure are not; further, the information may help explain differences in annoyance responses among airports. The detailed questions used for the phone questionnaire were not appropriate for the mail questionnaire because the subject matter would have disclosed the purpose of the survey and potentially biased responses to the aircraft annoyance question. The mail and Computer Assisted Telephone Interviewing (CATI) survey instruments used for this research effort are provided in Appendix A and Appendix B, respectively. The mail questionnaire contained 11 questions. The telephone questionnaire contained up to 51 questions.

Both the mail and telephone survey instruments are very similar to those used in the ACRP 02-35 study, though both have some changes and additions relative to the ones used during ACRP 02-35 work:

- The instruments used in this research effort have material describing the Paperwork Reduction Act that requires approval of all federal government surveys by the OMB. Race categories were revised to conform to OMB guidelines.
- ACRP 02-35's survey name was the "Community Attitude Survey" whereas the survey in this project is called the "Neighborhood Environmental Survey".
- The NES was conducted for and funded by the US Department of Transportation whereas the Community Attitude Survey was conducted for and funded by the National Academies of Sciences, Engineering and Medicine.
- The telephone instrument has several clarification changes of wordings and some question deletions.

Once the mail and telephone survey instruments were finalized, they and all other materials were translated into Spanish to allow the survey to be administered in Spanish, as was needed.

⁸ For a complete discussion of the sample size determination see Supporting Statement for a New Collection RE: Neighborhood Environmental Survey, Part B, Section B.1, https://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201409-2120-002

3 Airport Selection

A statistical process was used to select a representative sample of 20 airports from a sampling frame of 95 US airports. Section 3.1 describes the four criteria applied to construct the sampling frame of 95 airports. Balanced sampling was used to select a representative sample of 20 airports from the sampling frame using a set of balancing factors, as described in Section 3.2. The selections of individual addresses, based on DNL strata, is the subject of Section 4.

3.1 Sampling Frame

The sampling frame, from which the 20 airports for this research effort were selected, was based on four criteria. An eligible airport needed to:

1. Be located within the contiguous US,
2. Have at least 100 average daily jet operations as shown by FAA's Traffic Flow Management System Counts (TFMSC) for 2011,
3. Have at least 100 people exposed to DNL greater than or equal to 65 dB, and
4. Have at least 100 people exposed to DNL between 60 dB and 65 dB.

Criterion 1 reflects the fact that only airports in the 48 contiguous States were included.⁹ Criterion 2 helped ensure there were sufficient operations to provide a minimum of noise exposure to the surrounding communities. Criteria 3 and 4 were to ensure the surveyed airports would have a sufficient number of people at all exposure levels of interest.

These criteria yielded the 95 airports listed in Table 3-1 and mapped in Figure 3-1. Of these, three airports had been previously sampled in the ACRP 02-35 study, (San Diego International Airport (SAN), Portland International Airport (PDX), and General Edward Lawrence Logan International Airport (BOS)), and were excluded from the sample.¹⁰ Including any of these three airports in the NES sample would have meant re-sampling the same addresses.

The FAA designated three international airports for inclusion in the sample because of their large number of operations: Hartsfield-Jackson Atlanta International Airport (ATL), Chicago O'Hare International Airport (ORD), and Los Angeles International Airport (LAX). The remaining 17 airports in the sample were selected from the 89 airports that remained after excluding the directed airports (ATL, ORD, and LAX), and after excluding the three ACRP 02-35 airports (SAN, PDX, and BOS), from the list of 95 airports. The FAA further specified that one of the remaining 17 airports in the sample be chosen from the three major New York City-area airports (LaGuardia Airport (LGA), John F. Kennedy International Airport (JFK), or Newark Liberty International Airport (EWR)), and the sampling procedure ensure that any possible sample contained exactly one of these three airports.

⁹ This criterion led to the exclusion of Honolulu International Airport as it met criteria 2-4. No other airports in Alaska or Hawaii met these criteria.

¹⁰ However, the FAA may make the data available from ACRP 02-35 for further analysis.

Table 3-1. List of Airports Eligible for the Survey

Airport Identifier	Airport Name	Airport Identifier	Airport Name
ABQ	Albuquerque Intl Sunport	LIT	Bill and Hillary Clinton National Airport / Adams Field
ALB	Albany Intl	MCO	Orlando Intl
APA	Centennial	MDW	Chicago Midway Intl
ATL	Hartsfield-Jackson Atlanta Intl	MEM	Memphis Intl
AUS	Austin-Bergstrom Intl	MHT	Manchester
BDL	Bradley Intl	MIA	Miami Intl
BED	Laurence G Hanscom Field	MKE	General Mitchell Intl
BFI	Boeing Field / King County Intl	MSN	Dane County Regional
BHM	Birmingham Intl	MSP	Minneapolis-St. Paul Intl
BIL	Billings Logan Intl	MSY	Louis Armstrong New Orleans Intl
BNA	Nashville Intl	OAK	Metropolitan Oakland Intl
BOI	Boise Air Terminal / Gowen Field	OKC	Will Rogers World
BOS	General Edward Lawrence Logan Intl	OMA	Eppley Airfield
BTR	Baton Rouge Metropolitan, Ryan Field	ONT	Ontario Intl
BTV	Burlington Intl	ORD	Chicago O'Hare Intl
BUF	Buffalo Niagara Intl	ORF	Norfolk Intl
BUR	Bob Hope	PBI	Palm Beach Intl
BWI	Baltimore/Washington Intl Thurgood Marshall	PDK	Dekalb-Peachtree
CAE	Columbia Metropolitan	PDX	Portland Intl
CAK	Akron-Canton Regional	PHL	Philadelphia Intl
CHS	Charleston Air Force Base/Intl	PHX	Phoenix Sky Harbor Intl
CLE	Cleveland-Hopkins Intl	PIT	Pittsburgh Intl
CLT	Charlotte/Douglas Intl	PNS	Pensacola Gulf Coast Regional
CMH	Port Columbus Intl	PSP	Palm Springs Intl
CVG	Cincinnati/Northern Kentucky Intl	PVD	Theodore Francis Green State
DAL	Dallas Love Field	PWM	Portland Intl Jetport
DCA	Ronald Reagan Washington National	RDU	Raleigh-Durham Intl
DFW	Dallas/Fort Worth Intl	RIC	Richmond Intl
DSM	Des Moines Intl	RNO	Reno/Tahoe Intl
DTW	Detroit Metropolitan Wayne County	ROC	Greater Rochester Intl
ELP	El Paso Intl	SAN	San Diego Intl
EWR	Newark Liberty Intl	SAT	San Antonio Intl
FAT	Fresno Yosemite Intl	SAV	Savannah / Hilton Head Intl
FLL	Fort Lauderdale/Hollywood Intl	SBA	Santa Barbara Municipal
FSD	Joe Foss Field	SDF	Louisville Intl-Standiford Field
FXE	Fort Lauderdale Executive	SEA	Seattle-Tacoma Intl
GEG	Spokane Intl	SFO	San Francisco Intl
HOU	William P. Hobby	SJC	Norman Y. Mineta San Jose Intl
HPN	Westchester County	SNA	John Wayne Airport-Orange County
IAD	Washington Dulles Intl	STL	Lambert-St. Louis Intl
IAH	George Bush Intercontinental/Houston	SYR	Syracuse Hancock Intl
IND	Indianapolis Intl	TEB	Teterboro
JAX	Jacksonville Intl	TPA	Tampa Intl
JFK	John F. Kennedy Intl	TUL	Tulsa Intl
LAS	McCarran Intl	TUS	Tucson Intl
LAX	Los Angeles Intl	TYS	McGhee Tyson
LGA	LaGuardia	VNY	Van Nuys
LGB	Long Beach / Daugherty Field		

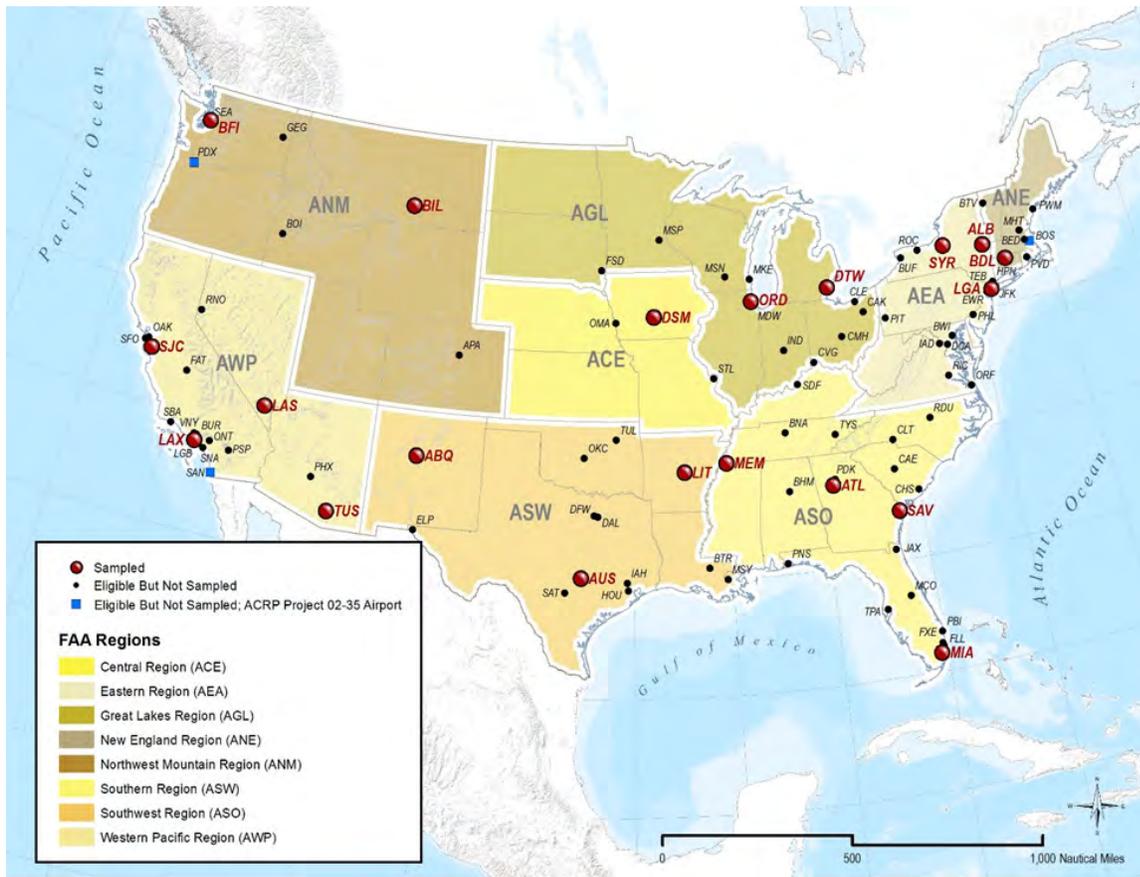


Figure 3-1. Map of Airports Eligible for the Survey and Sampled Airports

3.2 Balanced Sampling of 20 Airports

Balanced sampling was used to select the 20 airports for the NES, with the goal of obtaining a representative sample of airports. An "ideal" sample of airports would be a small-scale version of the population that mirrors the population for every characteristic of interest; however, because most characteristics are unknown before sampling, no sample selection procedure can provide an absolute guarantee that every characteristic in the sample has the same distribution as in the population. Balanced sampling ensures that the sample matches the population on a predetermined subset of characteristics called the balancing factors. The values of the balancing factors are known for the population units before sampling, and the balanced sample is selected so that the sample mean of each balancing factor approximately equals the population mean for that factor.¹¹ The method of balanced sampling dates back to Yates (1946), was advocated as an alternative to probability sampling by Royall (1976), and is described and explored in detail in Valliant et al. (2000) and Tillé (2011).

The airport sample for the NES has approximately the same proportion of airports as the population with respect to each of the balancing factors shown in Table 3-2. The set of 20 airports, taken as a whole, represents the population of 95 airports with respect to these balancing factors. The FAA, in collaboration with the research team, selected these factors for the reasons outlined below.

¹¹ A balanced sample is also a goal of random sample selection (Brewer, 2002, p. 82). A large randomly selected sample is expected to be approximately balanced on different factors because of the law of large numbers. But in a sample of size 20, a particular randomly chosen sample can be badly unbalanced on some factors. The balanced sample selection guarantees that the sample is representative on the balancing factors. Variables that are highly correlated with the balancing factors are expected to be approximately balanced as well.

Table 3-2. Balancing Factors for Selection of Airports

Balancing Factor	Description of Selection Variables
FAA Region	Proportion of airports in each of eight FAA regions in the contiguous US ⁽¹⁾
Average Daily Temperature	Proportion of airports with average daily temperature above 70 degrees F
	Proportion of airports with average daily temperature below 55 degrees F
Percent of DNL Nighttime Flight Operations	Proportion of airports with 20 percent DNL nighttime operations ⁽²⁾
Average Daily Flight Operations	Proportion of airports with more than 300 average daily flight operations ⁽³⁾
Aircraft Fleet Mix Ratio	Proportion of airports with a fleet mix ratio of commuter to large jet aircraft flight operations exceeding 1 ⁽⁴⁾
Population within 5 Miles	Proportion of airports with at least 230,000 people living within 5 miles of the airport ⁽⁵⁾

Notes:

(1) The FAA has nine regions but only eight in the contiguous US.

(2) DNL nighttime is 10:00 p.m. to 6:59 a.m.; 20 percent was the originally calculated median percentages of nighttime operations, discovered later to have been in error, see text below and Appendix C for further detail .

(3) Three hundred flight operations was a rounding of the median number of daily flight operations across the 95 airports, 270.

(4) Large jet aircraft defined as jet-engine aircraft weighing more than 41,000 pounds, such as the B737, A320, B757, B747; Commuter aircraft are all non-jet aircraft, such as the ATR-42, SF-340 and general aviation aircraft, along with regional and business jet aircraft, such as the Canadair Regional Jet and Learjet.

(5) The mean population within 5 miles of the airport, 230,000, was selected as the dividing point (instead of the median) because it ensured that the airports with the largest population affected were represented in the sample proportionately to their representation in the population of 95 airports.

The region factor ensured that the proportion of sampled airports within each region would be approximately equal to the proportion of the 95 airports within that region. This forced the sample to be spread out among the eight regions; without this balancing, it would have been theoretically possible for all of the airports except for ATL, ORD, LAX, and the New York City-area airport to have been located in one area of the country with no sampled airports in the rest of the country.

The temperature factor was chosen to ensure that the sample contained airports with a range of temperatures. Previous research has indicated that temperatures affect annoyance, with higher annoyance being observed at higher temperatures (Miedema, Fields and Vos 2005). Together, the two temperature factor divisions guarantee that the sample percentage of airports in each of the three average daily temperature ranges—below 55 degrees F, between 55 and 70 degrees F, and above 70 degrees F—matches the population percentage in that category.

For DNL nighttime operations, the sample was selected to match the population percentage of airports with more than 20 percent nighttime operations, according to initial calculations of those percentages. After the survey data were collected, an error was discovered in the calculations of the percentage of nighttime operations. This error does not affect the representativeness of the sample, however — balanced sampling guarantees that the sample is representative on any factors used in the design — and, in fact, the sample closely matches the population distribution for the corrected values of percentage nighttime operations. The population distribution of corrected percentage nighttime operations has 25th, 50th, and 75th percentiles of 9.8 percent, 12.8 percent, and 15.8 percent, respectively; the corresponding percentiles for the sample are 9.9 percent, 12.6 percent, and 17.0 percent.

The operations and fleet mix factors ensured that the sampled airports have variations in the number of daily operations and fleet mix. The population factor was included so that airports with varied population settings, (i.e., airports in rural, suburban and urban settings), would be included.

The target sample size for each category of each factor was set equal to the integer closest to the product of 20 and the proportion of the 95 airports in the sampling frame in that category. A sample met the balancing constraints if it achieved the target sample size for each of the factors in Table 3-2. In this way, the proportion of airports in the sample with average daily temperature above 70 degrees Fahrenheit (F) approximately¹² equalled the proportion of airports in the sampling frame with average daily temperature above 70 degrees F; the proportion of airports in the sample with more than 20 percent nighttime operations approximately equalled the proportion of airports in the sampling frame with more than 20 percent nighttime operations; and so on, for each of the balancing factors.

Restricted random sampling (Valliant, Dorfman, and Royall 2000) with a modification to include the airports ATL, ORD, and LAX, was used to select a sample that provides balance on the factors given in Table 3-2. In restricted random sampling, a large number¹³ of random samples is generated from the population of airports. Each of those samples is checked to see whether it meets the balancing constraints; any samples that do not meet the constraints are rejected. Finally, one sample is selected at random from the non-rejected samples (all of which meet the balancing constraints). This procedure results in a sample that is randomly selected from the set of possible samples that are balanced with respect to the factors in Table 3-2. The procedure for generating candidate balanced samples, and the random selection at the last stage, ensure that the sample used for the NES, after accounting for the inclusion of LAX, ATL, and ORD, was selected using objective procedures and not subjective judgments. The details of the procedure used to select the sample of 20 airports are given in Appendix C along with a description of the development of each of the balancing factors. Appendix C also presents the distribution of the balancing factors for the sample of 20 airports, relative to the distribution for the 95 airports listed in Table 3-1.

Table 3-3 and Figure 3-1 show the 20 airports in the sample. As described in Chapter 7, noise modeling also included SEA due to the influence of its aircraft operations on BFI.

Table 3-3. The 20 Airports in the Sample

Identifier	Airport Name	Identifier	Airport Name
ABQ	Albuquerque International Sunport	LAX	Los Angeles International
ALB	Albany International	LGA	LaGuardia
ATL	Hartsfield-Jackson Atlanta International	LIT	Bill and Hillary Clinton National Airport / Adams Field
AUS	Austin-Bergstrom International	MEM	Memphis International
BDL	Bradley International	MIA	Miami International
BFI	Boeing Field / King County International	ORD	Chicago O'Hare International
BIL	Billings Logan International	SAV	Savannah / Hilton Head International
DSM	Des Moines International	SJC	Norman Y. Mineta San Jose International
DTW	Detroit Metropolitan Wayne County	SYR	Syracuse Hancock International
LAS	McCarran International	TUS	Tucson International

¹² The equality was approximate because the number of airports in the sample meeting each criterion had to be an integer.

¹³ The balanced sampling procedure guarantees that the sample as a whole is representative with respect to the balancing factors; the additional step of random selection from the set of possible samples that meet the balancing constraints provides an additional layer of protection for the sample being representative on other characteristics.

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4 Address Selection and Data Collection Protocols

This section describes the process whereby individual addresses were selected, based on DNL strata, near each of the 20 airports; and the protocols that were used for the mail and telephone surveys. Section 4.1 describes how the sample size for each aircraft was determined for each of the noise strata. Section 4.2 describes the procedures used to select the sampled addresses from each noise stratum, and to divide the sample into release groups so that addresses from each noise stratum and airport would be sampled throughout the yearlong period of data collection. Sections 4.3 and 4.4 describe the data collection protocols for the mail and telephone surveys, respectively.

4.1 Sample Size Selection of Addresses

With the objective of this research effort to determine a regression-based curve describing the national relationship between annoyance (in terms of percent HA) and DNL, the sample design for addresses to be selected from each airport community was tailored for estimating a regression relationship (Lohr 2014). The target population for each airport was defined to be addresses with aircraft DNL of 50 dB or greater. FAA primarily considered the following factors in choosing DNL 50 dB as the NES's lower bound for a contour interval:

- In addition to the primary DNL threshold of 65 dB, the FAA also considers changes in DNL at noise exposures as low as DNL 45 dB, for purposes of identifying reportable changes for air traffic actions under the National Environmental Policy Act (NEPA).
- The US Environmental Protection Agency (EPA) has identified DNL 55 dB as adequate to protect public health and welfare with an adequate margin of safety (EPA 1974).
- While the FAA's Integrated Noise Model (INM) can accurately compute aircraft noise exposure over the full extent of conditions required by regulation, the accuracy of the calculation depends on a number of assumptions about thrust, altitude, and airspeed. As aircraft distance from the airport increases, the importance of these parameters to the noise on the ground also increases. As a result, greater care must be taken in the preparation of modeling inputs for lower DNL values and increased modeling uncertainty is possible.
- The 1992 FICON curve had relatively few (annoyance) data points below DNL 55 dB compared to greater DNL values.
- The cost of the NES would increase with decreasing DNL because greater numbers of population/respondents would need to be included.

The number of airports and sample size for each airport were selected to allow accurate estimation of the national dose-response curve and dose-response curves for each airport. There are two components to the variance of the estimated national curve: the first is the variability among respondents within an airport community, and the second is the differences from one airport to another. Increasing the number of respondents for one particular airport community only addresses the first source of variability; increasing the number of airports reduces both sources of variability. Having 20 airports allows the relationship to be estimated precisely using a smaller sample size within each airport community. The research team used results of previous studies (FICON 1992; Fidell and Silvati 2004; Fidell et al. 2011) to calculate estimated precisions for varied numbers of respondents. This effort demonstrated that the numbers of respondents in Table 4-1 should achieve the aforementioned goal. Increasing the number of addresses per airport beyond 500 was not expected to increase precision appreciably.

Table 4-1. Target Number of Respondents for each Airport, and for the NES as a Whole

Survey	Each Airport or All Airports	Noise Exposure Range, dB DNL					Total
		50-55	55-60	60-65	65-70	70+	
Mail	Each airport	100	100	100	100	100	500
Mail	Total, all airports	2,000	2,000	2,000	2,000	2,000	10,000
Telephone	Each airport	19.5	19.5	19.5	19.5	19.5	97
Telephone	Total, all airports	389	389	389	389	389	1,945

Each mail respondent was invited to participate in an additional telephone interview, and the anticipated number of telephone respondents was calculated assuming that 19.5 percent of mail respondents could be reached by telephone and would agree to participate in the telephone interview. Tables 4-2 and 4-3 show the assumptions made about response rates and vacancies used when planning the survey. Based on the ACRP 02-35 study and on the rates of other recent studies, the research team anticipated an overall mail response rate of 40.0 percent and a telephone response rate of 7.8 percent, as shown in Table 4-3. These response rates include assumptions about postal non-deliverables, resident locations with no matching phone number or with invalid phone numbers.

Table 4-2. Anticipated Sample Sizes and Completes

Item	Number
A. Mail Survey	
A1. Initial sample	26,700
A2. 6.3% PND (Postal nondeliverables) (see Note 1)	1,682
A3. Eligible sample (A1 minus A2)	25,018
A4. 40% of A3 complete mail questionnaires	10,007
B. Telephone Survey (see Note 2)	
B1. 40% of A4 match to telephone number	4,003
B2. 85.1% of B1 are valid matches	3,407
B3. 30% of B2 complete phone interview	1,022
B4. 60% of A4 do not match to telephone number	6,004
B5. 14.9% of B1 are invalid matches	596
B6. Total phone number requests (B4 + B5)	6,600
B7. 35% of B6 provide phone number	2,310
B8. 40% of B7 complete phone interview	924
B9. Total telephone completes (B3 + B8)	1,946

Notes:

- (1) Postal nondeliverables are mailed questionnaires returned as nondeliverable by the US Postal Service.
- (2) The numbers here vary from the table in the OMB submission due to a corrected error.

Table 4-3. Anticipated Response Rates

Response Rate	Percent
Anticipated mail survey response rate (A4/A3)	40%
Anticipated telephone survey response rate (B9/A3)	7.8%

In order to achieve high precision for the estimated dose-response relationships, a stratified random sampling design was used to select addresses across a range of noise exposures. The sample allocation in Table 4-1 also makes the sample design robust to planning assumptions about the shape of the curve (Abdelbasit and Plackett 1983, Chaloner and Lantz 1989) and allows for evaluating possible deviations from the assumed logistic model.

Stratified random sampling provided a sample that was relatively evenly distributed across noise levels by allowing the sample to have greater sampling fractions for addresses at greater noise exposures than would



have been possible with simple random sampling within airports. A simple random sample of 500 households, taken from the set of an airport’s households with DNL greater than or equal to 50 dB, would give low precision for estimating the logistic regression function. Most of the addresses in a simple random sample would have low DNL, and few, if any, households in the simple random sample would have high DNL. Such a sample would result in fitting a logistic regression curve to a data set with almost all of the DNL values at the low end of the range, and thus would have little information for fitting a curve to the upper end of the DNL range (approximately DNL 70 dB in this case).

Five DNL strata were defined by contour lines of DNL 50, 55, 60, 65 and 70 dB. The strata were defined as 50-55 dB, 55-60 dB, 60-65 dB, 65-70 dB and “70+” dB, where addresses exactly on the boundaries were assigned to the higher noise stratum. Addresses were randomly selected within each of the noise strata at each airport, with an initial target sample size of 100 respondents per stratum. To achieve 100 respondents in each stratum, approximately 250 addresses would be needed under the assumed response rate (40 percent) to receive 100 completed questionnaires.

As stated in Section 5, any Federally-funded project that solicits information from US citizens requires review and approval by the US OMB.¹⁴ After the sampling plan, which included the associated survey instruments, was approved by the OMB, the DNL contours were used to ascertain the number of addresses in each DNL stratum at each of the 20 airports in the sample. When addresses were counted in September 2015,¹⁵ it was found that only three of the airports had at least 250 addresses in the highest DNL stratum of 70 dB or more, and only seven airports had at least 250 addresses with DNL greater than or equal to 65 dB. Table 4-4 gives the number of airports, out of the sample of 20 airports, with sufficient addresses (250 at expected 40 percent response rate) to obtain at least 100 completed questionnaires in each of the five noise strata and number of airports with any addresses at each noise strata.

Table 4-4. Airports Having Sufficient Addresses to Complete 100 Questionnaires within Each Noise Exposure Range

Number of Airports Statistic	Numbers of Airports Having Addresses in DNL Range				
	50-55 dB	55-60 dB	60-65 dB	65-70 dB	70 dB or Greater
Having adequate sample sizes to meet goal of 100 subjects per noise exposure range	20	20	11	7	3
Having any subjects per noise exposure range	20	20	20	17	7

The sample size of 500 for each airport (100 per noise stratum) was re-allocated to the noise strata at airports with insufficient numbers of addresses in high noise strata. The re-allocation was done starting at the highest noise stratum. If there were insufficient addresses to yield 100 respondents in the DNL 70+ dB noise stratum, then all addresses in that stratum were to be sampled. The difference was calculated between the target sample size in that stratum (100) minus the expected number of respondents from that stratum. That difference was then allocated equally to the remaining noise strata at the airport. If there were insufficient addresses in the DNL 65-70 dB stratum, the process was repeated with that stratum, and the difference between the target sample size and the expected number of responses in that stratum was allocated equally to the lower noise strata. For example, for an airport with no addresses having DNL greater than 70 dB, but with sufficient addresses in the other noise strata, the sample was re-allocated so as to yield an expected 125 respondents in each of the four noise strata of DNL 50-55 dB, 55-60 dB, 60-65 dB, and 65-70 dB. Table 4-5

¹⁴ Paperwork Reduction Act, Pub. L. No. 96-511, 94 Stat. 2812, codified at 44 U.S.C. §§ 3501–3521
<https://www.gpo.gov/fdsys/pkg/PLAW-104publ13/html/PLAW-104publ13.htm>

¹⁵ The FAA furnished to the contractor team the 95 airports from whom survey respondents at 20 airports (selected as previously described) were to be sampled. At the time of this initial selection (circa 2011) each of these 95 airports were believed to contain at least 100 people (not necessarily addresses) exposed to between DNL 60 dB and DNL 65 dB and 100 people exposed to DNL greater than 65 dB based on prior FAA analysis.

shows the updated estimates of completes by strata after this re-allocation. The individual airport sample sizes for each stratum varied and, therefore, are not shown in Table 4-5.

Table 4-5. Revised Planned Number of Respondents for each Airport, and for the NES as a Whole

Survey	Each Airport or All Airports	Number of Planned Respondents in DNL Range					Total
		50-55 dB	55-60 dB	60-65 dB	65-70 dB	70 dB or Greater	
Mail	Each airport	*	*	*	*	*	500
Mail	Total, all airports	3,449	3,441	1,856	913	341	10,000
Telephone	Each airport	*	*	*	*	*	97
Telephone	Total, all airports	671	669	361	178	66	1,945

* Counts for each airport by noise strata are not displayed since the numbers were variable depending on number of addresses available.

4.2 Procedures for Selecting Addresses

The target sample sizes allocated in Section 4.1 were inflated to allow for a reserve sample in the event that response rates were less than expected, or that the rates for vacant and seasonal housing or undeliverable addresses were greater than expected. The initial sample sizes were calculated based on the predicted 40 percent response rate and 6.3 percent postal nondeliverable (PND) rate. Extra reserve sample was included should the response rate be less than 40 percent or the PND rate exceed 6.3 percent at some airports. The size of the reserve sample varied across airports because airports with a greater number of addresses classified as vacant, seasonal, and drop points¹⁶ were allocated additional reserve sample. As mentioned in Section 4.1, all addresses were selected for the sample in noise strata that had insufficient addresses to yield 100 respondents under these assumptions.

The US Postal Service (USPS) Computerized Delivery Sequence File (CDSF)¹⁷ was used as the household sampling frame. For each airport in the sample, contours for DNL 50, 55, 60, 65, and 70 dB were determined using the FAA’s INM, as described above. These contours defined the sampling strata for each airport. The contours were provided as GIS shape files to the sampling vendor who identified all households within each stratum using the USPS CDSF.

Addresses identified as businesses, group quarters¹⁸, and post office (PO) boxes (unless this was the only way the household received mail) were excluded from sampling. However, to ensure maximum coverage, addresses identified as vacant and seasonal were included due to the length of the field period and the chance the occupancy status would change by the time of sample release. Additionally, drop points were included since some airports had a very high proportion of such addresses. Addresses that met these criteria were sampled with equal probability within noise strata at each airport, resulting in a total initial sample size of 53,916. The sample was randomly assigned to six waves within each airport and noise stratum, with a wave released every 2 months. The first wave’s size was set based upon estimates of sample performance from the ACRP 02-35 study and was released in its entirety at the beginning of data collection. To ensure that the first wave was a representative subsample of the initial sample, it was formed by sorting the initial sample within each airport noise stratum by county, census tract, block group, and block; then selecting an equal probability systematic sample within each airport noise stratum. The Wave 1 sample size within each

¹⁶ Response rates are often less for addresses in these classifications. A drop point is a mail delivery point that serves multiple households (US Postal Service 2016, p. 22).

¹⁷ A product of the United States Postal Service (USPS) available through third-party vendors, the Computerized Delivery Sequence (CDS) program provides a frequently updated list of all addresses in the US.

¹⁸ We followed the US Census Bureau, which classifies all people not living in housing units (house, apartment, mobile home, rented rooms) as living in group quarters. There are two types of group quarters: institutional (e.g., correctional facilities, nursing homes, or mental hospitals) and non-institutional (e.g., college dormitories, military barracks, group homes, or missions).

noise stratum was calculated based on the target number of approximately 10,000 completes for the noise stratum (500 for each airport) divided by the number of waves (six), and a response rate of 40 percent and PND rate of 6.3 percent, i.e., $\text{target}/(.4 \times .937 \times 6)$. Wave 1 consisted of 4,476 addresses. The performance of this and future waves provided actual information on the response and PND rates at each sampled airport's noise strata to inform future sample release sizes within each airport and noise strata to meet the targets.

Waves 2 through 6 were formed by randomly assigning the remaining addresses (53,916 minus 4,476) to five approximately equal-sized waves of about 9,890 each. Waves 2 through 6 were further randomly assigned to release groups of 20 addresses each within each airport and noise stratum where there were sufficient addresses to obtain the overall goal of 100 completed questionnaires. The number of release groups (n_{relgrps}) that could be formed in each noise stratum was calculated by dividing the remaining number of addresses in the noise stratum by 20. To ensure that each wave matched as closely as possible the geographical distribution of the initial sample, the waves and release groups were assigned by first sorting the remaining addresses within each airport noise stratum by county, census tract, block group, and block, then numbering the addresses from 1 to n_{relgrps} repeatedly. This was followed by a sort by airport noise stratum, and release group number, then numbering the release groups from 2 to 6 repeatedly to create Waves 2 to 6.

In the higher noise strata where there were insufficient addresses to achieve 100 completed questionnaires at a particular airport, single, equal release groups were assigned to each wave because all sampled cases in these strata were scheduled to be released. In these higher noise strata, Waves 2 to 6 were assigned by sorting the remaining cases (after excluding Wave 1) by county, census tract, block group, and block, then numbering the addresses from two to 6.

Because each wave was a representative subsample of the initial sample, and the same mailout procedures were followed for each wave/release group, this allowed any number of release groups to be sent out each wave without bias. Releasing the sample in this manner allowed the target sample sizes to be obtained because more or fewer release groups could be released in particular airports and noise strata where needed.

4.3 Procedures for Mail Survey

The mailing protocol used for the main data collection followed published procedures (Dillman, Smyth and Christian 2008). All sampled addresses were contacted between two to four times, depending on when the questionnaire was returned. The contacts included:

- An initial survey package,
- A thank-you/reminder postcard approximately 1 week after the initial survey mailing,
- A second survey package mailing 2 weeks after the thank-you/reminder postcard (3 weeks after initial survey mailing), and
- A third survey package mailing 3 weeks after the second survey package mailing.

The contents of each survey package included a cover letter that provided the survey purpose and sponsorship, Frequently Asked Questions (FAQs) and answers, and a paper questionnaire that the respondent was requested to complete and return via an included postage-paid envelope. All materials mailed to the respondent referenced the "Neighborhood Environment Survey." All survey materials were provided in English and Spanish. This followed established procedures for eliciting response from Spanish-speaking households (Brick et al. 2012). A quasi-random selection procedure was used to select an adult to answer the mail questionnaire. The instructions on the inside page asked that the adult with the next birthday complete the questionnaire.

A \$2 cash prepaid monetary incentive was included with the initial mail package sent via USPS first-class mail. Pre-paid incentives of this size have been shown to significantly increase response to mail surveys (Church

1993; Dillman, Smyth and Christian 2008; Edwards et al. 2005). For example, in a recent meta-analysis of incentive experiments (Mercer et al. 2015), it was found that incentives of this size increase response rates by approximately 10 percentage points for a mail survey. The initial survey package and the thank-you reminder postcard were mailed to all sampled addresses. Only nonrespondents to the prior mail packages received subsequent survey package mailings. Mailings returned as PND by the USPS were excluded from subsequent mailings.

The second survey package was sent using express delivery. This increased the visibility of the package and maximized response at this stage (Dillman, Smyth and Christian 2008). Mailings undeliverable by express delivery were not excluded from the last mailing since USPS can often deliver to these addresses. The last mailing was sent USPS first class.

4.4 Procedures for Telephone Survey

Households that completed the mail questionnaire were eligible for the telephone interview. First, an attempt was made to obtain a telephone number for each household through a directory. Those that had a successful telephone match were mailed a letter requesting participation in the telephone survey. If no telephone match was available or if the matched phone number was determined to be invalid, the household was mailed a request to provide a telephone number. This survey package included a cover letter explaining the follow-up contact procedure and sponsorship. A short form for providing the household's telephone number was also included. The request for telephone number followed the mail contact procedures outlined by Dillman, Smyth, and Christian (2008), except there were three contacts. All households received a reminder postcard, and nonresponding households received a nonresponse follow-up request. All mailings were done using USPS first-class postage.

For the telephone interview, an adult was selected using the Rizzo method (Rizzo, Brick and Park 2004). If there is just one adult household member, that person was selected, whereas if exactly two, the CATI program randomly selected one of them. If more than two, the CATI program randomly determined if the screener respondent was selected or one of the other adults. If the screener respondent is not selected the adult with the next birthday was selected. If the screener respondent did not know which adult had the next birthday, a roster of adults in the household was collected and one adult was selected at random. This is a probability method of selection and gives each adult in the household an equal chance of being selected. Respondents were able to complete the telephone interview in English or Spanish. Respondents who completed the telephone interview received \$10 as a thank-you and were told about the \$10 at the beginning of the call and in the advance letters. An incentive was used because additional participation was requested from the household. Promised incentives on telephone surveys have been found to be effective in improving response (Singer et al. 1999). The meta-analysis by Mercer et al. (2015), for example, predicts this amount would increase response rates by approximately 5 percentage points.

Appendix D contains the analysis of the telephone survey results.

5 Reviews of Survey Method

The NES utilized multiple independent reviews of the employed methods as well as a pilot study, ACRP 02-35. The statistical analysis methodologies were approved by the Bureau of Transportation Statistics (BTS) and data collection was approved the OMB. An Institutional Review Board at Westat also reviewed all of the methodologies used in conducting the national survey. Technical bodies also reviewed the work. This included the Federal Interagency Committee on Aviation Noise (FICAN) as well as external review groups that examined the methods underlying the data collection and analysis process and the resulting data. These reviews took place at three separate points during the ACRP study and during the conduct of the NES. Sections 5.1 and 5.2 describe the regulatory and other technical reviews for the NES, respectively.

5.1 Regulatory Reviews

Regulatory reviews consist of those conducted by the OMB and Westat's Institutional Review Board (IRB).

5.1.1 OMB approval

Federally-sponsored data collections involving the public are required to receive an OMB approval under the Paperwork Reduction Act (PRA). Such clearance is required for data collections involving 10 or more respondents within a 12-month period. The approval process entails four main steps:

1. Preparation of an Information Collection Request (ICR) package,
2. A Federal Register notice informing the public of the intent to request clearance for the proposed data collection with a 60-day comment period,
3. A Federal Register notice informing the public that the ICR package is being submitted to OMB with a 30-day comment period, and
4. Submission of the ICR package to OMB with a 60-day review period.

Under Task 2 of the contract, FAA, HMMH, and Westat coordinated to prepare the NES's OMB submission from early 2013 through early 2015.¹⁹ A 60-day Federal Register notice (2014-13686²⁰) was posted on June 12, 2014 to solicit public comment on the proposed survey. Seven comments were received from the public and the team prepared responses in August 2014. A 30-day Federal Register notice (2014-21795²¹) was posted on September 12, 2014. No comments were received. FAA submitted the ICR materials to OMB on December 12, 2014. Two teleconferences were held with OMB to discuss the submission in April 2015. OMB approved the submission on April 27, 2015 and the survey was assigned OMB control number 2120-0762 (expiration date: 04/30/2018).

5.1.2 IRB approval

An IRB is a type of committee used in research that is formally designated to review, approve, and monitor behavioral and biomedical research involving humans. Westat's IRB includes a diverse group of nine individuals: researchers across a broad range of substantive areas, a physician, and two unaffiliated community members. The Board meets once a month to review protocols that include sensitive topics or vulnerable populations at the discretion of the IRB Chair. The IRB operates under procedures set forth in the regulations of the US Department of Health and Human Services and in the Federalwide Assurance (FWA)

¹⁹ https://www.reginfo.gov/public/do/PRAViewDocument?ref_nbr=201409-2120-002

²⁰ <https://www.federalregister.gov/documents/2014/06/12/2014-13686/agency-information-collection-activities-requests-for-comments-clearance-of-renewed-approval-of>

²¹ <https://www.federalregister.gov/documents/2014/09/12/2014-21795/agency-information-collection-activities-requests-for-comments-clearance-of-new-approval-of>

granted to Westat by the Office for Human Research Protections (OHRP). IRB approval is required before research may begin, continue, or be changed by the research team.

Westat's IRB requires each study to submit an initial application consisting of background material on the study, including research goals, methods, informed consent process, and materials (e.g., letters, scripts, questionnaires). The IRB then reviews the material to ensure compliance with human subjects' protection research rules and regulations.

Westat submitted the NES initial application to the IRB on August 26, 2015 and received expedited approval on September 1, 2015. Westat's IRB conducted annual continuing reviews for the duration of the contract.

5.2 Other Technical Reviews

As described below, the NES also underwent reviews by other agencies, two reviews by panels of experts and the NES's statistical methods were presented at three professional conferences on statistics and survey methodology.

In 2014, the BTS reviewed the statistical analyses methodologies as part of the DOT review of the OMB PRA package. BTS approved the methodologies within the PRA.

The FICAN consists of representatives from the US Departments of Defense, Interior, Transportation, and Housing and Urban Development, in addition to the US EPA, and the National Aeronautics and Space Administration (NASA); a representative from the National Institute of Health also participates in FICAN meetings, though it is not an official member. In 2013, FICAN reviewed the methods used to select the 20 airports that were surveyed and stated, "the balanced sampling methodology that was employed is the correct choice given the purpose of the research effort and the number and range of airports available for selection" (FICAN 2013).

In 2016 and 2017, the FAA convened a professionally facilitated Expert Review from international professionals in the field of noise dose-response research, to provide an objective third party review of the project's survey design, noise modeling, regression analysis techniques, supplemental analysis, and development of the national dose-response curve. The 2016 Expert Review consisted of five members and the 2017 Expert Review consisted of six members. Members were affiliated with private industry, a scientific/research resource of the US Department of Transportation, and two European scientific organizations. Many of the members had over 30 years of relevant experience. The Expert Panels provided suggestions for additional analyses and insight to the project team that were incorporated into this report. In addition to these reviews, in 2013 an expert review was conducted in association with the ACRP 02-35 project on the questions used in the mail questionnaire and phone interview.

The statistical methods employed in the NES have been presented at three professional conferences on statistics and survey methodology (Jodts and Lohr 2017a; Jodts and Lohr 2017b; Lohr, Broene and Jodts 2017).

6 Survey Administration and Response Rates

This section describes how the survey was administered and data was collected as well as the actual response rates for the mail and phone instruments. Section 6.1 documents how the data collectors were trained. Section 6.2 addresses the flow of data collection for both survey instruments. Section 6.3 describes the management and review of data. Section 6.4 provides the response rate calculation methodology. Section 6.5 details the survey response rates by various metrics.

6.1 Data Collector Training

In November 2015, five data collectors were trained and started work on the project. Due to attrition, in June 2016, three additional data collectors were trained and started production.

Training consisted of three phases: self-paced, WebEx, and role-play. The following sections detail the structure and content of each training session. Trainees had to successfully complete each session to move to the next stage.

6.1.1 Self-Paced

In the self-paced portion of training, data collectors were expected to review specific materials to introduce themselves to the study subject and survey instrument. The materials were placed in Westat's Learning Management System (LMS) and the data collectors could complete them on their own. If they did not complete their self-study within the specified timeframe, they were unable to proceed to the next section of training. Under the self-paced portion, data collectors reviewed sample letters and postcards and practiced going through the instrument. Trainees were required to take and pass a quiz addressing materials in the self-paced tutorial.

6.1.2 WebEx

The WebEx session was led by project staff (trainer) and facilitated by a Westat Telephone Research Center (TRC) team leader. During this time, the trainer provided an opportunity for the data collectors to ask any questions they may have had on the self-paced training materials. For the majority of this training, the trainer and trainees went through the instrument demonstrating different scenarios. In this segment, the trainer would have the interviewing platform open, which was viewable by all trainees on their computer screens via web conference. The trainees took turns reading the questions as if they were the interviewer, and the trainer would answer based on the scenario they were practicing. The trainee would then indicate which answer to select.

6.1.3 Role-Plays

In the final stage of training, the data collectors were paired with each other, and took turns acting as interviewer and respondent. They were expected to complete two role-plays, acting as both the interviewer and as the respondent. These role-plays covered different scenarios the interviewer might encounter during live production. The role-play sessions were monitored by supervisory staff who verified that trainees had mastered the content before proceeding to live interviewing.

6.1.4 Training for Spanish Language Interviewing

All Spanish bilingual data collectors completed the English self-paced, WebEx, and role-play sessions. They also participated in a separate Spanish role-play session where they completed the interview in Spanish with another Spanish-speaking data collector. All requirements for completion were the same as the English role-plays.

6.2 Data Collection Flow

6.2.1 Mail Survey

As noted in Section 2, the sample was released in waves, and the wave sizes varied to adjust for yield rates (number of completed questionnaires/sample released) within each airport's noise strata as data collection progressed in order to meet targets. The sample releases in each wave took into account the average yield for the performance to date but were somewhat conservative (meaning erring on the side of inviting too many households) to account for variation in yield at each wave and to ensure the completed questionnaires hit the overall targets in the end. Wave 2, in particular, was much larger than other waves since the sample was drawn before returns from the final Wave 1 mailing came in. This meant the team had limited data available and, therefore, made conservative assumptions about eligibility and response rates. Later waves were also drawn at a similar time in the preceding wave, but benefited from the cumulative yields to date allowing for more precise sample releases. Variations in response rate and yield at each wave accounted for differences in later waves. Table 6-1 shows the date and quantities mailed for each stage by wave. As discussed in Sections 4.3 and 4.4, the NES provided English and Spanish versions of the questionnaire to all respondents, in order to address lower Hispanic response rates observed in the ACRP study. Seven hundred fifty nine of the 10,328 completed mail questionnaires (7.3 percent) were done in Spanish, and 154 of the 2,328 telephone interviews (6.6 percent) were conducted in Spanish.

6.2.2 Telephone Survey

Telephone interviewing began November 12, 2015, and finished on November 13, 2016. Of the households that completed the mail questionnaire, 6,736 had a matched phone number or provided a phone number in response to a phone request and were called in an attempt to complete the telephone interview.

The telephone survey mail activities occurred on an ongoing basis driven by mail questionnaire receipts, but the sample waves were not a driving factor in the operations. The following indicates the date of initial and final mailing for each type and the schedule throughout operations. Minor adjustments to the weekly mailings were made periodically throughout the year to account for postal holidays.

- On November 4, 2015, the first telephone request mailing was sent to addresses that had completed the mail questionnaire but for whom there was no matching phone number. These requests continued each Wednesday for additional addresses as they completed the mail questionnaire and for those whom were identified as having an incorrect matched number. The last mailing was sent October 26, 2016.
- The first advance letter mailing for addresses that had completed the mail questionnaire and had a matching phone number was sent on November 5, 2015. These letters continued each Thursday for additional addresses as they completed the mail questionnaire. The last mailing was sent November 3, 2016.
- Thank you/reminder postcards were sent to the first batch of addresses receiving the telephone request mailing on November 12, 2015, and continued each Thursday for subsequent mail batches. The last mailing was sent October 27, 2016.
- The first nonresponse follow-up mailing for those who had not returned their phone number were was sent on November 25, 2015, and continued each Thursday. The last mailing was sent October 27, 2016.
- The first thank-you letter mailing, with \$10 incentive, for those completing the telephone interview was sent November 19, 2015, and continued each Thursday for additional completes. The last mailing was sent November 17, 2016.

Table 6-1. Mail Quantities by Wave and Stage

Wave	Mailing	Date	Quantity
1	Initial survey invitation	10/13/2015	4,476
1	Thank you/reminder postcard	10/20/2015	4,476
1	2nd survey invitation (Express)	11/3/2015	3,677
1	3rd survey invitation	11/24/2015	2,759
2	Initial survey invitation	12/15/2015	5,509
2	Thank you/reminder postcard	12/22/2015	5,509
2	2nd survey invitation (Express)	1/5/2016	4,665
2	3rd survey invitation	1/26/2016	3,424
3	Initial survey invitation	2/16/2016	4,856
3	Thank you/reminder postcard	2/23/2016	4,856
3	2nd survey invitation (Express)	3/8/2016	3,661
3	3rd survey invitation	3/29/2016	3,749 ⁽¹⁾
4	Initial survey invitation	4/12/2016	4,485
4	Thank you/reminder postcard	4/19/2016	4,485
4	2nd survey invitation (Express)	5/3/2016	3,600
4	3rd survey invitation	5/24/2016	2,857
5	Initial survey invitation	6/14/2016	3,907
5	Thank you/reminder postcard	6/21/2016	3,907
5	2nd survey invitation (Express)	7/7/2016	3,091
5	3rd survey invitation	7/28/2016	2,581
6	Initial survey invitation	8/16/2016 ⁽²⁾	4,935
6	Thank you/reminder postcard	8/23/2016	4,935
6	2nd survey invitation (Express)	9/7/2016	3,822
6	3rd survey invitation	9/27/2016	3,086

Notes:

(1) For Wave 3, the third survey invitation mailing was larger than the second invitation mailing because of an error in the parameters used to extract the addresses that led to an inadvertent inclusion of some addresses in the final nonresponse mailing.

(2) During the Wave 6 initial mail out, the postage meter broke down while the survey packages were being metered. Shipped pieces metered on the 8/16/2016 amounted to 3,724, and after the meter was repaired, the remaining 1,661 pieces were shipped on the 8/17/2016.

6.3 Data Management and Review

Returned NES mail questionnaires and Telephone Request Forms with at least one completed question were scanned using TeleForm, a questionnaire design and scanning software that provides automated data capture. Scanning staff reviewed the resulting scanned images for quality, and then passed them into the software's verification and data capture module. Alchemy, an image database and retrieval system, was used to store the questionnaire form images. The hard-copy forms were retained in a secured location until data files were complete.

The data capture module presented for verification any data items that the software could not read with the required level of confidence. The level of confidence is a feature of the TeleForm software that reflects the likelihood that a scanned image is what the software perceives it to be, (e.g., a specific number or letter).

The scanning verification staff compared images against the data recorded by the software and typed corrections into the recorded data as necessary. Once recorded data for a form were accurate, the data were

saved to the database. If the scanning staff could not determine the content of the image with certainty, (e.g., if the marks were particularly light), the staff would review the original hard copy questionnaire.

Scanning quality control (QC) staff also reviewed frequencies of the captured data. Verification staff and QC staff also reviewed open-ended items to ensure that all text was captured correctly.

Data Management (DM) staff also reviewed frequencies of the captured data after the scanning verification and QC staff completed their review and resulting data updates. DM staff made additional data updates when necessary, such as reviewing and reconciling multiple responses to a single item on the mail questionnaire or outlier values, (e.g., very large household sizes).

During these receipt, scanning, data capture, and data review processes, the scanned data resided in a series of tables in a Structured Query Language (SQL) server database to preserve the data at each snapshot in time. Additional products, such as SAS®, readily communicate with SQL server to allow for efficient transmission of data from one stage to the next.

6.4 Response Rate Calculation Methodology

Response rates for mail and telephone surveys were calculated per American Association for Public Opinion Research (AAPOR) guidelines (AAPOR 2016). Response Rate 1 (RR1) and Response Rate 2 (RR2) were for the mail and phone surveys, respectively. Equation (6.1) is the formula for RR1. RR1, or the minimum response rate, is the number of complete interviews (mail questionnaires in this research effort) divided by the number of interviews (complete plus partial) plus the number of non-interviews (refusal and break-off plus non-contacts plus others) plus all cases of unknown eligibility (unknown if housing unit, plus unknown, other).

$$RR1 = \frac{I}{[(I + P) + (R + NC + O) + (UH + UO)]} \quad (6.1)$$

where:

- RR = Response rate;
- I = Complete interview;
- P = Partial interview;
- R = Refusal and break-off;
- NC = Non-contact;
- O = Other;
- UH = Unknown if household/occupied HU;
- UO = Unknown, other.

Equation (6.2) shows the formula for RR2. RR2 counts partial interviews as respondents.

$$RR2 = \frac{I + P}{[(I + P) + (R + NC + O) + (UH + UO)]} \quad (6.2)$$

In short, the numerator includes the cases with questionnaire data in the final data file while the denominator includes all samples cases minus the ineligible cases (PNDs).

6.5 Response Rates and Additional Survey Metrics

Tables 6-2 and 6-3 report the observed sample size and pertinent response rates, which overall compare favorably to the anticipated rates reported in Table 6-4 through Table 6-9. The resulting response rate for each was slightly greater than the anticipated rate – 40.3 percent observed vs. 40.0 percent anticipated for the mail survey and 9.1 percent observed vs. 8.6 percent anticipated for the telephone survey.

Table 6-2. Sample Sizes and Completes

Item	Number
A. Mail Survey	
A1. Initial sample	28,168
A2. 9.1% PND (Postal nondeliverables)	2,561
A3. Eligible sample (A1 minus A2)	25,607
A4. Completed mail questionnaires	10,328
B. Telephone Survey (see Note 1)	
B1. 49% of A4 match to telephone number	5,066
B2. 77.8% of B1 are valid matches	3,942
B3. 30% of B2 completed phone interview	1,179
B4. 51% of A4 did not match to telephone number	5,262
B5. 22.2% of B1 were invalid matches	1,124
B6. Total phone number requests sent (B4 + B5) (see Note 2)	6,289
B7. 31% of B6 provide phone number	1,967
B8. 58% of B7 completed phone interview	1,149
B9. Total telephone completes (B3 + B8)	2,328

Notes: American Association for Public Opinion Research (AAPOR); response rate (RR)

(1) Telephone complete numbers reflect full (n=2,244) and partial (n=84) interviews.

(2) This number is slightly below the sum of the two previous numbers (difference of 97) because 48 of the 5,262 completed the mail questionnaire too close to the end of data collection to receive a phone number request. Additionally, 47 of the 1,124 were identified as invalid numbers too late in the data collection to receive a phone request, and another two mail respondents requested future contacts be stopped before the phone request was sent.

Table 6-3. Response Rates

Response Rates	Percent
Final mail survey response rate (A4/A3) (AAPOR RR1) (see Note 1)	40.3%
Final telephone survey response rate (B9/A3) (AAPOR RR2)	9.1%

(1) AAPOR 2016.

One notable exception is the PND rate, which was greater than anticipated (9.1 percent observed vs. 6.3 percent anticipated). For this research effort, including all vacant addresses ensured complete coverage of the sample area, whereas for the ACRP 02-35 study, only two of three airports included vacant addresses. Other factors that may have led to a higher PND rate are:

- Vacancy rates vary significantly from airport to airport and some of the sampled airports in the NES had high vacancy rates;
- The NES was in the field longer than the ACRP study, therefore, providing more time for the PNDs to be returned; and
- The NES had a third survey mailing 3 weeks later than the second and final mailing in the ACRP study allowing additional PNDs to be identified. However, while the sample was drawn all at once prior to the start of data collection (up to 1 year in advance of Wave 6 release), this should not have affected the observed rates because it is presumed that the vacancy rates remain stable over time, with the exception of households that are demolished (i.e., removed from the sample universe). With the exception of the

first wave, which was closest to the sample draw, evidence that this rate did not increase over time is provided in Table 6-6, which covers the PND rate across waves.

The telephone match rates (see Section 4.4) and accuracy of matched numbers also differed from the anticipated rates. The match rate is largely a reflection of the population with listed landline telephone numbers. This means communities with a greater than average proportion of unlisted phone numbers or cell phone only households will have lower match rates. The three airports in the ACRP 02-35 study averaged a 40 percent match rate. The NES, by contrast, averaged 49 percent and this resulted in more matched phone numbers than anticipated. However, the accuracy of the matched phones was a bit less than in the ACRP study, meaning a lower percentage of matches reached the correct household. This could have been due to the lag between sample selection and release for some cases or other unknown factors.

Lastly, there was a large improvement in the response rate among those who had provided a phone number (58 percent observed vs. 40 percent anticipated). While the design included a thank-you/reminder postcard and a follow-up request to the nonresponders of the phone request for the NES, the rate of provided phone numbers was slightly less than the anticipated rates based upon ACRP 02-35 results (31 percent observed vs. 35 percent anticipated). It is unknown why a higher response rate was experienced among those who provided their number.

Tables 6-4 through 6-9 provide data collection metrics and response rates (AAPOR RR1 for mail surveys and AAPOR RR2 for telephone surveys) for the survey by stratum, wave, and airport, respectively. Tables 6-8 and 6-9 indicate that the airports had varied response rates for both mail and telephone, with mail response rates ranging from 31.8 percent to 54.1 percent, and telephone response rates ranging from 5.5 percent to 10.5 percent. The correlation between the mail response rate and the telephone response rate across airports is 0.90. In Table 6-5, the response rate decreases for successive noise exposure strata. However, this decrease may be related to the variability in airport response rates, since the airports with larger ranges of noise exposure tend to have lower overall response rates. The response propensity analysis in Appendix E (Section E-1) found that for most airports, the value of DNL was not statistically significantly associated with response rate after accounting for the other variables in the model.

Table 6-4. Mail Survey (AAPOR RR1) Sample Sizes, Completes, and Response Rates by Strata

DNL Stratum	Sample size ⁽¹⁾	Completes	Yield ⁽²⁾	PND	PND rate	Response rate (RR1)
50-55	9,134	3,592	39.3%	817	8.9%	43.2%
55-60	9,261	3,481	37.6%	804	8.7%	41.2%
60-65	5,470	2,016	36.9%	419	7.7%	39.9%
65-70	3,041	914	30.0%	330	10.9%	33.7%
70+	1,262	325	25.8%	191	15.1%	30.3%
Overall	28,168	10,328	36.7%	2,561	9.1%	40.3%

Notes:

(1) Sample size represents the number of addresses to which the mail questionnaire was sent.

(2) Yield is defined as completes divided by sample size.

Table 6-5. Telephone Survey (AAPOR RR2) Sample Sizes, Completes, and Response Rates by Strata

DNL Stratum	Sample size ⁽¹⁾	Completes	Response rate (RR2)
50-55	9,134	831	10.0%
55-60	9,261	801	9.5%
60-65	5,470	453	9.0%
65-70	3,041	186	6.9%
70+	1,262	57	5.3%
Overall	28,168	2,328	9.1%

Notes:

(1) Sample size represents the number of addresses to which the mail questionnaire was sent.

Table 6-6. Mail Survey (AAPOR RR1) Sample Sizes, Completes, and Response Rates by Wave

Wave	Sample size ⁽¹⁾	Completes	Yield ⁽²⁾	PND	PND rate	Response rate (RR1)
1	4,476	1,704	38.1%	324	7.2%	41.0%
2	5,509	2,009	36.5%	525	9.5%	40.3%
3	4,856	1,861	38.3%	507	10.4%	42.8%
4	4,485	1,601	35.7%	401	8.9%	39.2%
5	3,907	1,402	35.9%	370	9.5%	39.6%
6	4,935	1,751	35.5%	434	8.8%	38.9%
Overall	28,168	10,328	36.7%	2,561	9.1%	40.3%

Notes:

- (1) Sample size represents the number of addresses to which the mail questionnaire was sent.
(2) Yield is defined as completes divided by sample size.

Table 6-7. Telephone Survey (AAPOR RR2) Sample Sizes, Completes, and Response Rates by Wave

Wave	Sample size ⁽¹⁾	Completes	Response rate (RR2)
1	4,476	418	10.1%
2	5,509	503	10.1%
3	4,856	452	10.4%
4	4,485	369	9.0%
5	3,907	299	8.5%
6	4,935	287	6.4%
Overall	28,168	2,328	9.1%

Notes:

- (1) Sample size represents the number of addresses to which the mail questionnaire was sent.

Table 6-8. Mail Survey (AAPOR RR1) Sample Sizes, Completes, and Response Rates by Airport

Airport Identifier	Sample size ⁽¹⁾	Completes	Yield ⁽²⁾	PND	PND rate	Response rate (RR1)
ABQ	1,484	513	34.6%	174	11.7%	39.2%
ALB	1,034	504	48.7%	52	5.0%	51.3%
ATL	1,744	503	28.8%	266	15.3%	34.0%
AUS	1,574	510	32.4%	118	7.5%	35.0%
BDL	1,066	519	48.7%	50	4.7%	51.1%
BFI	1,302	516	39.6%	76	5.8%	42.1%
BIL	1,169	508	43.5%	111	9.5%	48.0%
DSM	1,085	527	48.6%	62	5.7%	51.5%
DTW	1,287	508	39.5%	106	8.2%	43.0%
LAS	1,724	527	30.6%	214	12.4%	34.9%
LAX	1,504	521	34.6%	63	4.2%	36.2%
LGA	1,489	528	35.5%	54	3.6%	36.8%
LIT	1,612	535	33.2%	340	21.1%	42.1%
MEM	1,880	511	27.2%	310	16.5%	32.5%
MIA	1,810	534	29.5%	133	7.3%	31.8%
ORD	1,126	500	44.4%	47	4.2%	46.3%
SAV	1,390	528	38.0%	100	7.2%	40.9%
SJC	1,222	501	41.0%	43	3.5%	42.5%
SYR	1,024	515	50.3%	72	7.0%	54.1%
TUS	1,642	520	31.7%	170	10.4%	35.3%
Overall	28,168	10,328	36.7%	2,561	9.1%	40.3%

Notes:

- (1) Sample size represents the number of addresses to which the mail questionnaire was sent.
(2) Yield is defined as completes divided by sample size.

Table 6-9. Telephone Survey (AAPOR RR2) Sample Sizes, Completes, and Response Rates by Airport

Airport Identifier	Sample size ⁽¹⁾	Completes	Response rate (RR2)
ABQ	1,484	112	8.5%
ALB	1,034	139	14.2%
ATL	1,744	129	8.7%
AUS	1,574	110	7.6%
BDL	1,066	138	13.6%
BFI	1,302	92	7.5%
BIL	1,169	138	13.0%
DSM	1,085	139	13.6%
DTW	1,287	133	11.3%
LAS	1,724	90	6.0%
LAX	1,504	108	7.5%
LGA	1,489	79	5.5%
LIT	1,612	141	11.1%
MEM	1,880	121	7.7%
MIA	1,810	100	6.0%
ORD	1,126	103	9.5%
SAV	1,390	108	8.4%
SJC	1,222	93	7.9%
SYR	1,024	148	15.5%
TUS	1,642	107	7.3%
Overall	28,168	2,328	9.1%

Notes:

(1) Sample size represents the number of addresses to which the mail questionnaire was sent.

Table 6-10 shows the distribution a plot of completed mail questionnaires and telephone interviews by month. The goal of a yearlong data collection was to capture an average dose response across all seasons.²² Since each wave's mailings crossed over 2 months and returns continued to come in during the months following, it is not possible to calculate a monthly response rate.

Table 6-10. Completes by Month

Month	Mail	Telephone
January	1,058	253
February	934	232
March	906	210
April	999	174
May	730	235
June	521	195
July	777	171
August	1,024	154
September	855	165
October	833	155
November	877	185
December	814	199
Total	10,328	2,328

Notes:

(1) October and November include 2015 and 2016.

²² The yearlong data collection was also consistent with computing a yearly DNL.

7 Computation of DNL for Average Daily Flight Operations

Cumulative aircraft noise exposure is typically presented in terms of DNL that is based on annual average daily operations. Examining a year's worth of data accounts for seasonal or other variability in aircraft operations. For this project, a method was devised to compute noise exposure for every day of a year and the overall annual average day DNL in a consistent, repeatable manner for each airport considered.

It is important to note that for modeling of any kind, a degree of uncertainty in the results should be expected. Modeling accuracy is dependent on a range of factors. The two primary factors are 1) how well the fundamental quantity to be modeled is understood and calculated, and 2) how accurately the inputs needed by the model are provided. The aircraft noise modeling for this research effort used the FAA-approved INM, which provides both detailed noise calculations and a framework to manage the large amount of input data needed to accurately represent actual conditions. In this way, any aircraft noise modeling uncertainty was minimized resulting in accurate results suitable for the analysis described in this report.

Although the focus of the research effort is the national dose-response based on the 20 airports listed in Section 3.2, noise modeling included Seattle-Tacoma International Airport (SEA). Because of its proximity to BFI and the layout of SEA-based flight tracks, SEA's flight operations significantly influence the DNL of BFI's set of potential respondents. Of the 20 selected airports, only BFI had another airport (SEA) in proximity capable of influencing the DNL of the selected airport.

This section documents in detail how DNL for each of the 20 airports was computed. Section 7.1 provides an overview of the method. Section 7.2 address the basic setup parameters used in the INM. Section 7.3 discusses the radar flight track data and its processing. Section 7.4 addresses final data processing and Section 7.5 concludes with consideration of numbers of operations and final DNL calculations.

Appendix F summarizes the basic data used for modeling each of the airports. The intent of Appendix F is to assist in understanding the general nature of the airspace use and the predominant aircraft types that use each airport. It is not intended to provide sufficient information to repeat the noise metric calculations done for this research effort.

7.1 Overview of Method and Introduction

DNL for every potential respondent location at each airport was computed with the FAA's INM version 7.0d (FAA 2013), based on annual average daily flight operations. Although INM was superseded in 2015 by the FAA's Aviation Environmental Design Tool (AEDT)²³, initial phases of this project had started years prior and had used INM for selection of respondents. The use of INM, instead of AEDT, was maintained for consistency throughout the project.

Most of the input data for the INM relied on a year's worth of radar flight tracking data from the FAA for each of the 20 airports. Section 7.3.2 gives specific dates. FAA radar flight tracking data sources consisted of the Performance Data Analysis and Reporting System (PDARS)²⁴ and National Offload Program (NOP).²⁵ Operations counts derived from the radar flight tracking data were scaled and balanced to match official

²³ <https://aedt.faa.gov/>

²⁴ PDARS gathers information from systems at Air Route Traffic Control Centers (ARTCCs), Terminal Radar and Approach Control (TRACON) facilities and most recently from Air Traffic Control Tower (ATCT) facilities. ARTCCs track and provide service to an aircraft for the duration of its journey. TRACONS track and provide service to aircraft approaching and departing between 5 and 50 miles of an airport. ATCTs track and provide service to aircraft on the airport surface and immediate vicinity. Definition from <http://www.atac.com/pdars.html>

²⁵ NOP is operated by the FAA, and collects National Airspace System (NAS) operational data daily. One of the data items collected is flight tracks. Flight tracks contain identifying flight number and flight status (arrival, departure, or overflight) and position reports including (latitude, longitude, altitude, and time-of-report).

National Airspace System air traffic operations data available for public release, (i.e., the FAA's Air Traffic Activity Data System (ATADS) counts), for 2015 for each airport. Using specialized data management software and utilities²⁶, the radar flight tracking data for each airport was consistently checked and pre-processed into INM-compatible input for each available day. INM was used to generate daily DNL results, which were then energy-averaged to determine the average annual day DNL results.

DNL for each airport was computed twice – once for the generation of DNL contours and the selection of respondents (Section 4) using data from 2012 and 2013/2014 and a second time when the survey was completed with a final set of respondents using updated aircraft operations counts for 2015. See Section 7.3.2 for further detail about the data sources for each run.

No ground run-up modeling was performed.

7.2 Basic Setup Parameters

This section describes the basic physical parameters unique to each airport that are required by the INM – runway lengths and locations (7.2.1), helipads (7.2.2), if any, and local weather conditions (7.2.3) and terrain (7.2.4).

7.2.1 Runway Geometry

The INM includes an internal airport layout database, including runway locations, orientation, start-of-takeoff roll points, runway end elevations, landing thresholds, approach angles, etc. The primary information INM uses concerning runways is:

- Departure thresholds (i.e. where aircraft begin their take-off roll),
- Arrival threshold (a location marked on the runway),
- Arrival threshold crossing height (TCH) (the height that arriving aircraft cross the arrival threshold),
- Displaced threshold (distance from the runway end where an aircraft first touches down),
- Runway gradient (i.e. is the runway slightly uphill or downhill),
- Runway location, and
- Runway direction.

The INM data for each of the selected airports were updated with data downloaded from the “Airport Data & Contact Information” section of FAA’s website.²⁷ These data originate from the FAA Airport Master Record (5010-1) forms.

7.2.2 Helipad Location

The locations of helipads (if present) were determined using a combination of FAA 5010 data, location of the beginning/end of helicopter flight tracks, and visual investigation of satellite imagery. INM requires that helicopter operations originate and end at a helipad. Therefore, a helipad must be identified if helicopter operations are to be modeled at a particular airport. If helicopters operate from runways, then a virtual helipad must be identified at the location on the runway used by helicopters.

²⁶ HMMH’s proprietary programs, InFLIGHT™ and RealContours™ and several HMMH-developed processing utilities, were used to process and check the radar data into an INM-compatible form. These programs and utilities manage the large amount of data involved in running the INM using operations for a year of operations at an airport. These HMMH programs do no noise related computation; they assist in preparing the input needed by the INM.

²⁷ FAA 5010 data downloaded July 10, 2013 from http://www.faa.gov/airports/airport_safety/airportdata_5010/

7.2.3 Weather

The INM has several settings that account for the effects that meteorological conditions have on aircraft performance profiles and sound propagation. INM’s meteorological settings include average temperature, barometric pressure, relative humidity, and wind direction and speed.

For purposes of establishing the sampling frame and consistency with the radar flight tracking data (see Section 7.3 for the latter), weather data was downloaded from the National Climatic Data Center (NCDC) website²⁸ for the date range June 2012 to May 2013 for all airports.²⁹ The data range of the weather data was the same as the radar flight tracking data’s date range, for all airports except ORD.³⁰ Annual average daily weather conditions were based on analysis of the hourly NCDC data. Table 7-1 displays the resultant annual average weather conditions for each airport. The computation of each day’s DNL for the 2015 case year used the data from Table 7-1³¹, including ORD.

Table 7-1. Modeled Average Weather Conditions

Airport Identifier	WBAN Station ID	Temperature (degrees Fahrenheit)	Barometric Pressure (inches of Mercury)	Relative Humidity (Percent RH)
ABQ	23050	59.0	29.96	32.5
ALB	14735	50.0	30.02	67.9
ATL	13874	62.8	30.06	63.9
AUS	13904	68.5	30.00	65.5
BDL	14740	51.8	30.00	65.5
BFI	24234	53.4	30.06	71.3
BIL	24033	49.8	29.98	50.7
DSM	14933	52.2	30.01	62.8
DTW	94847	51.7	30.02	65.0
LAS	23169	71.1	29.88	25.5
LAX	23174	63.2	29.98	69.4
LGA	14732	56.2	30.01	61.8
LIT	13963	62.9	30.05	66.1
MEM	13893	62.9	30.04	63.8
MIA	12839	76.7	30.04	70.8
ORD	94846	51.6	30.00	66.6
SAV	3822	66.1	30.06	71.2
SJC	23293	59.1	30.03	67.9
SYR	14771	50.7	30.00	67.6
TUS	23160	70.9	29.90	33.3
SEA	24233	52.7	30.09	72.0

7.2.4 Terrain

Terrain data describe the elevations of the ground surface surrounding the airport and on airport property. The INM uses terrain data to adjust the ground level under the flight paths at which noise metrics are computed. The terrain data do not affect the aircraft’s performance or emitted noise levels, but do affect the

²⁸ Weather data available at: <ftp://ftp3.ncdc.noaa.gov/pub/data/noaa/isd-lite/>

²⁹ Weather data were not adjusted for missing or bad radar dates described in Section 7.3. The entire range was used for weather averaging.

³⁰ As described in Section 7.3.2, ORD’s radar data ranged from November 2013 to October 2014.

³¹ Each day’s weather conditions could not be used because of the limitations of the data processing software.

distance between the aircraft and a “receiver” on the ground. This in turn affects the noise levels propagated to the receiver. The terrain data were obtained from the United States Geological Survey (USGS).³²

7.3 Radar Flight Tracking Data Processing

Subsections 7.3.1 through 7.3.6 describe the sources of radar flight tracking data and its processing.

7.3.1 Radar Flight Tracking Data Sources

The FAA provided data from two repositories of historical National Airspace System (NAS) Data: PDARS and NOP. Both repositories collect and store similar Instrument Flight Rule (IFR) flight track data from FAA air surveillance systems. Availability of Visual Flight Rule (VFR) flight track data is often limited, as FAA does not always retain this data. In accordance with FAA policy in providing radar flight tracking data, the FAA omitted sensitive military operations and aircraft with an approved Block Aircraft Registration Request.

Table 7-2 lists the radar flight tracking data sources used for the 20 selected airports. Approximately half of the selected airports were served by PDARS and the remaining airports were served by NOP. PDARS and NOP are further described in the following two subsections, respectively.

Table 7-2. Radar Flight Tracking Data Sources

PDARS / ARTCC	NOP
ATL	ABQ
BFI	ALB
DTW	AUS
LAS	BDL
LAX	BIL
LGA	DSM
MEM	LIT
MIA	SAV
ORD	SYR
SJC	TUS
SEA	

Note: SEA was modeled and its results combined with BFI due to SEA’s proximity to BFI.

7.3.1.1 PDARS

PDARS gathers information from systems at Air Route Traffic Control Centers (ARTCCs), Terminal Radar and Approach Control (TRACON) facilities and most recently from Air Traffic Control Tower (ATCT) facilities. ARTCCs track and provide service to an aircraft for the duration of its journey. TRACONS track and provide service to aircraft approaching and departing between 5 and 50 miles of an airport. ATCTs track and provide service to aircraft on the airport surface and immediate vicinity.

Ten (10) of the selected airports (plus SEA) were close to TRACONS and thus PDARS radar flight tracking data were available. As the provided PDARS radar flight tracking data did not include city pairs³³, it was supplemented with data from the ARTCC. The ARTCC data includes arrival and departure airports for every flight operation, and these data were used to associate the proper city pair with the PDARS data for as many

³² Terrain data downloaded from <http://viewer.nationalmap.gov/viewer>.

³³ City pairs are the two airports between which an aircraft flies. The city pairs are used to determine the distance of the flight. INM represents trip distance with a “stage length” as a surrogate for aircraft takeoff weight (related to amount of fuel required to cover the trip distance). Thus, a city pair is needed to select the best INM departure flight profile (altitudes, power settings and speeds) for each specific aircraft type.

flights as possible. Hence, the constructed database contains city pairs for most flights, which was used to select the proper INM departure stage lengths (see Section 7.4.2).

7.3.1.2 NOP

NOP is operated by the FAA, and collects NAS operational data daily. One of the data items collected is flight tracks. Flight tracks contain identifying flight number and flight status (arrival, departure, or overflight) and position reports including (latitude, longitude, altitude, and time-of-report).

For the remaining ten (10) airports, radar flight tracking data were acquired from the NOP. The NOP radar flight tracking data did not include runway assignments, so spatial analyses were performed to make the runway assignments (see Section 7.3.4).

7.3.2 Dates Included in Radar Flight Tracking Data

The date range of data selected for all airports except ORD is June 1, 2012 to May 31, 2013. For ORD, data from November 1, 2013 to October 31, 2014 was used because of the initiation of the ORD modernization program begun in October 2013. Additionally, due to NOP data issues on December 1, 2012 and December 2, 2012, data for these two days were also removed for all NOP-sourced airports. There were several other unused days for some of the airports because the days were either missing completely, duplicating other days, or contained inaccurate information. Table 7-3 shows the dates excluded from radar flight tracking data for each selected airport.

Table 7-3. Radar Flight Tracking Data Date Summary

Airport Identifier	Total Days Included	Days Not Included
ABQ	354	12/1/2012, 12/2/2012, 1/25/2013 to 2/3/2013
ALB	363	12/1/2012, 12/2/2012
ATL	365	
AUS	363	12/1/2012, 12/2/2012
BDL	363	12/1/2012, 12/2/2012
BFI	365	
BIL	359	12/1/2012 to 12/6/2012
DSM	363	12/1/2012, 12/2/2012
DTW	365	
LAS	365	
LAX	365	
LGA	362	3 days excluded due to Hurricane Sandy
LIT	363	12/1/2012, 12/2/2012
MEM	365	
MIA	365	
ORD	361	12/1/2013, 2/23/2014, 3/8/2014, 3/9/2014
SAV	365	12/1/2012, 12/2/2012
SJC	365	
SYR	363	12/1/2012, 12/2/2012
TUS	360	6/23/2012, 8/31/2012, 12/1/2012, 12/2/2012, 12/15/2012
SEA	365	

7.3.3 Initial Data Filtering and Time Zone Adjustment

Through coordination with FAA, HMMH received radar flight tracking data files for each airport. Both types of radar flight tracking data (NOP and PDARS) consist of text files, but the format of the text files is different

between them. HMMH used proprietary in-house software to parse the data files and import the data into several tables within a SQL database (one database for each airport).

During the import process, several filtering options were used to exclude and/or modify radar flight tracking data that was deemed unusable or unsatisfactory. These import options included the following options, each of which is discussed in their respective subsections:

- Time Gap Limits,
- Speed Outlier Detection,
- Maximum Range Filtering,
- Maximum Altitude Filtering, and
- Time Zone Adjustment.

7.3.3.1 Time Gap Limits

The Time Gap Limit analysis computed the time difference between consecutive points of a flight track. Radar systems interrogate and supply a data point every 4 to 5 seconds, but in the case of corrupted data received, points from two different flights can be mistakenly joined together as one flight track or unexpected gaps in time greater than the normal can mean the track is unreliable. When two consecutive points of a track had a time difference greater than a specified threshold, the flight track was split into two separate flight tracks at that gap. A large time gap between consecutive points often indicates a problem with the flight track, and the flight track geometry was considered unreliable for the purpose of the research effort.

The time gap threshold used for this project was 270 seconds (4.5 minutes).

7.3.3.2 Speed Outlier Detection

Speed is reported in the raw data. The Speed Outlier Detection analysis identified flight track points whose speed exceeded a specified threshold, i.e., a flight segment of such speed would not make sense in the context of “near-airport” aircraft operations. If the speed specified in the radar flight tracking data was greater than a specified threshold, the flight track point was considered an outlier or corrupt and not uploaded to the SQL database. The resultant flight track would be derived from the remaining points for that flight.

The speed threshold used for this project was 320 meters per second (622 knots; 716 miles per hour).

7.3.3.3 Maximum Range Filtering

Maximum Range Filtering excluded flight track points whose distance from the airport of interest exceeded a specified threshold distance. The flight tracks were “clipped” at the threshold distance to exclude data not in the area of interest and would not influence the resultant cumulative noise exposure. This also excluded flight track points that may have been reported incorrectly.

The maximum range threshold used for this project was 200 nautical miles.

7.3.3.4 Maximum Altitude Filtering

The Maximum Altitude Filtering excluded flight track points whose altitude exceeded a specified threshold altitude. The flight tracks were “clipped” at the threshold altitude to exclude data not in the area of interest and would not influence the resultant cumulative noise exposure. This also excludes flight track points that may have been reported incorrectly.

The maximum altitude threshold used for this project was 100,000 feet above Mean Sea Level.

7.3.3.5 Time Zone Adjustment

The PDARS radar flight tracking data timestamp information is reported in local time, appropriate for each airport. However, the NOP radar flight tracking data timestamp information is reported in Coordinated Universal Time (UTC). For the purposes of noise modeling, it is important to convert these timestamps into a local time zone to determine DNL period (day or night). Each airport with NOP data was converted to the appropriate local time zone for that airport. Table 7-4 lists the time zone adjustments applied to each airport.

Table 7-4. Time Zone Adjustments for Airports with NOP Data

Airport Identifier	Local Time Zone (US)	UTC Standard Offset	UTC Daylight Savings Time Offset
ABQ	Mountain	UTC-7	UTC-6
ALB	Eastern	UTC-5	UTC-4
AUS	Central	UTC-6	UTC-5
BDL	Eastern	UTC-5	UTC-4
BIL	Mountain	UTC-7	UTC-6
DSM	Central	UTC-6	UTC-5
LIT	Central	UTC-6	UTC-5
SAV	Eastern	UTC-5	UTC-4
SYR	Eastern	UTC-5	UTC-4
TUS	Mountain	UTC-7	UTC-6

Note: Daylight Savings Time runs from the second Sunday in March at 02:00 a.m. until the first Sunday in November at 02:00 a.m., in all zones, except TUS.

7.3.4 Runway Assignment, Data Reduction and Final Filtering

7.3.4.1 Runway Assignment

Spatial analyses were performed on each airport’s data to make and/or verify the runway assignments reported in the radar flight tracking data. These spatial analyses include the calculations of [1] angle between “closest” flight track segment and assigned runway and [2] distance between “closest” flight track segment and assigned runway.

These spatial calculations helped determine runway assignment for each flight track. As the NOP radar flight tracking data did not include runway assignments, spatial analysis was used to make the runway assignments. As the PDARS radar flight tracking data included runway assignments, spatial analysis was used to verify the runway assignments.

7.3.4.2 Extraneous Points

Once the geometric analyses had been performed, the Ramer-Douglas-Peucker algorithm (Ramer 1972, Douglas and Peucker 1973) was applied to the flight track points. The purpose of the algorithm is, given a curve composed of line segments, to find a similar curve with fewer points. The algorithm defines ‘dissimilar’ based on the maximum distance between the original curve and the simplified curve, i.e., the Hausdorff distance between the curves (Hausdorff 1914). The simplified curve consists of a subset of the points that defined the original curve.

Reducing the number of flight track points while maintaining the flight track shape reduces analysis time, reduces noise modeling run time, and reduces data storage requirements.

7.3.4.3 Final Filtering

Within the SQL databases for each airport, some flight operations were tagged as “Bad Data,” indicating that they were not usable for noise modeling. There are several reasons that an operation may have been deemed unusable for noise modeling purposes, including erroneous flight track geometry, a lack of information to assign to an aircraft type, duplicate operations, or the operation was an overflight, i.e., not an operation associated with the airport of interest. Averaging all airports, discarded (filtered out) data comprised five percent of the non-overflight airport-specific operations, due to the reasons summarized above.

7.3.5 Data Checking

Flight tracks from the radar data were visually inspected to ensure:

- Assignment to the correct runway,
- Alignment with the assigned runway, and
- Arrivals and departures were correctly identified.

Flight track inspection also determined the altitudes of the downwind legs of “circuit” (touch and go or other types of closed pattern) flights.

Figure 7-1 shows a typical example of the arrival and departure data for one of the 20 selected airports, while Figure 7-2 is a closer view in which it is possible to see that the alignments are reasonable (red are arrivals, green are departures). Ultimately, as the radar tracks were converted to INM tracks, the tracks were extended or trimmed to connect with the proper runway ends.

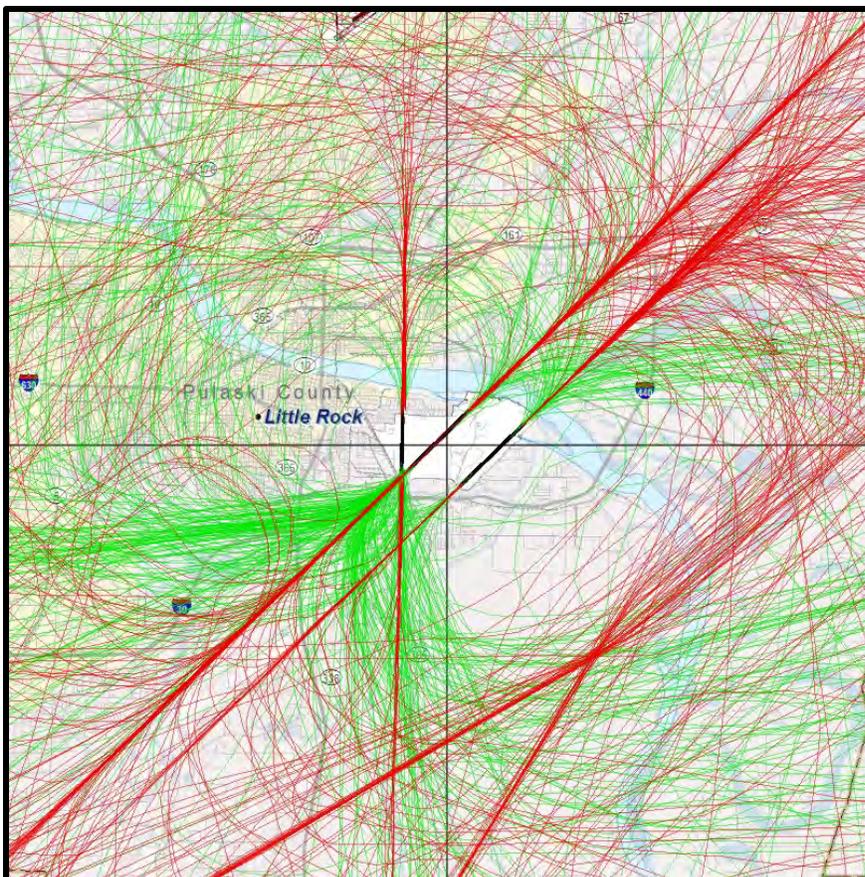


Figure 7-1. Overview of Typical Radar Track Arrivals and Departures

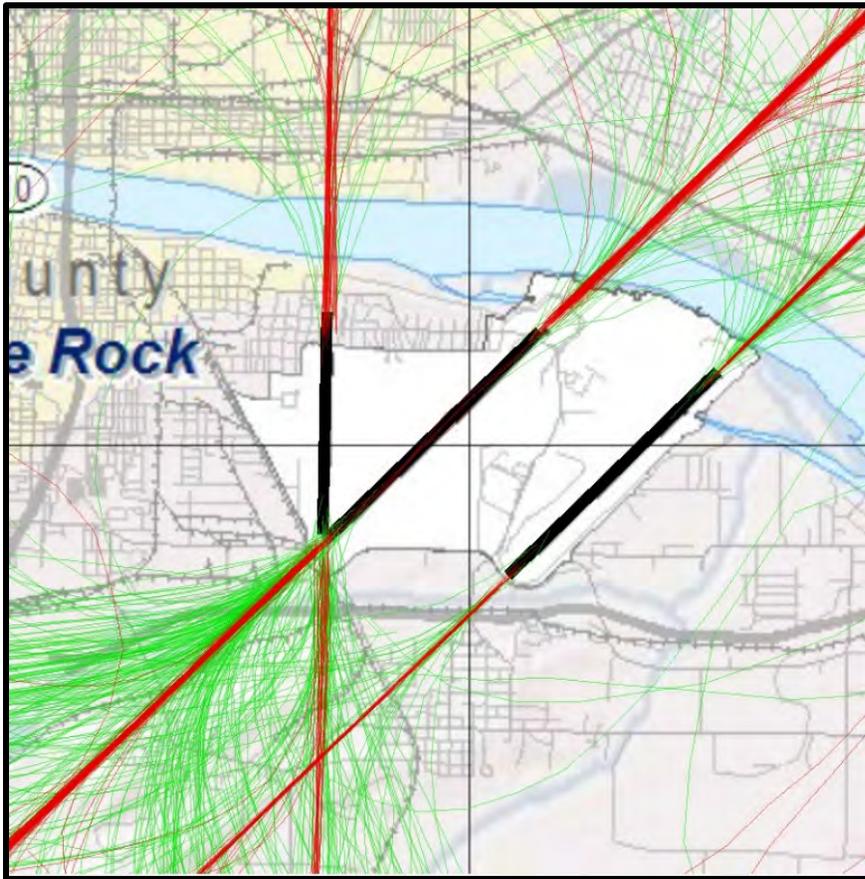


Figure 7-2. Close-up View to Check Alignment with Runways

Closed pattern flight tracks, or “Circuits”, were also examined. Modeling circuit tracks with the INM requires special consideration. Generally, these tracks depart and arrive on a single runway and in the INM must be treated as the combination of separate takeoff and landing segments. In general, circuits consist of a departure segment, a level “downwind” segment and an arrival segment. For the downwind segment, INM requires an altitude or pattern height. Pattern altitudes were determined from published sources but if they were not published, the pattern altitudes were determined from examination of the most common long level segment. Each circuit is counted as two operations in the ATADS counts to which the modeled operations were scaled.

Figure 7-3 shows an example of a flight track identified as a circuit. The track shown in the figure is for a C-130 Hercules conducting two separate patterns – the large pattern was flown first, followed by the smaller pattern.

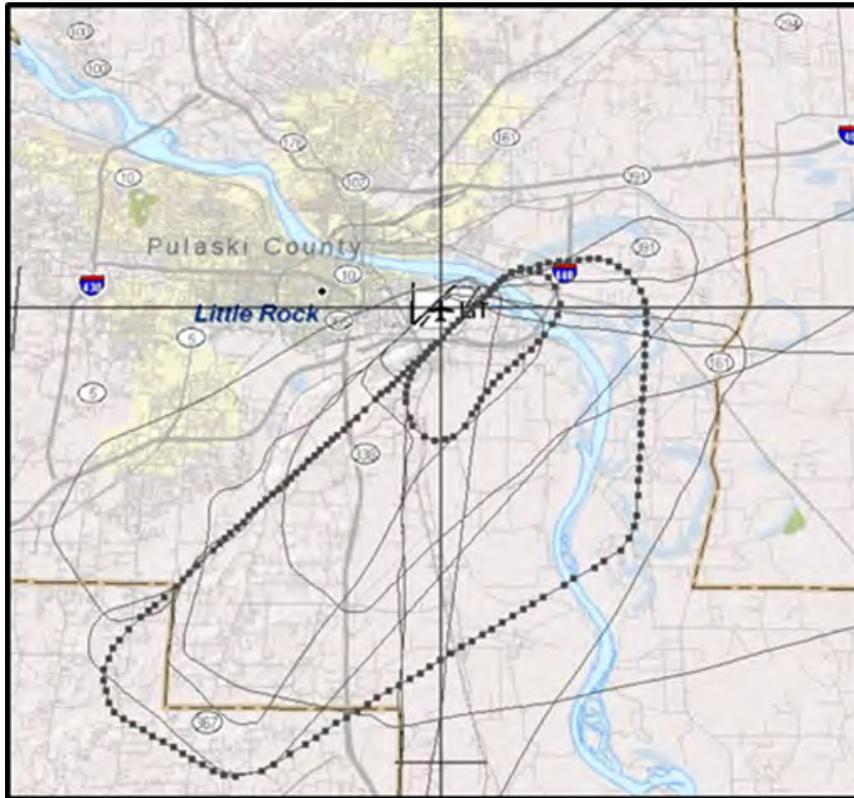


Figure 7-3. Circuit Tracks in the Flight Tracking Data with C-130 Circuit Identified

The particular track of Figure 7-3 is noteworthy because it demonstrates how two different altitudes may be flown and both must be identified and modeled. Figure 7-4 shows a graph of altitude versus elapsed time for the identified flight of Figure 7-3. Figure 7-4 shows the large pattern's downwind leg is at 2000 feet Above Field Elevation (AFE), while the small pattern's downwind leg is at approximately 1,200 feet AFE. For some airports, it was necessary to develop two circuit profiles for other purposes such as differentiating altitudes between non-jet and jet or military aircraft.

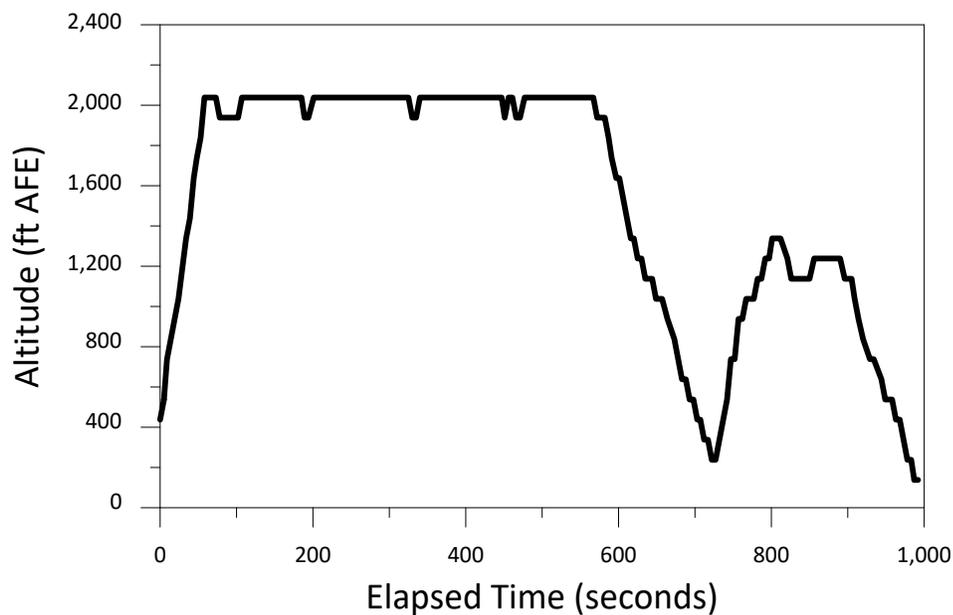


Figure 7-4. Representative Altitude Profile for the Aforementioned C-130 Circuits

7.3.6 Extended Flight Profiles

To ensure that DNL as low as 50 dB could be modeled accurately, the maximum cumulative flight track distances for each INM standard flight profile were compared against the expected flight track distances from the flight tracking data. The latter distances were found to exceed those in the standard INM flight profile database. Therefore, all arrivals were extended at constant approach thrust and angle from 6,000 feet AFE to 10,000 feet AFE, and all departures were extended at constant climb thrust and angle from 10,000 feet AFE to 18,000 feet AFE. Best modeling practices previously approved for INM were used to modify the standard profiles.

7.4 Final Data Processing

Subsections 7.4.1 through 7.4.5 describe five facets of the final data processing.

7.4.1 Generating INM Input

Using the database of flights conditioned as described in the above subsections, each available aircraft flight track was prepared for input into INM, conducting the following pre-modeling checks for compatibility with the INM:

- Examined each track for sufficient length (adequate number of radar returns to model the full profile),
- Checked that a runway assignment exists for all tracks,
- Cut the arrival track where the aircraft descended through 500 feet AFE and then connected the track to the appropriate runway end³⁴, and
- Checked aircraft type and whether or not the type is acceptable for the runway assigned. Occasionally, through improper coding or typographical error, departing aircraft are assigned to a runway from which they are incapable of taking off. In other words, their distance required to rotate or takeoff exceeds the length of the runway. The software equivalent of look-up tables of acceptable aircraft types for each runway was prepared and used to avoid this error.

Having eliminated tracks with insufficient or incorrect data³⁵, the INM input was generated. The process itself does not modify INM “standard” noise, performance or aircraft substitution data, but rather selects the best standard data or FAA approved non-standard data, available to INM for each individual flight track.

To create the INM input, the following functions were performed:

- Directly converted the radar flight track from PDARS or NOP for every identified aircraft operation to an INM-formatted track;
- Modeled each ground track as it was flown, including deviations (due to weather, safety or other reasons) from the typical flight patterns;
- Modeled each operation:
 - On the specific runway that was actually used and
 - In the period (i.e. day = 7 a.m. to 9:59 p.m. and night = 10 p.m. to 6:59 a.m.) in which that operation occurred.

³⁴ INM requires arrival tracks to end (or begin in reverse) precisely at the runway endpoint whereas radar data rarely ends exactly at the runway endpoint.

³⁵ Across the 20 airports, eliminated (insufficient or incorrect) radar tracks ranged from less than 1 percent (LAX) to 10 percent (ABQ). The 20-airport average was 4 percent.

- Selected the specific airframe and engine combination to model, on an operation-by-operation basis, by using the aircraft type designator associated with the flight plan and, if available, the registration number and the published composition of the individual operator's aircraft inventory (see Section 7.4.4); and
- Used the city-pair distances (the Great Circle distance around the globe connecting a departing and arriving airport) to select a standard INM departure stage length. Stage length is an index associated with a range of trip distance. Where no city-pair was available, stage length was selected by comparing the radar flight track altitude profile to the standard INM aircraft departure profiles (see Section 7.4.2).

7.4.2 Flight Profiles

The stage length for individual departure flights having city pairs was calculated based on the destination airport (city-pair) on the flight plan. Each flight's city-pair great-circle distance was compared to the stage lengths available in the default INM database and an appropriate selection was made. INM does not have all stage lengths available for all aircraft. In cases where the stage length determined by city-pair was not available in the INM or would result in aircraft over-running the runway on departure, the maximum stage length available not causing the aircraft to overrun the runway was selected. If a particular INM aircraft had multiple available default profiles in INM for a given stage length or an operation did not have a city pair, the flight track's altitude profile was compared to the available default INM profiles, and a default INM profile was assigned based on the closest match.

7.4.3 Day / Night Assignment

The flight tracking data included timestamp data for each operation. For arrivals and circuits, the flight's end time (last radar ping) was used to determine if the flight belonged to the DNL nighttime period (10:00 p.m. through 6:59 a.m.). For departures, the flight's start time (first radar ping) was used.³⁶ The INM applies the DNL-defined 10 dB "penalty" to all operations occurring at night.

7.4.4 Aircraft Types

The INM aircraft database contains noise and performance data for over 100 different aircraft types. The aircraft types given in the radar flight tracking data were converted to the most appropriate INM aircraft type contained within the INM database. The conversion to INM type consisted of several look-up tables, including (in order of priority) FAA registration data lookups, published airline and nationwide fleet mix data (J.P. Airline Fleet International 2013/2014), and HMMH experience.

Table 7-5 shows the modeled annual flight "events"³⁷ by aircraft category to convey a sense of how predominant aircraft categories varied across the airports. Commercial Jet events dominated other categories at all airports for both data years except: a) BFI and BIL, where Civilian Props dominated for both data years; and b) TUS, where Civilian Props dominated for 2015. TUS had the highest Military Fighter Jet percentage of all airports at 14-16 percent; Military Fighter Jet aircraft were likely a large contributor to the DNL at TUS.

Table 7-5 also shows the events data for both data years for which DNL was computed (initially for sampling purposes using 2012-2013 data and the second time for final DNL at each respondent using 2015 data). Total events decreased from the 2012-2013 data year to 2015 by an average of 2.4 percent across the set of airports. Figure 7-5 presents the total flight events for both data years graphically. MEM experienced the

³⁶ Note that these nighttime percentages were computed from 2012-2013/2014 radar data and thus reflect the best available operations numbers for each airport information and most accurate nighttime percent, Section 7.4.3; the error discussed in Section 3.5.2, Percentage of Nighttime Operations, had no effect on DNL computations.

³⁷ The term 'event' is intentionally used instead of the term 'operation'. An event is an arrival, departure or pattern (or circuit) where a pattern is counted as one event. An operation is an arrival, departure or pattern where a pattern is counted as two operations.

greatest decrease in total events (15.6 percent). SJC experienced the greatest increase in total events (9.6 percent). If SEA is included, the average decrease in total events is 1.4 percent and SEA would be the airport with the greatest increase in total events at 19 percent.

Table 7-5. Annual Flight Events by Aircraft Family

Airport Identifier	Commercial Jet	Civilian Jet, Other	Civilian Prop	Civilian Rotorcraft	Military Jet, Fighter	Military Jet, Other	Military Prop	Military Rotorcraft	Total
2012-2013									
ABQ	64,949	4,800	40,923	3,318	1,386	637	8,817	8,387	133,217
ALB	32,895	3,281	26,755	2,791	-	93	1,464	2,512	69,791
ATL	904,914	4,934	10,929	-	7	190	102	-	921,076
AUS	107,847	17,213	38,823	2,698	680	398	2,841	2,260	172,760
BDL	69,727	9,361	10,776	2,470	7	1,385	571	1,331	95,628
BFI	19,253	31,724	111,615	-	458	100	110	-	163,260
BIL	12,360	3,518	52,638	1,542	8	104	337	62	70,569
DSM	41,003	10,101	19,178	440	27	189	185	64	71,187
DTW	414,973	4,393	4,539	-	17	111	60	-	424,093
LAS	356,971	36,821	20,255	107,488	369	268	611	-	522,783
LAX	532,903	16,008	51,090	-	-	-	-	-	600,001
LGA	360,467	5,782	5,502	363	-	-	-	-	372,114
LIT	40,504	12,341	30,774	3,122	165	2,575	8,830	618	98,929
MEM	224,272	11,432	16,395	-	307	496	562	-	253,464
MIA	354,369	14,161	23,413	-	3	472	477	-	392,895
ORD*	858,143	5,475	5,483	-	-	175	18	-	869,294
SAV	32,120	12,905	26,946	1,574	2,796	1,028	2,757	658	80,784
SJC	95,412	16,236	20,542	-	-	42	232	-	132,464
SYR	32,740	3,001	24,643	1,479	26	285	489	395	63,058
TUS	44,129	10,361	42,063	6,826	16,663	1,237	1,314	407	123,000
SEA	215,792	2,307	90,819	-	-	-	-	-	308,918
2015									
ABQ	56,819	4,958	38,751	3,047	1,501	494	6,985	9,112	121,667
ALB	30,575	3,469	25,171	2,716	-	78	1,195	2,090	65,294
ATL	870,252	4,640	6,948	-	16	417	224	-	882,497
AUS	122,269	16,927	38,718	2,593	922	539	3,856	3,060	188,884
BDL	70,792	8,812	8,702	2,325	5	1,112	461	1,063	93,272
BFI	19,276	28,265	96,709	-	724	158	175	-	145,307
BIL	12,516	3,671	53,939	1,565	7	113	278	50	72,139
DSM	38,741	9,685	16,920	397	86	490	534	203	67,056
DTW	371,878	4,359	3,037	-	9	60	32	-	379,375
LAS	365,623	36,173	19,504	101,983	472	343	781	-	524,879
LAX	598,879	17,257	38,357	-	-	-	-	-	654,493

Table 7-5. Annual Flight Events by Aircraft Family (continued)

Airport Identifier	Commercial Jet	Civilian Jet, Other	Civilian Prop	Civilian Rotorcraft	Military Jet, Fighter	Military Jet, Other	Military Prop	Military Rotorcraft	Total
2015									
LGA	358,443	5,327	4,258	334	-	-	-	-	368,362
LIT	32,647	11,807	30,558	2,405	152	2,356	8,059	566	88,550
MEM	191,334	12,662	12,798	-	534	864	979	-	219,171
MIA	379,172	13,862	18,658	-	3	606	613	-	412,914
ORD	864,798	5,394	4,810	-	-	130	5	-	875,137
SAV	35,724	12,314	26,082	1,370	3,154	1,195	3,192	772	83,803
SJC	106,195	17,837	22,169	-	-	42	226	-	146,469
SYR	31,973	3,013	21,679	1,416	27	220	579	405	59,312
TUS	41,215	10,134	43,562	6,749	20,002	1,354	1,568	508	125,092
SEA	271,392	2,658	107,233	-	-	-	-	-	381,283

* For ORD, "2012-2013" is actually 2013-2014.

7.4.5 Define Study Area for Each Airport

INM requires a contour grid area to be defined for each airport. It is standard practice to base the extent of this area on the lowest value of DNL to be contoured or computed. For this project, the lowest DNL to be contoured is 50 dB. Although this project is basing its results on annual average daily operations, best practice is to base the extents of the study area on the 'busiest' day, i.e., the day with the most operations, because the DNL 50 dB contour of the busiest day will always be larger than the DNL 50 dB contour of the average day. Hence, once the pre-modeling runs were done and all days were ready for INM processing, the busiest day was selected and run to determine the size and shape of the DNL 50 dB contour with the following steps:

- Dominant operational flow days, i.e., days with most operations in each flow condition, were identified,
- DNL contours for dominant operational flow days were computed,
- Maximum extent of DNL 50 dB contour was determined from the DNL contours for the dominant operational flow days,
- Grid size was set to cover the maximum extent of the DNL 50 dB contour and
- Terrain grid was cropped to one nautical mile larger than the noise grid extent.

Additionally, all daily DNL 50 dB contours were examined to insure that none extended beyond the planned study area.

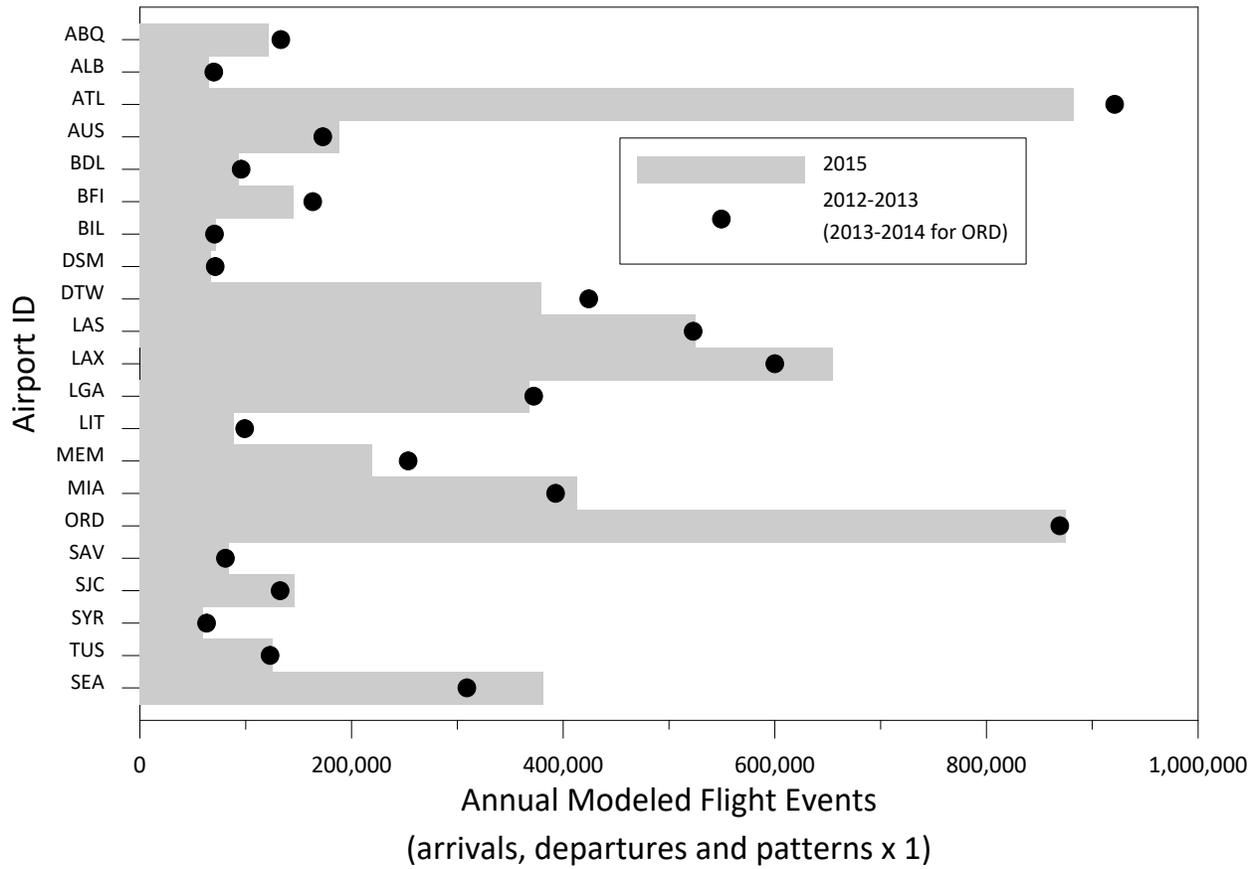


Figure 7-5. Total Flight Events for Both Data Years

7.5 Numbers of Operations and Final DNL Computations

Having created all the necessary model input data, as described in the preceding sections, only adjustments to operations numbers and error checking remained before producing the final output runs. Sections 7.5.1 through 7.5.2 detail the adjustments made and the output processing, respectively.

7.5.1 Scale and Balance Operations

The data source and standard for numbers of annual flight operations for each airport was traffic counts from the FAA’s ATADS for 2015. Because the operations numbers derived from flight tracking data may not have been equal to the ATADS counts, the former needed to be reconciled – scaled and balanced – to the 2015 ATADS counts. Scaling means adjusting the modeled operations to equal the FAA’s annual counts by aircraft category. Balancing means making the modeled arrival operations equal the modeled departure operations by aircraft type and FAA aircraft category. Aircraft categories were (FAA 2014):

- Air Carrier: Operations by aircraft capable of holding 60 seats or more and are flying using a three-letter company designator.
- Air Taxi: Operations by aircraft less than 60 seats and are flying using a three letter company designator or the prefix “Tango”.
- Military: all classes of military operations.
- General Aviation: Civil (non-military) aircraft operations not otherwise classified under air carrier or air taxi.

Operations were assigned to the FAA aircraft categories given the airline code from the radar flight tracking data and INM’s aircraft database (Weight and Owner Categories of the INM ‘aircraft.dbf’ file) and by manual inspection. Appendix F shows the ATADS data and its evolution through the scaling process. Except for the overall numbers of flight operations, the final noise modeling did not account for operational changes occurring at some of the study airports during the period between 2012 and 2015, nor any changes occurring during the survey period in 2015/2016.

Table 7-6 shows the total number of radar tracks used and the total number of operations modeled on those tracks because of the scaling and balancing process that assigned the total number of operations to the total number of usable radar tracks. For the 2015 data year, the ratios ranged from 1.02 (MEM)) to 1.95 (BFI), averaging 1.16. BFI, BIL and TUS had the highest ratios of the set of airports, i.e., between 1.46 and 1.95.

Table 7-6. Total Number of Tracks and Operations Modeled

Airport Identifier	Number of Flight Tracks	2012-2013* Annual Flight Operations Modeled (ATADS counts scaled to Number of Data Days)	2012-2013* Ratio of Operations to Flight Tracks	2015 Annual Flight Operations Modeled	2015 Ratio of Operations to Flight Tracks
ABQ	115,036	138,797	1.21	124,184	1.08
ALB	60,829	74,322	1.22	69,865	1.15
ATL	912,968	921,077	1.01	882,497	0.97
AUS	157,269	174,105	1.11	191,193	1.22
BDL	89,513	95,902	1.07	93,507	1.04
BFI	84,772	187,016	2.21	165,571	1.95
BIL	52,953	79,783	1.51	81,040	1.53
DSM	62,377	73,777	1.18	69,387	1.11
DTW	420,749	424,093	1.01	379,376	0.90
LAS	497,494	522,784	1.05	524,878	1.06
LAX	593,065	600,001	1.01	654,493	1.10
LGA	358,160	372,113	1.04	368,362	1.03
LIT	87,439	105,077	1.20	99,039	1.13
MEM	248,129	253,464	1.02	219,171	0.88
MIA	386,554	392,894	1.02	412,915	1.07
ORD	839,073	869,294	1.04	875,136	1.04
SAV	68,102	88,567	1.30	88,932	1.31
SJC	130,949	134,953	1.03	148,669	1.14
SYR	55,756	65,985	1.18	61,227	1.10
TUS	98,321	139,008	1.41	143,435	1.46
SEA	303,793	308,918	1.02	381,283	1.26

Note: Daylight Savings Time runs from the second Sunday in March at 02:00 a.m. until the first Sunday in November at 02:00 a.m. in all zones.

7.5.2 Final DNL Computations

After flight track counts were corrected, scaled and balanced, the data was packaged into an INM “Study” to produce a validation or “test” run. Once each test run of INM for each airport was verified to be error-free, a final run of all data days produced daily DNL values at each subject location.³⁸ Finally, the annual average DNL for each subject location was computed by energy averaging all results at every computation point³⁹ for each airport.

³⁸ The final modeling missed between 1 and 9 annual flight events at eight of the modeled airports and 275 flight events at BIL. The missing events did not significantly affect the resultant dose-response curves. See Appendix F for more detail.

³⁹ INM’s detailed grid method was used to compute the specific values at each subject location.

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8 Dose-Response Curves

The main purpose of the NES was to produce updated dose-response curves relating the predicted annual average daily noise exposure of residents near airports with their self-reported levels of annoyance. This section provides individual dose-response curves for each of the 20 airports (Section 8.1) and the dose-response curve for all 20 airports together, referred to as the national curve (Section 8.2). These curves were developed using a statistical model based upon all mail questionnaire responses, which allowed for variation among the airports while combining them to produce a national curve.

The logistic regression model from FICON (1992) was used as the basis of the functional form of the individual airport and national curves. In addition to the historical consistency of this choice, alternative models were examined with the result that the model fit for logistic regression was found to require the fewest assumptions, offer the greatest flexibility, and yet provide a good fit to the observed data (see Appendix G). OMB also approved the method. The model in Equation (8.1) gives the predicted percent HA:

$$\text{Percent HA} = \frac{100 \exp(\beta_0 + \beta_1 \text{DNL})}{1 + \exp(\beta_0 + \beta_1 \text{DNL})} \quad (8.1)$$

Details of the mathematical formulations of the individual airport and national models and of the computational methods used to fit the models are given in Appendix H. All data analyses in Chapters 8 and 9, and in Appendices E, G, H, I and J, were generated using SAS/STAT® software, Version 9.4.⁴⁰

The outcome variable HA was defined using the responses to Question 5e of the mail questionnaire. Question 5 asked: “Thinking about the last 12 months or so, when you are here at home, how much does each of the following bother, disturb or annoy you?” and part e of the question asked about “Noise from aircraft.” HA was set equal to one if the respondent reported being “very” or “extremely” annoyed by aircraft noise, and was set equal to zero if the respondent reported being “not at all,” “slightly,” or “moderately” annoyed by aircraft noise.⁴¹

8.1 Dose-Response Curves for Individual Airports

Table 8-1 gives the model coefficients, standard errors, and 95 percent confidence intervals for the fitted curves from each of the 20 sampled airports. Figure 8-1 displays the 20 individual airport curves.⁴² Separate graphs for each airport, showing the curve, 95 percent confidence bands, and data points summarizing percent HA for groups of respondents, are presented in Appendix I.

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⁴¹ Sixty-seven of the respondents checked more than one response to Question 5e. For example, 13 respondents checked both 4 (very) and 5 (extremely) annoyed. For respondents who checked more than one response, we calculated the average of the checked values and defined HIGH_ANNNOY to be one if the average was 4 or greater and zero otherwise. For 40 of the 67 cases, the checked categories were entirely within the set {1, 2, 3} or the set {4, 5}.

⁴² To protect the confidentiality of the respondents, each curve is drawn from DNL 50 dB to a maximum value of DNL that is rounded to a multiple of 5 near the highest DNL value. The range of DNL displayed for each airport was determined as follows. The respondents were categorized into five DNL groups: 55 dB or less, 55-60 dB, 60-65 dB, 65-70 dB, 70 dB or greater. The number of respondents in each group was calculated, and the graph was extended to the boundary of the largest DNL group that has at least 20 respondents, where the boundary of the highest DNL group is set to 75 dB. For example, if an airport has 250 respondents with DNL less than 55 dB, 250 respondents in the range 55-60 dB, and 3 respondents above 60 dB, the curve is displayed from DNL 50 dB to DNL 60 dB. Alternatively, if an airport has 240 respondents with noise exposure less than 55 dB, 240 respondents in 55-60 dB, and 23 respondents in 60-65 dB, the curve is displayed from DNL 50 dB to DNL 65 dB.

Table 8-1. Model Coefficients for Individual Airport Curves

Airport Identifier	Intercept	Standard Error of Intercept	Lower 95% Confidence Limit of Intercept	Upper 95% Confidence Limit of Intercept	Slope	Standard Error of Slope	Lower 95% Confidence Limit of Slope	Upper 95% Confidence Limit of Slope
ABQ	-6.1563	2.1591	-10.4250	-1.9521	0.1093	0.0406	0.0302	0.1894
ALB	-8.2847	1.5698	-11.4155	-5.2521	0.1355	0.0279	0.0815	0.1911
ATL	-8.3554	1.0956	-10.5485	-6.2480	0.1379	0.0182	0.1027	0.1743
AUS	-11.4847	1.6807	-14.8551	-8.2546	0.1903	0.0298	0.1330	0.2499
BDL	-6.9470	1.3290	-9.5961	-4.3781	0.1124	0.0233	0.0674	0.1587
BFI	-6.5752	1.1655	-8.8959	-4.3210	0.1031	0.0195	0.0652	0.1419
BIL	-13.8302	2.2344	-18.3277	-9.5522	0.2395	0.0407	0.1614	0.3213
DSM	-8.6299	1.4657	-11.5504	-5.7968	0.1387	0.0254	0.0895	0.1892
DTW	-5.9880	1.3581	-8.6806	-3.3507	0.1059	0.0237	0.0598	0.1530
LAS	-6.6325	1.0178	-8.6646	-4.6697	0.1025	0.0169	0.0699	0.1361
LAX	-5.7330	0.8695	-7.4677	-4.0548	0.0930	0.0137	0.0665	0.1204
LGA	-13.1473	1.2944	-15.7651	-10.6832	0.2125	0.0214	0.1718	0.2556
LIT	-8.0593	1.4986	-11.0430	-5.1606	0.1395	0.0271	0.0871	0.1934
MEM	-8.9629	1.0223	-11.0252	-7.0113	0.1388	0.0163	0.1077	0.1715
MIA	-12.6290	1.2452	-15.1485	-10.2599	0.2005	0.0201	0.1622	0.2412
ORD	-10.5999	1.1034	-12.8285	-8.4963	0.1840	0.0185	0.1488	0.2214
SAV	-9.1981	1.9600	-13.0964	-5.4026	0.1566	0.0355	0.0878	0.2270
SJC	-10.7487	1.4209	-13.6010	-8.0228	0.1782	0.0245	0.1312	0.2273
SYR	-3.4425	1.3248	-6.0567	-0.8563	0.0489	0.0234	0.00307	0.0951
TUS	-7.3388	1.3725	-10.0761	-4.6882	0.1399	0.0242	0.0933	0.1882

This graph displays the estimated dose-response curve for each airport. The y-axis is the estimated percent highly annoyed and the x-axis is the noise exposure, measured by the DNL in decibels. At noise exposure of DNL 50 dB, at the left side of the graph, the predicted percent highly annoyed ranged from about 7 percent to 40 percent. At noise exposure of DNL 75 dB, the four airports with this level of noise exposure have percent highly annoyed ranging from about 75 percent for LAX to about 95 percent for ORD. The individual airport curves do not independently provide a complete picture of the national response to aircraft noise.

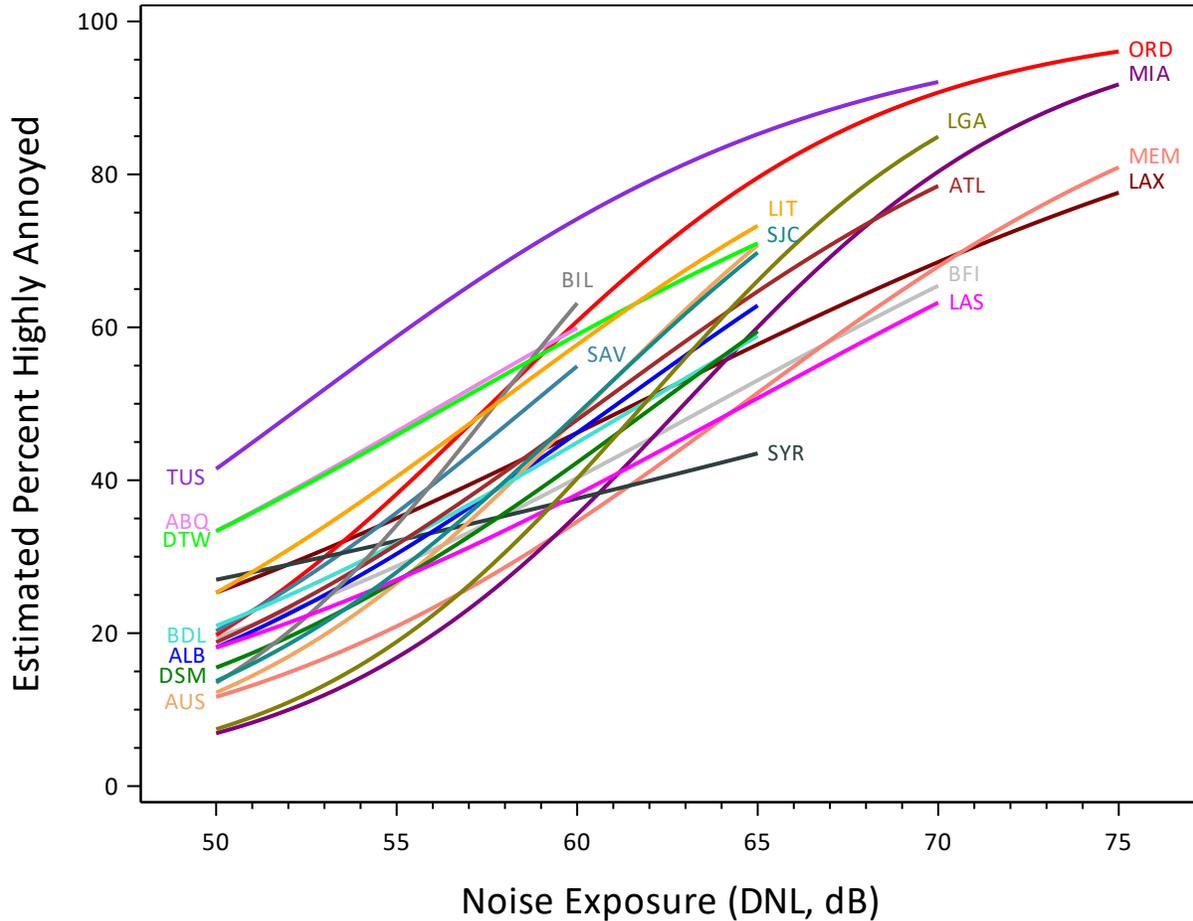


Figure 8-1. Individual Dose-Response Curves for all 20 Airports

8.2 National Dose-Response Curve

The national curve is a current national estimate of the relationship between noise and perceived annoyance based on a representative sample of airports and of residents living near them. It was created by combining the data from all of the individual airports into a single dataset. That combined dataset was used to estimate the parameters in a model that included the airports as random effects, (i.e., treating them as a random sample that is drawn from a larger population of all airports), thereby incorporating an estimate of the variation present had we drawn a different sample of airports. The approach uses all available data to create a national curve, while at the same time provides an estimated dose-response curve for each individual airport. In this way, the national curve can be considered a weighted average of all the sampled airports, taking into account how precisely the model fits each airport. The dose response is similar for most of the airports. Consequently, this approach gives more precise estimates of the model parameters by combining all airport data in a single model than if separate estimates for each airport, based on their own smaller sample, were simply averaged. In this analysis, airports with a more precise fit are given somewhat greater weight in producing the national average.

An alternative approach would have been to create separate curves for each airport independently, and then average equally the resulting slopes and intercepts to obtain a national curve. For comparison purposes, this method was evaluated and was shown to produce results within a few percentage points of the selected method. Appendix H (Section H.2) gives the mathematical formulation of this model. The alternative approach, while potentially more straightforward, would not have produced individual airport curves, a

national curve, and tests for all the parameter estimates in a single analysis informed by all the data. However, the method employed herein is able to do all of this.

Equation (8.2) displays the equation for the national curve.

$$\text{Percent HA} = \frac{100 \exp(-8.4304 + 0.1397 \text{ DNL})}{1 + \exp(-8.4304 + 0.1397 \text{ DNL})} \quad (8.2)$$

Table 8-2 repeats the model's coefficients, and provides their standard errors and 95 percent confidence intervals.

Table 8-2. Model Coefficients for the National Dose-Response Curve

Coefficient	Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Intercept, β_0	-8.4304	0.5789	-9.6420	-7.2187
Slope, β_1	0.1397	0.0098	0.1192	0.1602

Figure 8-2 graphically displays the dose-response curve and can be used to estimate a 95 percent confidence interval on an estimated percent HA for a given DNL. The dashed lines result from incorporating all responses from all sample airports into a single model estimating both the predicted annoyance and the confidence interval for that estimate. The national curve results in approximately 20 percent HA at DNL 50 dB, 66 percent HA at DNL 65 dB and 79 percent HA at DNL 70 dB. See Appendix H for definition of the 95 percent confidence interval.

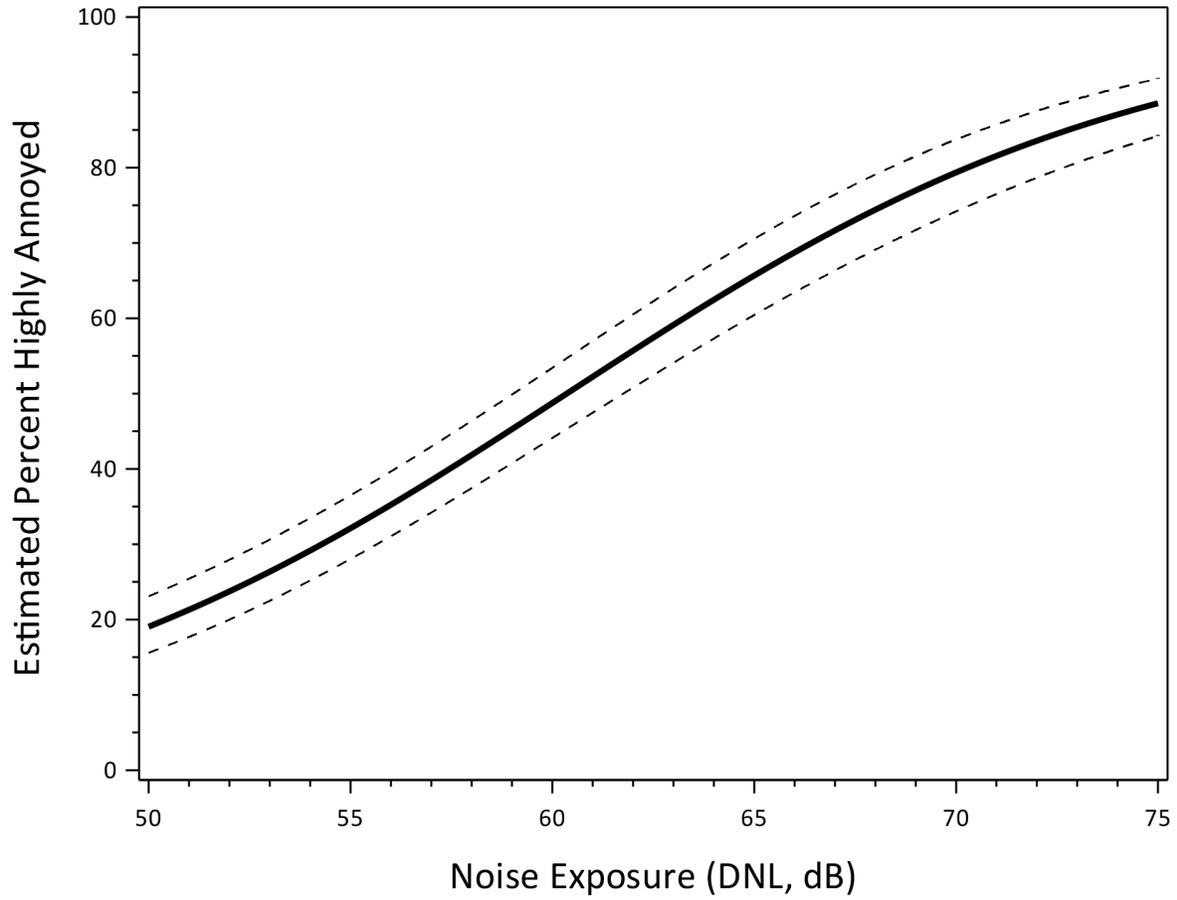


Figure 8-2. National Dose-Response Curve (solid line), with 95 Percent Confidence Intervals on Annoyance for a Given DNL (dashed lines)

Figure 8-3 displays the national curve along with a shaded region showing the range of the curves for each of the 20 airports from Figure 8-1. The national curve is approximately in the middle of the range of the individual airport curves. See Section 9.4 for discussion of airport-to-airport differences.

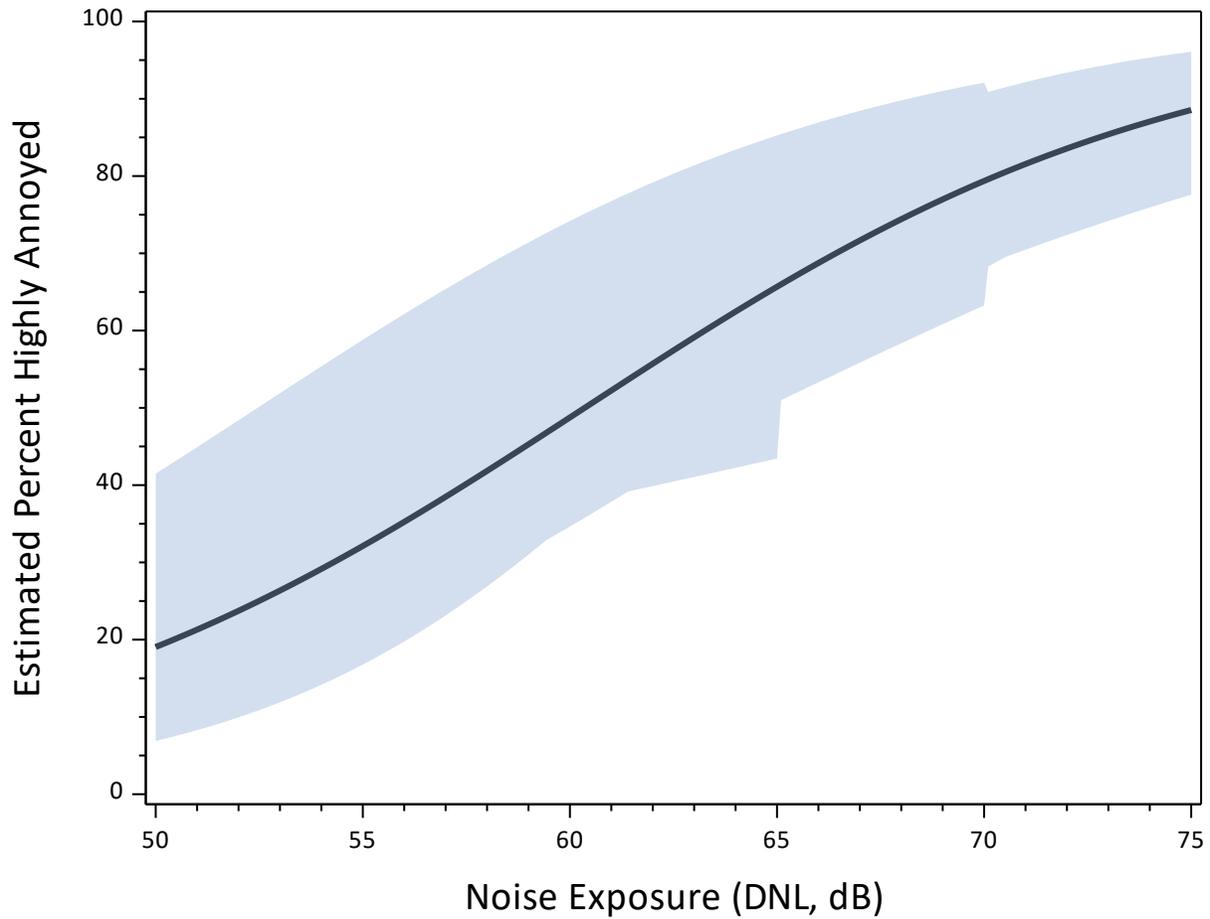


Figure 8-3. National Dose-Response Curve (solid line), Compared to Range (shaded area) of the 20 Individual Airport Dose-Response Curves

Figure 8-4 compares the national curve to four other curves from frequently cited research:

- the FICON (1992) curve,
- two community tolerance level analyses from Equation (G.1) of the International Organization for Standardization (ISO) (2016), and
- the Netherlands Organisation for Applied Scientific Research (TNO) curve at the bottom of page 4 of Janssen and Vos (2011), also given as Equation (H.3) in ISO (2016).

The dashed lines indicate the 95 percent confidence interval for a predicted percent HA for a given DNL.

The FICON, ISO and TNO equations are shown below as Equations (8.3) through (8.5), respectively. In Equation (8.4), the value of the constant depends on the adjustment used for aircraft noise. Figure 8-4 shows the ISO curve for values of the constant equal to 65 and 68, to represent the range of recommended adjustments for aircraft noise.

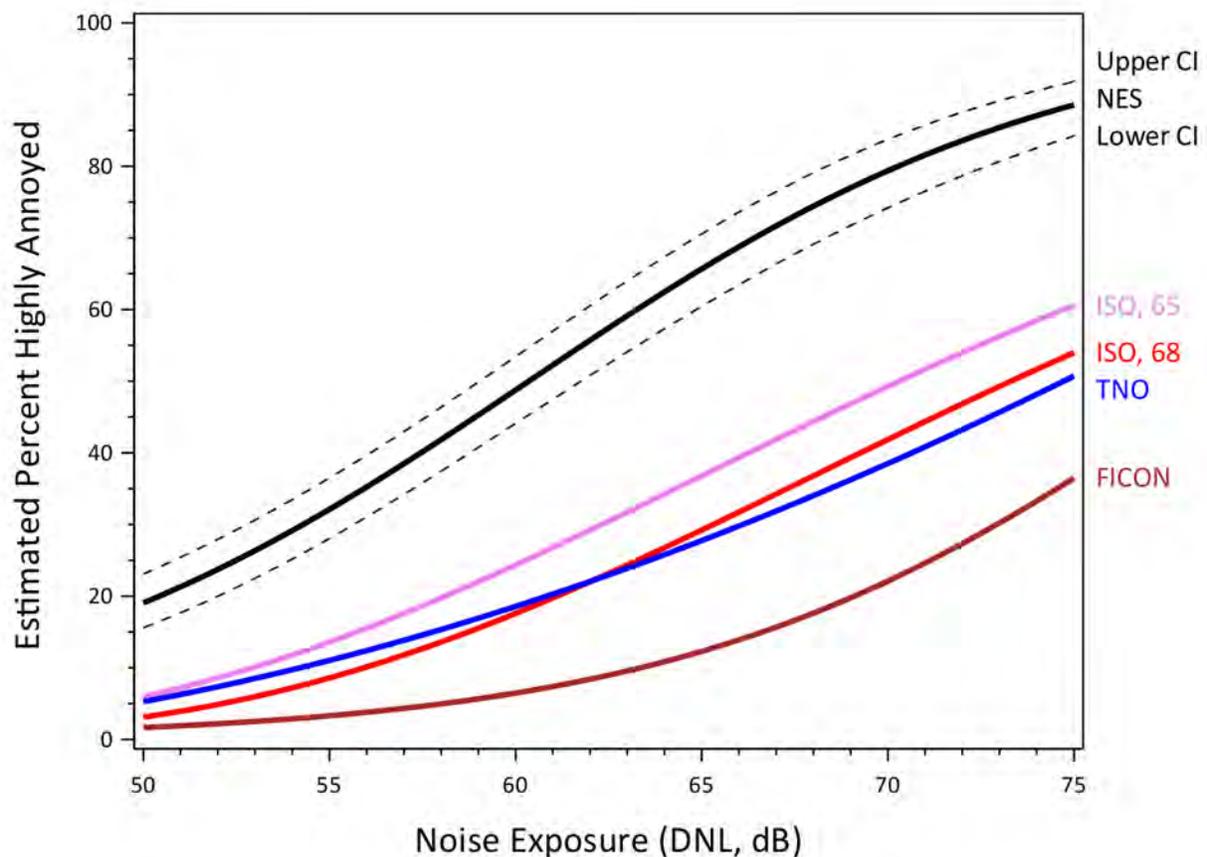


Figure 8-4. National Dose-Response Curve (NES), with 95 Percent Confidence Intervals (CI) on Annoyance for a given DNL. TNO, FICON and ISO Curves with Constants 65 and 68 are Shown Below the National Curve

$$\text{Percent HA}_{\text{FICON 1992}} = \frac{100 \exp(-11.13 + 0.141 \text{ DNL})}{1 + \exp(-11.13 + 0.141 \text{ DNL})} \quad (8.3)$$

$$\text{Percent HA}_{\text{CTL ISO 2016}} = 100 \exp \left\{ - \left[\frac{1}{10^{0.1[\text{DNL} - \text{constant}]}} \right]^{0.3} \right\} \quad (8.4)$$

$$\text{Percent HA}_{\text{TNO}} = -1.395\text{E-}04 \times (\text{DNL} - 42)^3 + 4.081\text{E-}02 \times (\text{DNL} - 42)^2 + 0.342 \times (\text{DNL} - 42) \quad (8.5)$$

Figure 8-5 shows the curve along with estimates of percent HA for groups of observations from the individual airports.⁴³ Note that the dashed lines in Figure 8-5 and their actual values given in Table 8-3 describe the precision of estimated HA for a given DNL from the national model. They are not a reflection of the much more variable distribution of the points, which represent the variation in individual annoyance responses. In a similar way, the sample mean is much less variable than the individual observations used to compute it.

In Figure 8-5, the national curve is near the middle of the points from DNL 50 dB up to about DNL 68 dB. Above DNL 68 dB, there is some divergence between the curve and the data points from the airports that have high noise exposure. This divergence occurs in part because the national curve can be thought of as “averaging” the individual dose-response curves (Appendix H, Section H.2), and the results greater than DNL 70 dB are extrapolated for the thirteen airports (see Table 4-4) that have no data greater than DNL 70 dB.

Figure 8-5 has been simplified with DNL aggregated into eight bins to address Personally Identifiable Information (PII) considerations (i.e., to protect respondent anonymity). However, the actual curve fitting was conducted with the original non-binned data.

Sensitivity analyses, presented in Appendix G, confirmed that the curve fits the data well under alternative models for DNL less than 70 dB: The curves from the alternative models were inside the confidence limits shown in Figure 8-2 for all values of DNL between 50 and 70 dB. However, some of the alternative models predicted less annoyance than the curve shown in Figure 8-2 for values of DNL greater than 70 dB. Caution should be used when employing the logistic regression curve to predict a national value of percent HA for values of DNL greater than 70 dB. There were relatively few observations in the data set greater than 70 dB, so the data provide less information for the form of the curve in that region than in the region with DNL less than 70 dB.

⁴³ The data points were calculated as follows. For each airport, the respondents were classified into DNL groups of width 3 dB: less than 52.5, 52.5 to 55.5, 55.5 to 58.5, 58.5 to 61.5, 61.5 to 64.5, 64.5 to 67.5, 67.5 to 70.5, and 70.5+. Any group with fewer than 20 respondents was merged with the group to its left to protect respondent confidentiality. The percent HA was calculated for each group and airport was plotted against the midpoint of the DNL range (the midpoints are 51, 54, 57, 60, 63, 66, 69, and 72). All 20 airports had points plotted at DNL 51 dB; only the four airports with at least 20 respondents above DNL 70.5 dB had points plotted at DNL 72 dB.

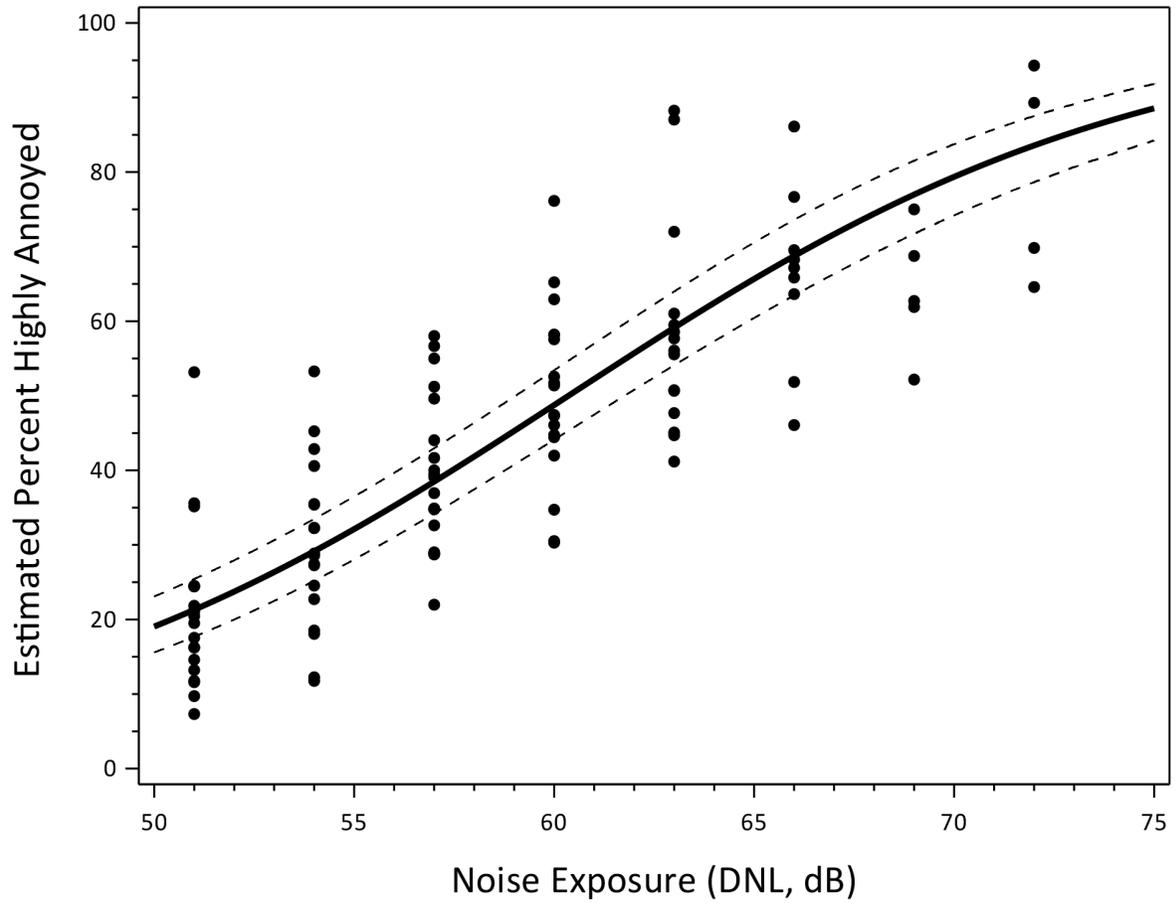


Figure 8-5. National Dose-response Curve, With 95 Percent Confidence Intervals on Annoyance for a given DNL, Displayed with 5-dB binned (see previous footnote) Point Estimates of Percent HA from Individual Airports

Table 8-3 shows the predicted percent HA from the model in Equation 8.2, for DNL between 50 and 70 dB.

Table 8-3. Predicted Percent HA at Selected Noise Exposures, from National Dose-response Curve

DNL Value (dB)	Predicted Percent HA	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
50	19.1	1.9	15.4	23.4
51	21.3	2.0	17.5	25.7
52	23.7	2.0	19.8	28.2
53	26.4	2.1	22.2	30.9
54	29.2	2.1	24.9	33.8
55	32.1	2.2	27.8	36.8
56	35.2	2.2	30.8	40.0
57	38.5	2.2	33.9	43.3
58	41.8	2.3	37.2	46.7
59	45.3	2.3	40.5	50.2
60	48.8	2.4	43.8	53.7
61	52.2	2.4	47.1	57.3
62	55.7	2.5	50.5	60.8
63	59.1	2.5	53.7	64.3
64	62.5	2.6	57.0	67.7
65	65.7	2.6	60.1	70.9
66	68.7	2.6	63.1	73.9
67	71.7	2.6	66.0	76.7
68	74.4	2.6	68.7	79.4
69	77.0	2.5	71.3	81.8
70	79.4	2.4	73.8	84.0

8.3 Considerations for Interpreting the Curves

The interpretation of a regression model for summarizing the relationship between a response variable y (here, the indicator variable percent HA defined at the beginning of this section) and an explanatory variable x (here, DNL) in a population depends on several factors:

1. Representativeness of the sample with respect to the population,
2. Functional form of the regression model and how well it fits the data,
3. Method for measuring y and the accuracy of the y values, and
4. Method for measuring x and the accuracy of the x values.

In the NES, residents in each of the 20 airport communities were surveyed with the same survey design and protocol, using the same questionnaire, and over the same period. Previous studies used different survey methods and measurements of annoyance. Janssen et al. (2011) reviewed literature finding that some of the differences among previous studies could be explained by the study design and sample selection methods. Some of the studies that served as the foundation of the ISO, TNO, and FICON curves used telephone or face-to-face survey administration, or used different mailing and nonresponse follow-up protocols for a mail survey; measured highly annoyed using a different instrument or different scale; had different response rates; surveyed the population for only part of a year rather than the whole year; and used different methods for computing DNL for respondents. The data for the studies were collected from different countries and in different languages. Importantly, many of the prior studies included noise from a variety of transportation sources.

The ISO and TNO curves from Equations (8.4) and (8.5) were fit using statistical models of different form than the two-parameter logistic regression model in Equation (8.1). The ISO curve used a log-log link function instead of the logit link function used in Equation (8.1), and it fixed the slope of the equation at a predetermined value instead of estimating it from the data see Appendix G, Section G.4 for a discussion of the model used for the ISO curve. The TNO model (Janssen and Vos, 2011) is a polynomial approximation to the results from a grouped regression model (Groothuis-Oudshoorn and Miedema, 2006) in which the individual airport study intercepts are random effects; as discussed in Appendix H, Section H.2, the model used for the national curve in Equation (8.2) uses random effects for both the slopes and the intercepts.

The NES national curve may differ from dose-response curves from other studies because the relationship between noise exposure and annoyance has changed since the earlier studies, but the differences may alternatively be due to differences in study design, implementation, measurement, cultural differences for studies occurring in other countries, or a combination of these factors. In addition, advances in technology and statistical theory have resulted in changes in methodology that were not available for some of the previous studies. Many of these aspects are discussed in the following subsection, along with implications for comparing the estimated dose-response curves from the NES with other dose-response curves in the literature.

8.3.1 Sample Representativeness

As described in Chapter 3, the sample of airports in the NES was selected using balanced probability sampling so that it is representative of the population of 95 airports with respect to the factors listed in Table 3-2. Within each airport, a stratified random sample of addresses, stratified by noise exposure, was taken at each airport, ensuring that the sample of addresses selected from each noise stratum is representative of the population of addresses in that noise stratum.

Although the address-based sampling method used in the NES has been demonstrated to have greater response rates than alternative methods of data collection such as telephone surveys (National Research Council, 2013, Chapter 4) and the ACRP study showed the response rate from the mail administration to be much greater than that of a telephone survey (Miller et al. 2014a), there was still nonresponse to the survey. If the nonrespondents differ from the respondents, and if those differences cannot be controlled for through statistical modeling or weighting, then the sample may not be fully representative of the population (Brick 2013).

The dose-response curves in Sections 8.1 and 8.2 are constructed using data from the respondents to the survey. The survey has no information on the annoyance level of the nonrespondents. Westat conducted analyses to investigate whether respondents and nonrespondents differed on characteristics that are known for every sampled address, whether respondent or not. Appendix E reports the nonresponse bias analyses performed for the survey. To conduct a further exploration of potential nonresponse bias, the model was refit to data using nonresponse-adjusted weights. The curve from this model, reported in Appendix G (Section G.3), was visually indistinguishable from the curve fitted without weights from Figure 8-2. This indicates that the dose-response relationship is unaffected by nonresponse bias adjustments that can be done using information from the sampling frame, and provides evidence that nonresponse bias is not detected from the information known from the sampling frame. However, the information known about both respondents and nonrespondents is limited, and it is possible that respondents and nonrespondents differ on characteristics not known in the sampling frame, including their annoyance to aircraft noise.

8.3.2 Regression Model Form

The analysis reported in this section used the two-parameter logistic regression model from Equation (8.1) to summarize the dose-response relationship, as requested by FAA. The logistic regression model is widely used to model dose-response relationships because it can fit many different possible sigmoidal shapes (Cox and Snell 1989). As with any parametric model, the two-parameter logistic regression model assumes a specific form for the relationship between percent HA and noise exposure. In particular, the logistic model is

symmetric about the point where 50 percent are highly annoyed.⁴⁴ The model also assumes that the percent HA always increases as DNL increases.

Appendix G evaluates the fit of the model for the individual-airport and national dose-response curves. Overall, for DNL below 70 dB, the predicted percent HA from the two-parameter national logistic model is similar to the predicted percent HA for alternative models that were fit to the data. As shown in Appendix G (Figure G-1), for DNL greater than 70 dB, some of the alternative models predicted less percent HA than the logistic model. An alternative one-parameter model from Fidell et al. (2011) exhibited significant lack of fit for the NES data, as presented in Appendix G (Section G.4).

8.3.3 Methodology and Accuracy of Measurement of Highly Annoyed

Chapter 2 described the development of the NES methodology and the question used to classify a respondent as being highly annoyed. Annoyance was measured following procedures developed by IC BEN (Fields et al. 2001), recommended by ISO (2016), including the use of a five-point verbal scale, which is widely used in current surveys. Respondents answering "Very" or "Extremely" annoyed are counted as HA as opposed to those answering "Not at all", "Slightly" or "Moderately" annoyed. Some laboratory research has shown that people rate "Very" and "High" as expressing equivalent degrees of annoyance (Fields et al. 2001). Many earlier surveys, including many of those in the FICON analysis (1992), derived their annoyance indicator from survey questions that differed in such features as: the use of numeric rather than verbal scales, the language of administration, the reaction (not always "annoyance"), the number of scale points, the verbal labels for the scale points ("highly" has not been offered as a choice in surveys), and whether the scale is presented in as single question or is broken into two parts with a screening question. The NES mail questionnaire only asked about aircraft noise annoyance as part of a rating of thirteen neighborhood conditions. As a result, respondents in the NES mail survey, as for most recent surveys, did not know that aircraft noise was the focus of the inquiry when answering the question. Noise annoyance surveys differ considerably from one another in many ways that sometimes affect survey responses (Groves et al. 2011) and might affect annoyance responses. Examples include the season of administration, the mode of questioning (mail, telephone, face-to-face, etc.), the method for identifying households, whether the respondent within a household is self-selected or selected by the survey, and the context set by any introductory materials including the identification of the survey purpose and sponsor.

8.3.4 Methodology and Accuracy of DNL Modeling

Chapter 7 described the methodology used by the NES to calculate the value of DNL for each sampled address in the research effort, and the steps taken by HMMH to ensure the accuracy of those calculations. Westat performed internal consistency checks to verify that the values of DNL used in the model were consistent with the noise contours that had been used when selecting the sample.

8.3.5 Comparison with Other Curves

A comparison of the NES curves to other curves in the literature should consider the populations from the studies and how well the samples represent those populations, and how well the statistical models that are employed summarize the information from those studies. It also needs to account for differences in the methodology for measuring HA and possible differences in the calculation of DNL. The survey methodology used in the NES follows current best practices in public opinion / social science research. These methods

⁴⁴ Dobson and Barnett (2008, Section 7.3) review alternative models that can be used for dose-response relationships, including probit and complementary log-log link models. The different models give similar results for predicted percentages between 30 and 70 percent but may differ slightly for predicted percentages close to 0 and 100 percent. In particular, log-log and complementary log-log link models do not have the symmetry property of the logistic and probit models. The log-log link model has a shallower slope than the logistic model when the predicted percentage is close to 100 percent and a steeper slope when the predicted percentage is close to 0 percent.

were tested and refined following a pilot test (ACRP 02-35) and have been commonly used for recent major surveys by other Federal agencies such as the Federal Highway Administration, National Cancer Institute and the Department of Education.⁴⁵

Figure 8-4 shows that the TNO, ISO, and FICON curves fall outside of 95 percent confidence limits for the national curve fit to the NES data. This indicates that the NES curve is statistically significantly different from the mathematical functions used to summarize those curves. However, each of the TNO, ISO, and FICON curves is an estimate based on airport surveys that had been conducted in the past and on samples of respondents in those surveyed airports. These surveys also had sampling and nonsampling errors, and a proper significance test would need to account for the errors in the studies used to construct the TNO, ISO and FICON estimates.

The model for the NES in Equation (8.1) used the same functional form as the FICON (1992) curve. Table 8-4 compares the coefficients from the two curves. The estimated slope from the FICON (1992) curve is close to that of the NES curve. The intercept for the NES curve, however, is greater than the FICON value of -11.13. The estimated coefficients indicate that the rate of increase in percent HA with increasing DNL is consistent with the earlier FICON results. However, it appears that the percent HA for a given DNL has increased over that previously observed in FICON.

Table 8-4. Comparison of NES and FICON (1992) Coefficients

Coefficient	Estimate from NES Curve	Lower 95% Confidence Limit for NES Curve	Upper 95% Confidence Limit for NES Curve	Estimate from FICON (1992)
Intercept, β_0	-8.4304	-9.6420	-7.2187	-11.13
Slope, β_1	0.1397	0.1192	0.1602	0.141

The increase in annoyance at all levels of DNL exposure should be placed in context with the timeframe of this research effort. The FICON curve utilized data from the 1960s through 1980s and is now several decades old. Over that timeframe, the public may have become increasingly sensitive to aircraft noise at a given DNL, perhaps due to differences in the nature of sound exposure (e.g., changes in operations, frequency of flights), differences in study design, country surveyed, implementation and measurement, changes in attitudes, or a combination of these factors. Meta-analysis of more recent studies has also found higher levels of aircraft noise annoyance compared to historical curves (Guski et al. 2017). Further research is underway by the project team to examine historical trends in aircraft noise annoyance data, including comparisons to other recent research.

⁴⁵ These recurrent major Federally-funded national surveys have all transitioned from telephone to mail data collection over the past decade: National Household Travel Survey, Federal Highway Administration, Department of Transportation - <https://www.nationalhouseholdtravelsurvey.com/>
Health Information National Trends Survey (HINTS), National Cancer Institute - <https://hints.cancer.gov/>
National Household Education Surveys, National Center for Education Statistics, Department of Education - <https://nces.ed.gov/nhes/>

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9 Additional Factors Analyzed

Additional analyses were performed to investigate whether the airport-to-airport differences in the dose-response curves could be partially explained by other factors. It is important to note that the final list of factors was determined before the end of data collection and before data analysis on the dose-response curves commenced. Thus, they are considered pre-planned hypotheses. The scientific community has established that posing hypotheses after exploring patterns in the data, known as data fishing or p-hacking, leads to more false positive findings (Head et al. 2015). The American Statistical Association Statement on Statistical Significance and P-Values (Wasserstein and Lazar 2016) provides guidance for interpreting the results of statistical tests. Note that although multiple hypotheses are considered in this section, the results presented were not adjusted for multiple testing. The results given below consider the comparison-wise error rate, not the familywise error rate (see Oehlert (2000), Chapter 5, for a discussion of the two error rates).

The FAA identified the following six factors to be examined:

1. Climate
2. “Visible” Flight Events
3. “Noticeable” Flight Events
4. “Relatively Important” Flight Events
5. Race/Ethnicity
6. Income

The factors associated with each analysis area are described briefly in Table 9-1 and in detail in Appendix J along with their rationale. Income was not asked on the NES mail questionnaire and was studied using census block group statistics from the American Community Survey. For race/ethnicity, the variable MINORITY was defined using respondents’ self-reported information. Climate was characterized by the sum of Cooling Degree Days and Heating Degree Days. A flight event was defined as ‘visible’ if it was at least 45° above the horizon and within a slant distance of 12,000 feet of the respondent. A flight event was ‘noticeable’ if it had a Maximum (A-weighted) Sound Level (L_{max}) of at least 50 dB at the respondent’s location.⁴⁶ A flight event was ‘relatively important’ if it was one of the events contributing up to 1 dB of the total DNL at the respondent’s location.

The analyses in this section investigate whether, after controlling for DNL, these factors are related to the overall level of aircraft noise annoyance or moderate the relationship between annoyance and noise exposure as measured by DNL. Section 9.1 addresses the climate analysis. Section 9.2 addresses the analyses for the three flight event metrics and Section 9.3 addresses the race/ethnicity and income analyses.

⁴⁶ The concept of “noticeability” here means that some aspect of aircraft flights, possibly in addition to their sound level, may raise awareness of the planes and hence increase the annoyance.

Table 9-1. Additional Factors Studied

Factor	Definition
DEGREEDAYS (Climate)	Sum of the number of annual cooling degree days and heating degree days for the airport. A degree day is the difference between the day’s mean temperature and 65 degrees Fahrenheit. It is termed a ‘cooling degree day’ if the day’s mean temperature is greater than 65 degrees Fahrenheit and a ‘heating degree day’ if the day’s mean temperature is less than 65 degrees Fahrenheit.
VISIBLE	Number of flights for which the point of closest approach has an elevation angle greater than or equal to 45 degrees above the horizon, and with a slant distance less than 12,000 feet.
NUMBERABOVE50 (‘Noticeable’)	Number of modeled aircraft events at or above a maximum sound level (L_{max}) of 50 dBA at the sampled address during the calculation period.
IMPORTANT	Number of aircraft operations that produce a DNL value within 1 dB of the total DNL value for all aircraft operations at the sampled address during the calculation period.
MINORITY (Race/Ethnicity)	1 if the respondent reported being Hispanic or selected one or more of the following race categories: Black or African American, American Indian or Alaska Native, Asian, or Native Hawaiian or Other Pacific Islander; 0 if the respondent reported being non-Hispanic and selected only the White category for race.
PCTBELOWPOVERTY (Income)	Percentage of population below the poverty level in the census block group containing the sampled address, calculated from the 2010-2014 American Community Survey five-year estimates.

9.1 Degree Heating and Cooling Days

The variable DEGREEDAYS is an airport-level characteristic, i.e., the variable has the same value for all addresses at an airport. The other variables in Table 9-1 vary among respondents from the same airport community. While the variable DEGREEDAYS could potentially be associated with differences in the overall level of annoyance between airports, it cannot be used to explain differences among households residing near the same airport.

The variable DEGREEDAYS was analyzed by including an extra term in the model in Equation (8.1), as described in Section G.3. The model fit is Equation (9.1).

$$\text{Percent HA} = \frac{100 \exp(\beta_0 + \beta_1 \text{DNL} + \beta_2 \text{DEGREEDAYS})}{1 + \exp(\beta_0 + \beta_1 \text{DNL} + \beta_2 \text{DEGREEDAYS})} \tag{9.1}$$

The estimated model coefficients, along with standard errors and 95 percent confidence intervals, are given in Table 9-2.

Table 9-2. Model Coefficients for Model with DEGREEDAYS

Coefficient	Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Intercept, β_0	-8.4154	0.6862	-9.8516	-6.9792
DNL, β_1	0.1397	0.0100	0.1187	0.1607
DEGREEDAYS, β_2	-0.000003	0.00005	-0.0001	0.0001

The estimated coefficient for DEGREEDAYS (β_2) is not significantly different from zero ($T = 0.003$, $p\text{-value} = 0.96$). There is no evidence that households near airports with higher total degree heating and cooling days have higher, or lower, levels of annoyance to aircraft noise.

The results from the model reported in Table 9-2 indicate that a linear term for DEGREEDAYS does not help explain airport-to-airport differences in annoyance. Because DEGREEDAYS is an airport-level characteristic, an

additional graphical analysis could be performed to display the lack of relationship between DEGREEDAYS and percent HA. Figure 9-1 displays the predicted percent HA at DNL 55 dB for each of the 20 sampled airports, related the value of DEGREEDAYS for that airport. The predicted values of percent HA were calculated by substituting the airport-specific regression coefficients from Table 8-1 into the model in Equation (8.1).⁴⁷ If DEGREEDAYS helped explain airport-to-airport differences in annoyance at DNL 55 dB, one would expect to see a trend in the graph. However, there is no apparent trend in Figure 9-1: airports with high values of percent HA at DNL 55 dB, and airports with low values of percent HA at DNL 55 dB, appear at high, low, and middle values of DEGREEDAYS. Figures 9-2 and 9-3 show a similar lack of relationship between DEGREEDAYS and predicted percent HA at DNL 60 dB and predicted percent HA at DNL 65 dB, respectively.

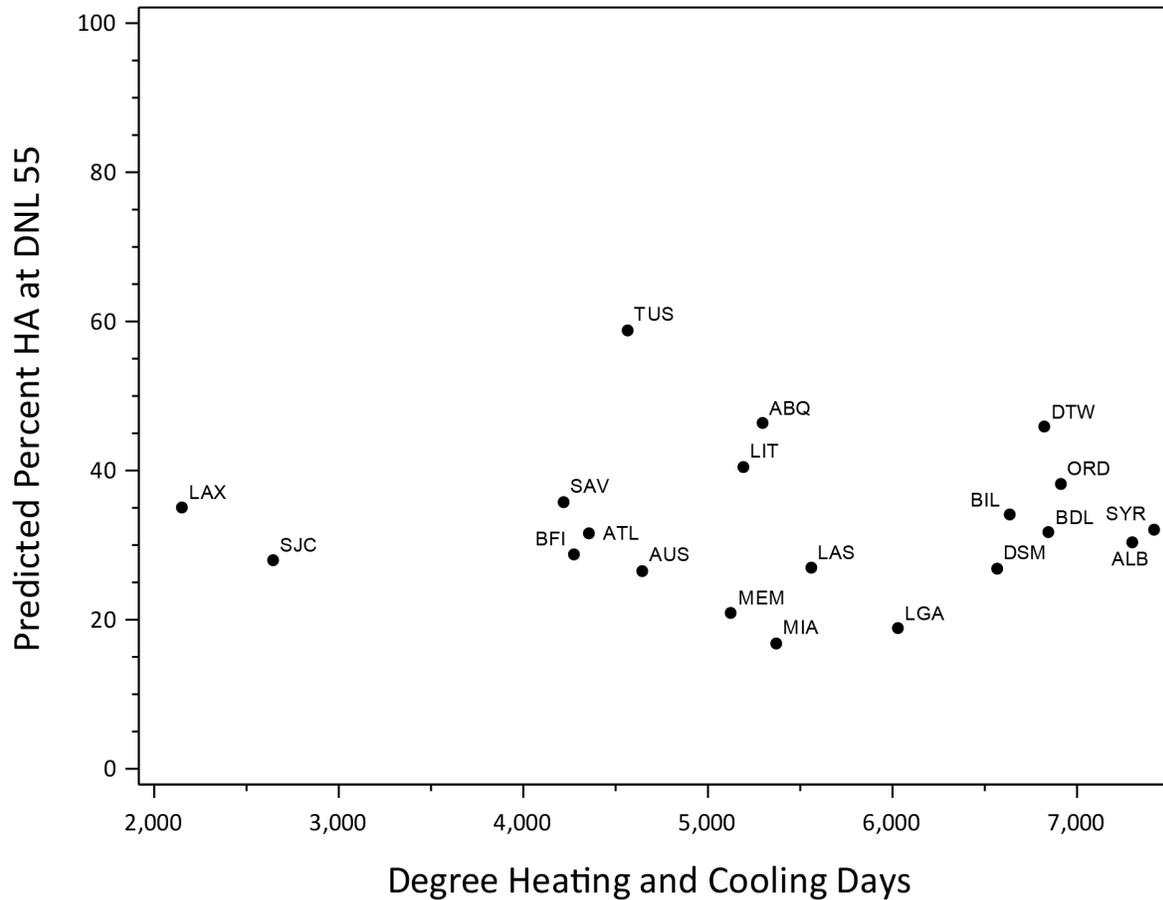


Figure 9-1. Estimated Percent HA at DNL 55 dB by Airport Total Degree Days

⁴⁷ For example, the predicted percent HA for ABQ at DNL 55 dB was calculated as $100 \exp(-6.1563 + 0.1093 \times 55) / [1 + \exp(-6.1563 + 0.1093 \times 55)] = 46.38$ percent. The predicted percentage from the model was used so that all airports would be compared on the same footing. Because different airports have different distributions of DNL values, a comparison of average percent HA across airports would result in some airports having higher percent HA merely because they had more sampled households with high DNL value.

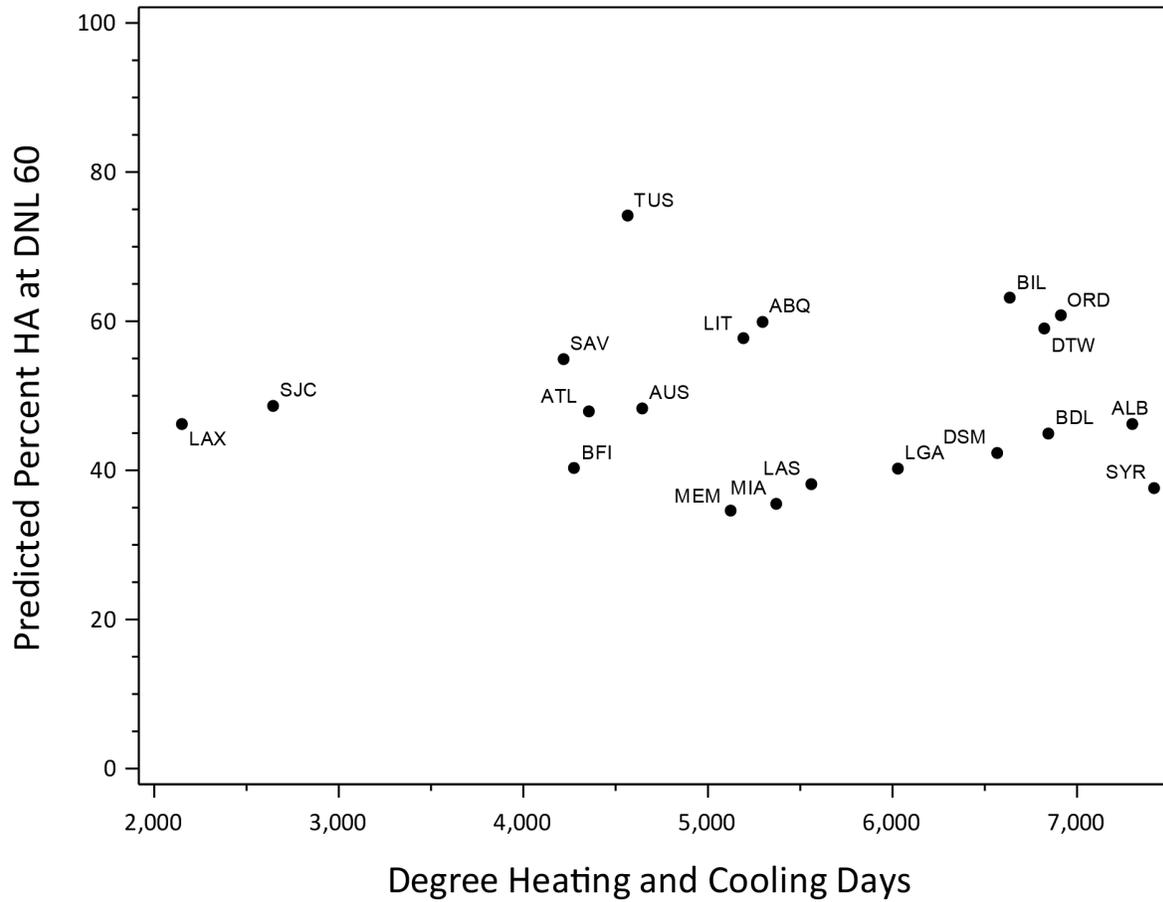


Figure 9-2. Estimated Percent HA at DNL 60 dB by Airport Total Degree Days

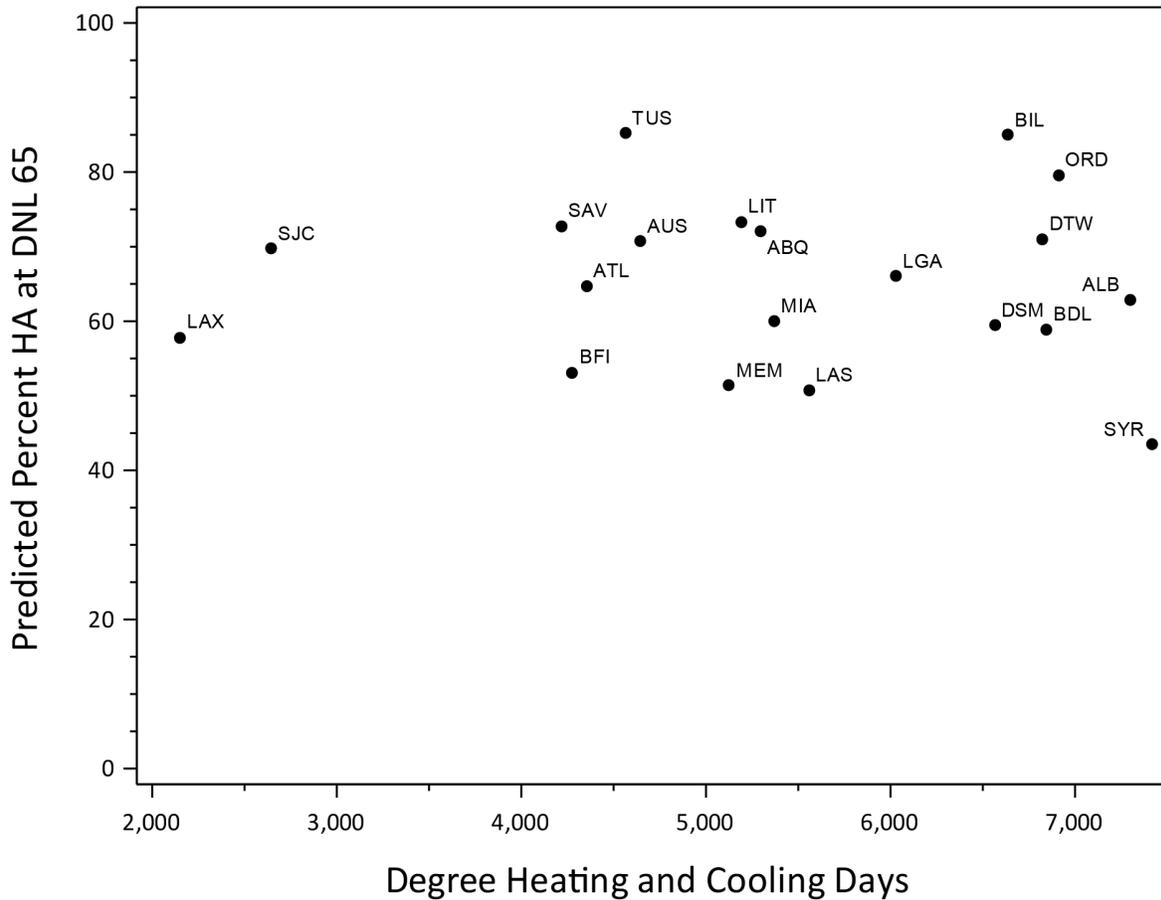


Figure 9-3. Estimated Percent HA at DNL 65 dB by Airport Total Degree Days

9.2 Additional Metrics

The values of the metrics IMPORTANT, NUMBERABOVE50, and VISIBLE differ among respondents in an airport community. Therefore, the model used to investigate the relationship of each FACTOR to annoyance includes terms for the modification the overall level of annoyance (β_2) and for the modification of the slope (β_3):

$$\text{Percent HA} = \frac{100 \exp(\beta_0 + \beta_1 \text{DNL} + \beta_2 \text{FACTOR} + \beta_3 \text{FACTOR} \times \text{DNL})}{1 + \exp(\beta_0 + \beta_1 \text{DNL} + \beta_2 \text{FACTOR} + \beta_3 \text{FACTOR} \times \text{DNL})} \tag{9.2}$$

The statistical models and tests used to evaluate the association between these factors and annoyance to aircraft noise are described in Appendix G (Section G.3). Tables 9-3 through 9-5 present the model coefficients, standard errors, and 95 percent confidence intervals for the variables VISIBLE, NUMBERABOVE50, and IMPORTANT, respectively.

Table 9-3. Model Coefficients for Model with VISIBLE

Coefficient	Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Intercept, β_0	-7.9988	0.5440	-9.1374	-6.8603
DNL, β_1	0.1317	0.0095	0.1119	0.1516
VISIBLE, β_2	-0.0034	0.0032	-0.0101	0.0034
VISIBLE x DNL, β_3	0.000062	0.00005	-0.00004	0.00017

Table 9-4. Model Coefficients for Model with NUMBERABOVE50

Coefficient	Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Intercept, β_0	-9.9748	1.0179	-12.1054	-7.8443
DNL, β_1	0.1673	0.0181	0.1295	0.2051
NUMBERABOVE50, β_2	0.0043	0.0018	0.0006	0.0080
NUMBERABOVE50x DNL, β_3	-0.00008	0.00003	-0.00014	-0.00001

Table 9-5. Model Coefficients for Model with IMPORTANT

Coefficient	Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Intercept, β_0	-8.6774	0.8855	-10.5307	-6.8240
DNL, β_1	0.1446	0.0161	0.1110	0.1782
IMPORTANT, β_2	0.0022	0.0056	-0.0096	0.0139
IMPORTANT x DNL, β_3	-0.00004	0.0001	-0.0003	0.0002

For the factor NUMBERABOVE50, the coefficients for the intercept and DNL appear quite different from those in the model in Table 8-2 containing only those variables. This occurs because of multicollinearity in the data: the variable NUMBERABOVE50 is highly correlated with DNL, and that correlation causes the estimated regression coefficients to be unstable as reflected in the increased standard errors for those coefficients. For predicting percent HA, each model needs to be considered in its entirety. Belsley et al. (1980) discuss multicollinearity and its implications for interpreting regression coefficients.⁴⁸

The model in Equation (9.2) has two more terms than the model in Equation (8.1). A Wald test statistic, described in Equation (G.6) of Section G.3, was used to test the null hypothesis that both β_2 and β_3 are 0. This test considers whether either FACTOR, FACTOR x DNL, or both together, explain any of the variability in the response HA after controlling for DNL. For VISIBLE, the test statistic is 4.0 with p-value > 0.10. For NUMBERABOVE50, the test statistic is 6.0 with p-value = 0.05. For IMPORTANT, the test statistic is 0.46 with p-value > 0.10. Thus, VISIBLE and IMPORTANT are not statistically significantly related to HA after controlling for the effect of DNL; NUMBERABOVE50 is marginally significant, but the effect is not large and the result needs further investigation because of the high correlation between NUMBERABOVE50 and DNL. The analysis indicates that after accounting for the effect of DNL, VISIBLE and IMPORTANT do not provide additional information that can explain annoyance.

⁴⁸ If there were no multicollinearity, the model in Equation (9.2) could be used to describe how the dose-response curve relating percent HA and DNL differs when the extra variable in the model takes different values. For example, from Table 9-4, the predicted relationship between percent HA and DNL when NUMBERABOVE50 = 500 is

$$\text{Percent HA when (NUMBERABOVE50 = 500)} = \frac{100 \exp(-7.82 + 0.127 \text{ DNL})}{1 + \exp(-7.82 + 0.127 \text{ DNL})},$$

where the intercept is calculated as $-7.82 = -9.9748 + 0.0043 (500)$ and the slope is calculated as $0.1673 - 0.00008 (500) = 0.127$. Similarly, the predicted relationship between percent HA and DNL when NUMBERABOVE50 = 1,000 is

$$\text{Percent HA when (NUMBERABOVE50 = 1000)} = \frac{100 \exp(-5.67 + 0.087 \text{ DNL})}{1 + \exp(-5.67 + 0.087 \text{ DNL})}.$$

However, because NUMBERABOVE50 and DNL are highly correlated, the relationships in each of the two equations above are likely valid only for a small range of DNL values. For example, there are almost no addresses in the sample where NUMBERABOVE50 is less than or equal to 500 and DNL is greater than 60 dB, or where NUMBERABOVE50 is greater than or equal to 1,000 and DNL is less than 55 dB. Thus, an attempt to apply the model to predict percent HA when NUMBERABOVE50 = 500 and DNL = 65 is an extrapolation outside the range of the data. Note that the multicollinearity affects the estimated coefficients of the model. The predicted values of percent HA, however, are consistent with those from the model in Equation (8.2) as long as the prediction is made for values of DNL and NUMBERABOVE50 that are jointly in the range of the data.

9.3 Race/Ethnicity and Poverty Status

Tables 9-6 and 9-7 present the results of the analysis of the variables MINORITY and PERCENTBELOWPOVERTY. The Wald test statistic for MINORITY is $Q = 1.2$ with $p\text{-value} = 0.55$; the test statistic for PERCENTBELOWPOVERTY is $Q = 0.4$ with $p\text{-value} > 0.80$. Neither variable is statistically significantly associated with HA, after controlling for the effect of DNL. The analysis indicates that the dose-response curve is essentially unaffected by consideration of minority status or the percent below poverty in the census block group.

Table 9-6. Model Coefficients for Model with MINORITY

Coefficient	Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Intercept, β_0	-8.8753	0.8210	-10.5936	-7.1570
DNL, β_1	0.1478	0.0144	0.1177	0.1779
MINORITY, β_2	0.5412	0.7271	-0.9805	2.0629
MINORITY x DNL, β_3	-0.0106	0.0125	-0.0367	0.0156

Table 9-7. Model Coefficients for Model with PERCENTBELOWPOVERTY

Coefficient	Estimate	Standard Error	Lower 95% Confidence Limit	Upper 95% Confidence Limit
Intercept, β_0	-8.8369	1.0783	-11.0938	-6.5800
DNL, β_1	0.1470	0.0189	0.1074	0.1866
PERCENTBELOWPOVERTY, β_2	0.0199	0.0323	-0.0476	0.0874
PERCENTBELOWPOVERTY x DNL, β_3	-0.0004	0.0006	-0.0016	0.0009

The difference in percent HA between minority and non-minority respondents exposed to the same DNL values was not statistically significant. In addition, airports with greater percentages of minority residents did not exhibit different values of percent HA at specific DNL values than airports with lower percentages of minority residents.

As stated in Table 9-1, PERCENTBELOWPOVERTY is the percentage below poverty in the census block group containing the respondent's address. It is a neighborhood characteristic, and does not describe the poverty status of the respondent's household. The analysis presented in Table 9-7 indicates that respondents in high-poverty block groups have similar relationships between annoyance and DNL exposure as do respondents in low-poverty block groups.

9.4 Summary

This section presented the results of the analyses of factors that had been hypothesized, prior to the data collection, as potential causes of differences among the individual dose-response curves for different airports. Of the six factors studied – climate, "visible" flight events, "noticeable" flight events, "relatively important" flight events, race/ethnicity, and income – only the factor "noticeable" exhibited any ability to explain differences in the dose-response relationships among individuals or airports, and for that factor the relationship was only marginally statistically significant.

Although different airports do have different relationships between percent HA and noise exposure as measured by DNL, none of the factors studied in this section provided a compelling explanation for why those relationships may differ.

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10 Data Files Available for Further Analyses

The FAA is making sets of data available for further analyses by others. Section 10.1 provides a synopsis of the noise modeling data set. Other sets of questionnaire output data are in two use classifications – public and restricted. Sections 10.2 and 10.3 describe the Public Use File (PUF) and Restricted Use File (RUF), respectively.

10.1 Noise Modeling Data

Approximately 1.2 terabytes of noise modeling data is available in the following four data categories, each having its own subsection:

1. Radar Flight Tracking Data,
2. Daily INM Studies,
3. DNL Contours, and
4. Daily INM Detailed Grid Results.

10.2 Public Use File

The PUF contains the NES's primary results in a way that protects PII. The following two subsections describe the PUF. Subsection 10.1.3 presents example output from the PUF. The PUF will be made publicly available in comma-separated values (CSV) and SAS® formats.

10.2.1 Key variables

The NES Mail questionnaire instrument consisted of the following 10 questions:

- Question 1 asked if there was more than one person age 18 or older living in the household.
- Question 2 requested the total number of persons age 18 or older if Question 1 was "Yes."
- Question 4 requested the first name of the person completing the questionnaire.
- Question 5, parts A-M asked the level of annoyance with various environmental factors.
- Question 6 requested the respondent to rate their neighborhood on a scale of 0-10.
- Question 7 asked the respondent's year of birth.
- Question 8 requested the respondent's gender.
- Question 9 asked the respondents Hispanic origin.
- Question 10 requested the respondent's race.
- Question 11 asked the sex, age, and month born of all adults in the household.

Question 3 was an instruction for the adult with the next birthday to complete the questionnaire and did not request data.

10.2.2 Excluded Information

PII was removed from the PUF. This means that the data set does not include, at a minimum, any of the following: name, address, telephone, or latitude and longitude (geolocation) of respondents' residence.

Detailed indirect identifiers would greatly increase the chance of successfully identifying a respondent if released to the public and are not included in the file. Additional such variables include airport identifier,

continuous DNL value, birth year, race/ethnicity with more detailed categories, and variables from the telephone instrument that are more sensitive and increase the risk of data disclosure.

10.2.3 Example Output

Derived from the PUF, Table 10-1 presents the percentages for each annoyance category (numerically 1 through 5) for most of the variables listed in Section 10.1.1. Table 10-1 also summarizes the percentage *HA* for each variable listed in the mail questionnaire, e.g., 9 percent are highly annoyed by undesirable business, institutional or industrial property in their neighborhood. In general, between 9 and 22 percent of those surveyed were highly annoyed by items not related to aircraft noise, whereas 42 percent were highly annoyed by aircraft noise.

Table 10-1. Example Output Data from PUF – Survey Questions

Survey Question	Percent HA (score of 4 & 5)	Percent of Responses Within Each Category				
		Not at All Annoyed	Slightly Annoyed	Moderately Annoyed	Very Annoyed	Extremely Annoyed
		1	2	3	4	5
Noise from cars, truck or other road traffic	17	29	31	23	10	7
Smells or dirt from road traffic	11	53	23	13	6	5
Smoke, gas or bad smells from anything else	13	49	24	14	7	6
Litter or poorly kept up housing	22	35	26	17	12	10
Noise from aircraft	42	14	20	24	18	24
Your neighbors' noise or other activities	13	40	30	17	8	5
Any other noises you hear when are here at home	16	52	19	13	8	8
Undesirable business, institutional or industrial property	9	68	15	8	5	4
A lack of parks or green spaces	17	52	17	14	9	8
Inadequate public transportation	15	55	17	13	8	7
The amount of neighborhood crime	20	31	29	20	11	9
Poor city or county services	18	42	24	16	9	9

Note: Percentages for intermediate responses (e.g., 1.5, 2.5, etc.) were combined with next highest integer response. For example, percentages associated with "1.5" were added to percentages associated with "2"; 1 thru 5 sum horizontally to 100 percent.

Table 10-2 summarizes the data with regard to the aircraft DNL groupings. Twenty-five percent of respondents exposed to DNL less than or equal to 55 dB were highly annoyed whereas 74 percent of respondents exposed to DNL greater than 70 dB were highly annoyed. The overall data trends are also true in the individual categories with over one-fifth of the respondents being extremely annoyed in the range of DNL 55 to 60 dB and one-third of the respondents being extremely annoyed in the range of DNL 60 to 65 dB.

Table 10-2. Example Output Data from PUF – Aircraft DNL

Aircraft DNL	Percent HA (score of 4 & 5)	Percent of Responses Within Each Category ⁽¹⁾				
		Not at All Annoyed	Slightly Annoyed	Moderately Annoyed	Very Annoyed	Extremely Annoyed
		1	2	3	4	5
Less than or equal to 55 dB	25	22	26	27	14	11
55-60 dB ⁽²⁾	40	13	20	27	19	21
60-65 dB ⁽²⁾	55	7	16	22	21	34
65-70 dB ⁽²⁾	66	6	9	19	21	45
Greater than 70 dB ⁽²⁾	74	3	9	14	17	57

Notes:

- 1) Percentages for intermediate responses (e.g., 1.5, 2.5, etc.) were combined with next highest integer response. For example, percentages associated with "1.5" were added to percentages associated with "2"; 1 thru 5 sum horizontally to 100 percent.
- 2) Exclusive of lower bound.

10.3 Restricted Use File

The RUF contains more detailed data than the PUF, including PII. Due to the data’s sensitivity and non-disclosure requirements, the RUF can be provided by the FAA but only on a case-by-case basis.

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11 References

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Jen Rutter

From: Naso, Kela A. <Kela.Naso@denverwater.org>
Sent: Thursday, May 12, 2022 11:04 AM
To: Jen Rutter
Subject: RE: [EXTERNAL]: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

You don't often get email from kela.naso@denverwater.org. [Learn why this is important](#)

Please be cautious: This email was sent from outside Adams County

Good Morning Jen,

Denver Water doesn't have comments regarding the draft plan and draft future land use map.

Thank you,

Kela Naso | Engineering Specialist
Denver Water | t: 303-628-6302 | c: 720-517-4486
denverwater.org | denverwater.org/TAP



From: Jen Rutter <JRutter@adcogov.org>
Sent: Friday, May 6, 2022 3:36 PM
To: Jen Rutter <JRutter@adcogov.org>
Subject: [EXTERNAL]: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon,

Attached is the request for comments for the draft Comprehensive Plan – Advancing Adams (Case #**PLN2022-00007**). The draft Plan and draft Future Land Use Map can be found at www.AdvancingAdams.org. You can also view the request for comments at <http://www.adcogov.org/planning/currentcases>.

We have entered the last public outreach phase for Advancing Adams. There will be several outreach events in various parts of the County, a virtual event, and are welcoming comments through the [online Comment Map](#). I have attached a flyer with information about upcoming Open Houses.

Comments on the draft Plan and Map are due by **Tuesday, May 31, 2022**. Please send your comments and questions to me at jrutter@adcogov.org. Thanks in advance for your review of this case.

Thank you,
Jen



Jen Rutter, AICP

Planning & Development Manager, *Community & Economic Development*

ADAMS COUNTY, COLORADO

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www.adcogov.org

County operating hours: Tuesday through Friday, 7 a.m. to 5:30 p.m.

Jen Rutter

From: Williams - DNR, Joanna <joanna.williams@state.co.us>
Sent: Monday, May 9, 2022 4:03 AM
To: Jen Rutter
Subject: Re: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

You don't often get email from joanna.williams@state.co.us. [Learn why this is important](#)

Please be cautious: This email was sent from outside Adams County

Good Morning Jen,
Our office does not have any comments draft Comprehensive Plan.
Regards,

Joanna Williams, P.E.
Water Resource Engineer



P 303.866.3581 x 8265
1313 Sherman Street, Room 821, Denver, CO 80203
Joanna.Williams@state.co.us | www.colorado.gov/water

On Fri, May 6, 2022 at 3:35 PM Jen Rutter <JRutter@adcogov.org> wrote:

Good afternoon,

Attached is the request for comments for the draft Comprehensive Plan – Advancing Adams (Case #**PLN2022-00007**). The draft Plan and draft Future Land Use Map can be found at www.AdvancingAdams.org. You can also view the request for comments at <http://www.adcogov.org/planning/currentcases>.

We have entered the last public outreach phase for Advancing Adams. There will be several outreach events in various parts of the County, a virtual event, and are welcoming comments through the [online Comment Map](#). I have attached a flyer with information about upcoming Open Houses.

Comments on the draft Plan and Map are due by **Tuesday, May 31, 2022**. Please send your comments and questions to me at jrutter@adcogov.org. Thanks in advance for your review of this case.

Thank you,

Jen



Jen Rutter, AICP

Planning & Development Manager, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams County Parkway, 1st Floor, Suite W2000A

Brighton, CO 80601

o: 720.523.6841 | jrutter@adcogov.org

www.adcogov.org

County operating hours: Tuesday through Friday, 7 a.m. to 5:30 p.m.



P.O. Box 711, Strasburg, CO 80136 • 720.587.7501
 www.i-70reap.com • admin@I-70Reap.com

**COMMENTS TO
 ADVANCING ADAMS DRAFT MASTER PLAN
 by
 I-70 REGIONAL ECONOMIC ADVANCEMENT PARTNERSHIP
 JUNE 2022**

- Watkins
-
- Bennett
-
- Strasburg
-
- Byers
-
- Deer Trail
-
- Aurora
-
- Adams County
-
- Arapahoe County
-
- Colorado Air & Space Port

REAP wishes to commend Adams County for Advancing Adams, its comprehensive effort to chart the future of the county. It’s a document whose time has come.

REAP is the economic development organization that stretches along the I-70 corridor east from Aurora. It covers Watkins, Bennett, Strasburg, Byers and Deer trail and straddles both Adam and Arapahoe County. REAP’s mission is to advocate, organize, connect, network for smart growth in this water constrained region.

As such it focuses on pockets of development. It balances the agricultural traditions and land use against new residential, commercial and industrial growth spreading to the east.

The comments below address relevant chapters. They are not based on detailed analysis but on anecdotal evidence and a sense of the economic and social future of eastern Adams County.

Chapter 1. Future Land Use

The draft Comprehensive Plan presents county forecasts and Future Land Use Maps (FLUM) derived from 2020 census data and other growth projections. They are estimates at best. REAP senses a different forecast.

For example, county wide agricultural land use is projected to decrease slightly to 81.2% from 81.9% in 2012. That may not be enough of a decrease. Large farm owners are getting older with no next generation. Future Farmers of America membership is shrinking. Meanwhile developers and home builders are active. Bennett is approving new residential growth on Muegge Farms and Bennett Farms. This trend will continue.

Concurrently, the forecast for medium to high residential growth may also be off. It shows a significant decrease to 0.9% from 1.6% in 2012. Again, Bennett growth and highway/interchange construction dominate the landscape to accommodate new neighborhoods. This is worth watching.

Chapter 4: Natural Resources, Environment

REAP concurs with the county’s awareness of a water constrained environment and the need to focus attention on it. Climate change and draught will be a way of life in eastern Adams County.

NRE 2.1.01 Calls for a water analysis to measure future supply and methods of conservation. Begin this endeavor immediately. Involve Arapahoe County along with water districts in Strasburg, Byers and Deer Trail. They are all stakeholders.

[REAP Mission Statement](#)

Stimulate private investment in order to increase opportunities for employment, expand the tax base, broaden the economy, and generally improve the quality of life of our citizens.

This analysis should piggyback on a recent water infrastructure analysis done as part of the Watkins-Bennett Area Vision Study.

And REAP suggests separating this analysis by water supply and delivery. Western Adams County relies on existing surface water systems. The east depends on aquifers. Each will have different economic and technical factors.

REAP offers to engage in this study by facilitating interjurisdictional communications, stakeholder forums, study sessions and public input.

NRE 2.1.02 Calls for limiting subdivision east of Denver International Airport (DEN) and north of Colorado Air and Space Port (CASP) to preserve agricultural land. This seem premature until a county-wide water analysis can be done. The county will get a better sense how to balance land uses.

NRE 2.1.03 Envisions water conservation policies in building and development codes. The time is now to implement new technological advancements in water delivery, quality, storage, usage, recovery and drainage. This would involve educational outreach by the county to developers and home builders.

NRE 2.1.04 Champions low water landscaping. In Colorado newly enacted HB22-1151 starts a new financial incentive program for voluntary turf replacement. Adams County could supplement that incentive to further champion low water landscaping.

Chapter 5: Built Environmental and Connections

REAP concurs in the 20-minute commute model. How people live, work, play, shop and access services should be compact. In eastern Adams County this reduces reliance on automobiles and traffic hazards.

BEC 1.1.05 Collaboration and coordination with other jurisdictions on information and planning seems self-evident but needs to be reinforced.

BEC 1.1.06 The same collaboration should also apply to capital improvement projects (CIPs). Financial commitments in one county can leverage matching funds in another county and at the state or federal level. The faster pace of CIPs in eastern Adams County makes this an imperative.

BEC 1.2.06 Again calls for a county water analysis. See **NRE 2.1.01** comments above.

BEC 2.2.05 and BEC 2.2.10 Both promote transit hubs. REAP suggests doing more than promote. In its 10-year plan CDOT commits transit service between Limon and Denver. Capacity, frequency and scheduling are all unknowns. It would be helpful for CDOT to see that Adams County is planning transit hubs in Bennett and Strasburg. And these hubs will align with Colorado's new Greenhouse Gas (GHG) emissions reduction goals.

BEC 3.1.10 Prioritizes the planning of green and sustainable public private projects. The best example in eastern Adams County is the potential of Electric Vehicle (EV) charging stations. New federal and state funding will spur planning in candidate communities along Colorado's interstate corridors. Forward thinking communities can plan for small retail outlets around these stations for private and commercial EV motorists who must take 20 minutes to recharge their vehicles.

REAP Mission Statement

Stimulate private investment in order to increase opportunities for employment, expand the tax base, broaden the economy, and generally improve the quality of life of our citizens.

Chapter 6. Economic Development.

REAP applauds Adams County for its emphasis in partnerships and community-based (pocket) economic growth. Land and water use planning must go hand in hand with economic development.

ED 3.1.04 Supports industrial use and infrastructure investment for Colorado Air and Space Port. This is good. Aerospace growth and spin-off technology give Adams County a place in Colorado's second largest industry and a global reputation as a commercial space leader

ED 3.1.04 Discourages development on agricultural land. Again, let the results of a county-wide water analysis and the demographic future of farm life be the guide.

ED 4.1.06 Encourages the interjurisdictional coordination of infrastructure investment in targeted areas. This again is self-evident.

ED 5.1.04 Suggests inter-jurisdictional collaboration related to redevelopment tools like opportunity zones (OZ) or enterprise (EZ) zones. This is good. A relevant example is an existing EZ zone in Adams County that, through current collaboration, can stretch to Byers in Arapahoe County.

Chapter 7. Cultural Heritage

The draft plan mentions efforts by REAP to promote agricultural tourism. A 2022 REAP survey of past ag-tourism destinations, though, turned out disappointing. Only two of 33 sites replied that, after COVID, they were still in the ag tourism business. Still, REAP will continue to promote tourism but on a more targeted basis, like marketing to area military units with families.

Preserving small and large agricultural properties as a cultural asset is laudable but be aware of future demographic changes.

CH 1.1.02 Supports agricultural tourism. Do not neglect this. It is a way to educate city residents on their food and fiber roots. Ensure that Adams County zoning allows for this kind of land use in various forms. Are gift shops allowed? Are motorized rides for children allowed?

CH 1.1.03 Calls for preserving existing agricultural land, farms and facilities. This is still a worthy goal and objective. Better communication with the farm community is needed to gain a better understanding of where the community is demographically headed.

CH 1.2 Suggests exploration and encouragement of innovation. This is critical especially in an increasingly water constrained environment. Colorado State University can be a good partner.

CH 1.2.02 Envisions providing educational opportunities for best practices. Working with area high schools and Future Farmers of America to develop new curriculum will be key.

CH 1.2.04 Explore renewable energy. Form relationships with the U.S. National Renewable Energy Lab (NREL) to research, develop and implement new technology for irrigation and energy usage.

REAP Mission Statement

Stimulate private investment in order to increase opportunities for employment, expand the tax base, broaden the economy, and generally improve the quality of life of our citizens.

Chapter 8. Strategic Corridors.

REAP understands that Adams County has higher priority corridors in western Adams County. But REAP cautions not to forget I-70 East. E470, Sky Ranch, CASP, four new interchanges, future transportation and logistics centers will dominate the landscape from Watkins and Bennett and beyond. Strasburg growth will soon follow. Keep that in mind.

REAP applauds the inclusion of an update to the 2002 Strasburg sub area plan. Arapahoe County is considering an update to the Byers sub area plan. Both can work together. Coordinate with it and with the water districts to update and expand the scope. Focus on integrated community-based goals and objectives called for in Advancing Adams.

Conclusion

REAP did not comment on the associated Transportation Master Plan (TMP) or the Park, Open Space and Trail Plan (POST). Park, open space and trails, although critical in overall health and livability of the country, is a lower REAP priority. Some transportation comments were included in the above comments.

Take note. The era of EV vehicles and charging stations is fast approaching. It would be wise for Adams County to focus on it as part of built environment, economic development, strategic corridors.

Arapahoe County is considering how to prioritize plans for vehicles and charging infrastructure. Adams County should follow suit.

The community-based approach also makes great sense. The plan calls for a 20-minute commute. This all aligns with REAP approach of pockets of economic development.

Three cheers for the emphasis on collaboration and coordination with others. This is a REAP mantra. Interjurisdictional cooperation makes Advancing Adams and other plans succeed.

The biggest omission? The plan makes no mention of workforce development strategies with the four REAP regional high schools or any Adams County high school. This is key to economic development. The objective is to open student eyes to nearby jobs and careers, like at DEN, that would keep them living in eastern Adams. Best to involve school districts in your collaborations.

Thank you for the opportunity to provide these comments. REAP remains willing to make Advancing Adams a meaningful endeavor. Our sleeves are rolled up.

Jen Rutter

From: Clayton Woodruff <Clayton.Woodruff@RTD-Denver.com>
Sent: Tuesday, May 31, 2022 4:42 PM
To: Jen Rutter
Subject: PLN-2022-00007 - advancing Adams

Please be cautious: This email was sent from outside Adams County

The RTD has no comment



C. Scott Woodruff

Engineer III

Regional Transportation District
1560 Broadway, Suite 700, FAS-73 | Denver, CO 80202

o 303.299.2943 | m 303-720-2025

clayton.woodruff@rtd-denver.com

South Adams County Water & Sanitation District*Distribution & Collection*10200 E 102nd Ave. · Henderson, CO 80640 · (720) 206 – 0595 · www.sacwsd.org

Re:	PLN2022-00007
Date:	5/25/2022
Review Type:	
Applicant Name:	Adams County
Applicant Address:	
Project Name:	ADCO Community & Economic Development Department
Project Location:	County Wide
Reviewer:	Jeff Nelson, Development Review Supervisor

SACWSD Rules & Regulations can be found here:

<https://www.sacwsd.org/DocumentCenter/View/776/Rules-and-Regulations?bidId=>

SACWSD Design & Construction Standards can be found here:

<https://www.sacwsd.org/DocumentCenter/View/773/SACWSD-Design-Standards-and-Specifications?bidId=>

SACWSD Service Application can be found here:

<https://www.sacwsd.org/DocumentCenter/View/912/Development-Service-Application-2021?bidId=>

SACWSD Developer Checklist can be found here:

<https://www.sacwsd.org/DocumentCenter/View/774/General-DevelopmentChecklist?bidId=>

General comments to the referenced review can be found below. Any response from the applicant must be sent to SACWSD Development by emailing Development@sacwsd.org.

General Comments:

1. Determine whether the parcel is included in the District. If not, initiate the inclusion process and become included within the District's service area. This process typically takes between 90-180 days to complete. If the parcel is not included, offsite utility construction may be required to provide adequate fire flows to this site.
2. Identify the source and amount of water owned in order to serve the entire development as envisioned and present evidence to support ownership of adequate Equivalent Residential Units (ERUs).
3. Complete the District's service application with corresponding design plans including site, potable water, irrigation water, and wastewater utility plans, plumbing plans, and District standard details.
4. Design and construct the District's water and sewer infrastructure in accordance with current approved Design Standards and Construction Specifications.
5. Per SACWSD rules and regulations each building will be required to have individual water meters and sanitary sewer service lines.
6. Pay appropriate connection fees and pass all required inspections.

Project Special Comments:

No Special Comments.

If you have any questions about the comments given, please contact the SACWSD Development department at (720) 206 – 0595 or email Development@sacwsd.org.

Sincerely,

Jeff Nelson

Development Review Supervisor



City Hall
9500 Civic Center Drive
Thornton, Colorado 80229-4326

City Development Department
303-538-7295
FAX 303-538-7373
www.cityofthornton.net

May 27, 2022

Jennifer Rutter, AICP
Adams County Community and Economic Development Department
4430 S. Adams County Parkway, 1st Floor, Suite W2000A
Brighton, CO 80601-8216

RE: Outside referral for Comprehensive Plan Amendment to adopt the Advancing Afams Comprehensive Plan

Ms. Rutter:

The City of Thornton's City Development staff have reviewed the proposal and have provided comments for the referral for the new comprehensive plan and have provided the following comments:

Current Planning
Walt (Warren) Rivera, Planner I 303-538-7596

a. No Comments.

Long Range Planning
Thomas Dimperio, AICP 303-538-7381

- a. Thornton has had recent inquiries regarding employment and light industrial uses in the Welby Area south of 88th Ave. This area is not within the Thornton growth boundary, but the city will communicate with the county in the event that developments in this area propose to annex to Thornton.
- b. Thornton supports the corridor planning efforts and would appreciate the opportunity to be involved in efforts related to corridors near or within Thornton, especially the Washington Street corridor.
- c. Thornton appreciates the opportunities for collaboration with the county in support of advancing planning goals as indicated by Policy BEC 1.1, Strategy ED 5.1.01 and 5.1.04, CSP 1.2 and 1.3, CSP 4.9, Strategy CH 3.1.01 and other Advancing Adams goals and strategies involving collaboration with municipalities.
- d. Thornton's Comprehensive Plan recognizes the South Platte Corridor and Riverdale Road as sensitive natural and historic features. The Plan encourages the tapering of density from Riverdale Road to the South Platte River, and the protection of each corridor's unique ecological, historic, and scenic qualities and characteristics.
- e. Thornton supports urban development locating within city boundaries.
- f. Ch. 6, p. 56 change "tenant" to "tenet"

Please feel free to contact me at 303-538-7596, or via e-mail at Katelyn.Puga@thorntonco.gov for updates and/or questions related to this response.

Sincerely,


Walt (Warren) Rivera
Planner I

cc: Grant Penland
Warren Campbell
Collin Wahab
Thomas Dimperio

V:\PLANNING DIVISION\Outside Referrals\Adams County\Adams County 2022\Adams County Comprehensive Plan
PLOS202200699

Jen Rutter

From: Don Summers <don@toddcreekvillage.org>
Sent: Tuesday, May 24, 2022 2:49 PM
To: Jen Rutter
Subject: RE: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Please be cautious: This email was sent from outside Adams County

Jen,
I am commenting on behalf of Todd Creek Village Metropolitan District. We currently provide water service to approximately 2600 homes in the northern Adams county area north of E 470 between the South Platte River on the east side and Holly Street on the west side.
After looking over the Advancing Adams web page I have to say that I came away impressed and in agreement with the overall plans and goals stated. I believe the County and its residents will benefit tremendously from this plan.
If you would like more specific input, please let me know.
Thank you for your efforts on this forward looking plan,

Don Summers
General Manager
Todd Creek Village Metropolitan District
10450 E. 159th Ct
Brighton, Co 80602
720.373.7373

The information contained in this e-mail is intended only for the individuals to whom it is addressed. Its contents (including attachments) are confidential and may be privileged information. If you are not an intended recipient, you must not use, disclose, disseminate, copy or print its contents. If you receive this email in error, please notify the sender or reply by e-mail and delete or destroy this message.

From: Jen Rutter <JRutter@adcogov.org>
Sent: Friday, May 6, 2022 3:36 PM
To: Jen Rutter <JRutter@adcogov.org>
Subject: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Good afternoon,

Attached is the request for comments for the draft Comprehensive Plan – Advancing Adams (Case #**PLN2022-00007**). The draft Plan and draft Future Land Use Map can be found at www.AdvancingAdams.org. You can also view the request for comments at <http://www.adcogov.org/planning/currentcases>.

We have entered the last public outreach phase for Advancing Adams. There will be several outreach events in various parts of the County, a virtual event, and are welcoming comments through the [online Comment Map](#). I have attached a flyer with information about upcoming Open Houses.

Comments on the draft Plan and Map are due by **Tuesday, May 31, 2022**. Please send your comments and questions to me at jrutter@adcogov.org. Thanks in advance for your review of this case.

Thank you,
Jen



Jen Rutter, AICP

Planning & Development Manager, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams County Parkway, 1st Floor, Suite W2000A

Brighton, CO 80601

o: 720.523.6841 | jrutter@adcogov.org

www.adcogov.org

County operating hours: Tuesday through Friday, 7 a.m. to 5:30 p.m.

Karl Onsager

From: Steve Hebert <shebert@bennett.co.us>
Sent: Tuesday, July 12, 2022 8:42 PM
To: Karl Onsager
Cc: Jen Rutter
Subject: Re: Advancing Adams map comment

Please be cautious: This email was sent from outside Adams County

Karl,

The Board of Trustees approved the annexation and zoning for both Bennett Farms at the NWC of Colfax and Harback and Kiowa Creek Preserve at the NEC of Kiowa-Bennett Rd & Old Victory Rd.

Let me know if you need any additional information.



Steve Hebert, AICP | Planning Manager
207 Muegge Way | Bennett CO, 80102
(303)644-3249 ext.1030 | shebert@bennett.co.us
townofbennett.colorado.gov

On Thu, Jul 7, 2022 at 1:55 PM Karl Onsager <KOnsager@adcogov.org> wrote:

No worries Steve. We are going back to BoCC on July 20 for a special study session to get direction. However, it looks like this may be resolved and out of the county's hands by then. Can you follow up on the 13th with the result of the hearing? We can discuss what happens if Bennett doesn't annex. Good luck with second reading.

Karl Onsager, AICP

Senior Implementation Planner, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams Parkway, 1st Floor

Brighton, CO 80601

o:720-523-6817 | KOnsager@adcogov.org

www.adcogov.org



May 31, 2022

Jen Rutter
Adams County Community and Economic Development
4430 South Adams County Parkway, Suite W2000A
Brighton, CO 80601

RE: Advancing Adams Comprehensive Plan, PLN2022-00007
TCHD Case No. 7681

Dear Ms. Rutter,

Thank you for the opportunity to review and comment on the draft comprehensive plan. Tri-County Health Department (TCHD) staff has reviewed the plan for compliance with applicable environmental and public health regulations and principles of healthy community design. After reviewing the plan, TCHD has the following comments.

Attainable Housing

Chapter 3 – Community and Housing

Finding affordable housing of good quality is a significant problem facing our communities. The Denver Metro region's population has grown and wages have stagnated, resulting in a significant shortage of affordable housing. The cost of housing is outpacing the increase in wages. Between 2012 and 2016, while the median monthly household income for residents in Adams, Arapahoe, and Douglas Counties increased by 15% to 18%, the median monthly rent increased by 26% to 30% and the median home value increased between 35% and 51%. A standard first promoted by the United States National Housing Act of 1937, and still in use today, is that households should not spend more than 30% of their income on rent or a mortgage so enough money remains to cover non-housing related needs. Because of high cost of living, renters in Adams, Arapahoe, and Douglas Counties are having to spend up to or more than half of their monthly income on rent.¹

These trends make it more difficult for residents both to rent as well as to buy their own homes and build equity. This can be especially true for low income residents and communities of color who also experience a higher prevalence of substandard housing. In urban areas, this can be a result of redlining (a practice where banks refused to grant home loans in certain neighborhoods based on racial or ethnic composition) which was allowed by the Federal Housing Administration until the 1960's. Neighborhoods of color were systematically denied access to government-backed home mortgages. This and other policies affecting economic and educational opportunity had generational impacts on economic prosperity, which continue to this day.¹

¹ Tri-county Health Department 2019-2024 Public Health Improvement Plan

Poor housing conditions are associated with a wide range of health conditions, including respiratory infections, asthma, lead poisoning, injuries, and poor mental health. The quality of housing includes structural soundness, handicap accessibility, and indoor air quality, among other characteristics. Housing can be a source of exposure to various carcinogenic air pollutants. Radon, a colorless, odorless radioactive gas that forms naturally in soil, is the second leading cause of lung cancer in the United States. Quality, affordable housing is central to individual and community wellbeing. TCHD urges local governments to reduce the burden of housing costs by prioritizing mixed income housing units. In addition to housing policy, local governments and municipalities can also take steps to ensure inclusionary zoning policies and the creation of auxiliary dwelling units.¹

“Missing Middle Housing” refers to building types like duplexes, fourplexes, cottage courts, and courtyard buildings that fall in the middle of the housing spectrum between detached single-family homes and high-rise apartment buildings. They are considered missing because they have largely been illegal to build since the 1940’s. Missing middle housing can be a source of attainable housing and can promote walkability, which improves health.

TCHD supports the County’s goal of proactively addressing housing affordability, diversity, and supply through land use regulations. Specifically, TCHD encourages the County to promote “missing middle” housing options, and address affordability with partners to create housing that is attainable for residents of the County.

Food Production and Access

Chapter 3 – Community and Housing

TCHD commends Adams County for the inclusion of Strategy COH 5.1.05 (page 28) “Address food deserts through targeted economic development efforts to attract grocers and retailers providing healthy food options...” and recommends that the County develop economic development strategies to both ATTRACT and RETAIN grocers and food retailers with healthy options. The retention of both existing and future food retailers with healthy food options is necessary to support the longevity of food retailers in neighborhoods that have limited healthy food options. Communities in Adams County are already feeling the effects of major grocery retailers leaving, such as along the north Federal corridor in the last three years. Any efforts to bring food retail to underserved areas must be long-term, ongoing investments in and engagement with food retailers to ensure that their presence in the community is not short-lived.

Chapter 5 – Built Environment and Connections

TCHD commends Adams County for including healthy food access as a key neighborhood development component throughout the plan and particularly as a component of the 20-minute community (page 46). Distance to food retail is one barrier to food access that can be addressed through strategies related to transportation and

housing/retail proximity. Given that the term “healthy food” is used throughout the plan, TCHD recommends that the County add a description of “healthy food” that emphasizes residents’ desire for the availability and affordability of nutritious, fresh, and culturally relevant food near where they live. It would also be helpful to describe the types of food sources (e.g., food retailers such as grocery stores, farm stands, and farmers markets, as well as community gardens and food assistance providers) that will be prioritized as locations for the distribution and sale of nutritious food.

Chapter 7 – Cultural Heritage

TCHD commends Adams County’s focus on agriculture as the “cultural heritage backbone” of the county (page 72). It is essential to highlight that agriculture is an asset to the County as well as to the Denver metro and Front Range regions, while simultaneously development pressures threaten the prime agricultural land in the county (as acknowledged in the highlights of the existing conditions report on page 7). Goal CH 1, Policy CH1.1, and the associated strategies (page 78) will be essential to the preservation of prime agricultural land. TCHD recommends that the County also look at maintaining water rights associated with the agricultural land, especially as population growth along the Front Range increases demand for the limited water supply. For Policy CH 1.2 and the associated strategies related to agricultural innovation, as well as Strategy CH 1.3.01 (page 79), TCHD recommends that County consider cross-sector partnerships (public, private, and/or nonprofit) for the expansion and strengthening of season extension, food processing, and food distribution infrastructure. Investments in these partnerships would create economic opportunities for both local producers and local food entrepreneurs, as well as increase the provision of locally produced food to local residents.

In two sections of the plan (Strategy BEC 2.2.03 on page 50 and Strategy CH 1.3.02 on page 79), the plan links food access to public health. As Adams County forms a new public health department, it is imperative to build the staff capacity to engage in collaborative, intersectional, and innovative work that links food systems and food access to housing, transportation, economic opportunities, access to healthcare, and other social determinants of health.

Please feel free to contact me at 720-200-1575 or kboyer@tchd.org if you have any questions about TCHD’s comments.

Sincerely,



Kathy Boyer, REHS
Land Use and Built Environment Specialist III

cc: Brian Hlavacek, TCHD

Jen Rutter

From: Spurgin, Andrew <aspurgin@CityofWestminster.us>
Sent: Thursday, May 19, 2022 10:38 AM
To: Jen Rutter
Cc: McConnell, John
Subject: RE: [EXTERNAL] Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Please be cautious: This email was sent from outside Adams County

Jen,
Thank you for the opportunity to comment on the proposed Advancing Adams Comprehensive Plan. With this email the City of Westminster staff notes several locations where the proposed 2022 Advancing Adams Comprehensive Plan is not consistent with the land uses identified in the current adopted [Westminster Comprehensive Plan](#) for the “Sphere of Influence” areas where the City identifies a land use in areas that may be considered for annexation at a later time, see Figure 2-4 on page 2-37 in the [Westminster Comprehensive Plan](#). We would propose the following land use map changes to ensure alignment between the City’s and County’s Plans:

- Southeast corner of 128th & ZUNI (parcel 0157333000001) should be designated Residential Medium rather than the proposed Residential Low;
- Shaw Heights residential area, multiple parcels, generally south of 92nd, west of Federal Blvd, north and east of Circle Drive, west of US-36 should be designated Residential Low rather than Residential Medium;
- Parcels along the west side of Lowell Blvd south of 68th Avenue ideally would be designated Agricultural Small Scale to align with Westminster’s identified “Area to Remain Low Density/Agriculture”, however if this is not possible then we would recommend the Residential Low designation (Parcels 0182506400002 through 0182506400005) in lieu of the Advancing Adams proposed Mixed Use designation; and
- Parcels 0182505409011 and 0182505409012 south of 70th Ave and west of Zuni should reflect the current and proposed 20-acre expansion to the Metro District park as a Parks and Open Space designation in the Plan.

The overall draft [Plan document](#) is visually engaging and well organized. A few suggested edits are noted below:

- Suggest adding a table of contents in the front part of the document;
- We would recommend adding a residential density cap to the Mixed Use designation, such as 20 units per acre (to align with Residential Medium), unless a site is located within 1/4 mile of a RTD rail stop or major RTD park and ride facility such as Wagon Road or the Sheridan P-n-R at US-36;
- Either in the Natural Resources & Environment Chapter, or by means of the separate POST Plan, recommend a policy to identify the need for additional park facilities in the Shaw Heights area through potential partnerships with Adams County, City of Westminster, Hyland Hills Parks & Rec District, and Tri-County Health and/or its successor; and
- Suggest more specific language in the Natural Resources & Environment or Built Environment Chapter relative to mitigating risk from wildfire events in light of the Marshall Fire.

Thank you for considering our feedback and good luck finishing up the Plan!

Andrew Spurgin, AICP | Principal Planner
City of Westminster Community Development
aspurgin@cityofwestminster.us
303.658.2127



From: Jen Rutter <JRutter@adcogov.org>
Sent: Friday, May 6, 2022 4:27 PM
To: Jen Rutter <JRutter@adcogov.org>
Subject: [EXTERNAL] Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good afternoon,

Attached is the request for comments for the draft Comprehensive Plan – Advancing Adams (Case #PLN2022-00007). The draft Plan and draft Future Land Use Map can be found at www.AdvancingAdams.org. You can also view the request for comments at <http://www.adcogov.org/planning/currentcases>.

We have entered the last public outreach phase for Advancing Adams. There will be several outreach events in various parts of the County, a virtual event, and are welcoming comments through the [online Comment Map](#). I have attached a flyer with information about upcoming Open Houses.

Comments on the draft Plan and Map are due by **Tuesday, May 31, 2022**. Please send your comments and questions to me at jrutter@adcogov.org. Thanks in advance for your review of this case.

Thank you,
Jen



Jen Rutter, AICP

Planning & Development Manager, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams County Parkway, 1st Floor, Suite W2000A

Brighton, CO 80601

o: 720.523.6841 | jrutter@adcogov.org

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County operating hours: Tuesday through Friday, 7 a.m. to 5:30 p.m.



Right of Way & Permits

1123 West 3rd Avenue
Denver, Colorado 80223
Telephone: **303.571.3306**
Facsimile: 303. 571. 3284
donna.l.george@xcelenergy.com

June 1, 2022

Adams County Community and Economic Development Department
4430 South Adams County Parkway, 3rd Floor, Suite W3000
Brighton, CO 80601

Attn: Jen Rutter

Re: Adams County Comprehensive Plan, Case # PLN2022-00007

Public Service Company of Colorado's (PSCo) Right of Way & Permits Referral Desk has reviewed the **Adams County Comprehensive Plan**. Please be advised that PSCo has these existing facilities throughout Adams County:

- high-pressure natural gas transmission
- electric transmission
- natural gas distribution
- electric distribution

Public Service Company has no objection to this comprehensive plan, contingent upon PSCo's ability to maintain all existing rights and proposal should not hinder our ability for future expansion, including all present and any future accommodations for natural gas transmission and electric transmission related facilities.

Donna George
Right of Way and Permits
Public Service Company of Colorado dba Xcel Energy
Office: 303-571-3306 – Email: donna.l.george@xcelenergy.com

Exhibit 5 – Public Comments

- 5.1 Albert Frei & Sons
- 5.2 Fairfield & Woods P.C. on behalf of Brannon Sand & Gravel
- 5.3 Brownstein Hyatt Farber Schreck, LLP on behalf of Fiore & Sons, Inc.,
A-One Chipseal, Iron Woman Construction & Environmental Services, and
Waste Connections of Colorado, Inc.
- 5.4 Buckley Parallel, LLC
- 5.5 Comunale Properties
- 5.6 EFG Denver on behalf of Clear Creek Station Development
- 5.7 Foster, Graham, Milstein & Calisher LLP on behalf of Mann Lake
Holdings, LLC and Concrete Express, Inc.
- 5.8 Ft Gibson LLC
- 5.9 Hutchison, Inc.
- 5.10 Industrial Property Owner’s Consortium (IPOC) through Fairfield & Woods P.C.
- 5.11 Jack’s Solar Garden
- 5.12 Molen & Associates
- 5.13 Utility Trailer Sales of Colorado, LLC through Fairfield & Woods P.C.
- 5.14 Brownstein Hyatt Farber Schreck, LLP on behalf of Scannell Properties, LLC
- 5.15 Map Comment Responses and Staff Recommendations

Public Comment Response	Comments	Staff Recommendation
5.3 Brownstein Hyatt Farber Schreck, LLP on behalf of Fiore & Sons, Inc., A-One Chipseal, Iron Woman Construction & Environmental Services, and Waste Connections of Colorado, Inc.	Text recommendations	<p>Staff added Figure 1-4 listing the readoption of sub-area plan policy, future land uses, and which plan supersedes to address the comment response. Staff also added additional language to Chapter 1 and 2 clarifying the plan’s role as visionary and advisory policy document.</p> <p>Staff does not recommend additional changes based on other comments received.</p>
5.6 EFG Denver on behalf of Clear Creek Station Development	Text recommendations	<p>Staff added the following to Chapter 2 and Strategy BEC 3.1.08 “There may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation overlay, may undermine the Plan’s stated development goal, and in those instances existing and future development will need to accommodate these existing conditions.”</p>
5.11 Jack’s Solar Garden	Text recommendations	<p>Staff reviewed the draft language and determined it was sufficient and does not recommend additional language at this time.</p>



35715 U.S. Hwy 40
Bldg B, Suite 120
Evergreen, CO 80439
C (303) 475-4101

May 31, 2022

Delivery Via Email: jrutter@adcogov.org

Jen Rutter, AICP
Planning & Development Manager
Adams County, CO, Community & Economic Development
4430 S. Adams County Parkway, 1st Floor, Ste. W2000A
Brighton, CO 80601

***RE: Response to Request for Comments
Draft Comprehensive Plan-Advancing Adams (Case #PLN2002-00007)***

Dear Ms. Rutter:

Please accept this letter as comments and concerns submitted on behalf of Albert Frei & Sons, Inc. and other current related real property owners (collectively, the "Freis") regarding the draft Comprehensive Plan-Advancing Adams, Case #PLN2002-0007 (the "Plan"). **Exhibit A-Property Description and Land Use** attached hereto and made a part hereof is provided to outline those properties and current owners.

Primarily, the Freis' concerns are related to the following: (1) material changes to the existing lands (see attached **Exhibit A**); (2) changes from Industrial to Residential; and (3) changes from Mixed Use to Splendid Valley Plan/Agricultural only. As proposed, the draft Plan will not only limit but takes away current property rights on existing lands owned by the Freis. To eliminate the current property rights of owners will drastically affect not only the business operations of the Freis, but also the ability for Frei residential owners to use and enjoy their property as desired.

Regarding the Frei family business operations, the Frei family has responsibly owned and operated real property in Adams County for more than 60 years with the current Frei family continuing this family legacy. The Frei family not only works in the area, but also owns residences in the area that is subject to the proposed Plan. Material changes to the Plan related to Frei-owned property would hinder continuing business operations as it would be increasingly difficult if not prohibited to apply for and obtain County conditional use permits ("CUPs") to modify or expand its business operations as desired. Should the Plan be approved as proposed related to the Frei properties, it would be difficult if not next to impossible to justify that the proposed plans are compatible and or in keeping with the Comprehensive Plan if the material changes are approved. Generally, as is, any application submitted in relation to the properties outlined in **Exhibit A** meets the foregoing threshold of being consistent or compatible with the current comprehensive plan.

As such, we hereby respectfully request that the properties outlined in **Exhibit A** remain unchanged in the proposed Plan. Should you wish to discuss this matter further, please do not hesitate to contact me directly at brigo@albertfreiansons.com or (303) 475-4101.

Very truly,

Becky J. Rigo,
In-House Counsel,
Albert Frei & Sons

Exhibit A-Property Description and Land Use

<u>Frei Property Description</u>	<u>Parcel ID/Acct. No.</u>	<u>Existing Land Use</u>	<u>Proposed Land Use</u>	<u>Material Change</u>
Fernald	171936402002/R0150275 182501104003/R0188188 182501102001/R0097857	Industrial ODP	Mixed Use	YES
Brannan	171936401004/R0150273	Industrial ODP	Mixed Use	YES
Frei Associates II. Ltd, (including Mary Jane Frei & Ben Frei residences)	172129202001/R0077411 172129200040/R0077405 172130101001/R0202883 and R0202884 172130101002/R0202885 and R0202886 172130101003/R0202887 and R0202888 172130101004/R0202889 and R0202890 172130101005/R0202891 and R0202892 172129200054/R0201371	Industrial	Mixed Use Commercial	YES
Hatchery	172130301006/R0198051 172120301007/R0198052	Commercial	Industrial Low	YES [East Half]
Holzer	172116000011/R0075327	Industrial	Mixed Use Commercial	YES
Worthing (including Thomas Frei residence)	157126101001/R0178947 157126101003/R0178949 157126201001/R0178595 157136000013/R0009195 157126000018/R0009198	Residential, Agricultural	Parks & Open Space	YES
Ritchey	156919200001/R0202420 156919300003/R0202423	Mixed Use	Ag/Splendid Valley Plan	YES



Jessica Alizadeh
(303) 894-4456
jalizadeh@fwlaw.com

July 6, 2022

VIA EMAIL: JRUTTER@ADCOGOV.ORG

Re: Brannan Sand and Gravel – Comments Regarding the Proposed Comprehensive Plan Amendments

Dear Ms. Hall:

This firm represents Brannan Sand and Gravel Company, LLC (“Brannan”). On behalf of Brannan, thank you for the opportunity to provide preliminary comments on the proposed Future Land Use Categories (“Amendments”) to the Adams County Comprehensive Plan (“ComPlan”). As you may know, Brannan is the owner of several properties throughout Adams County. Our comments below pertain to Brannan properties in the unincorporated County that would be particularly impacted by the Amendments as drafted for the following reasons:

I. General Concerns

A. General Effect of Proposed Amendments

The County’s proposed ComPlan amendments appear to overlook the thoughtful and necessary location of industrial activities within the County. County land use regulations currently have many requirements for conformance with the ComPlan. Because of this, if the proposed amendments are approved, applications for things such as improvements to existing facilities and site plans, and to reconstruct in the event of a casualty, will become difficult and in some cases impossible for the County to approve, leading to a decrease in the actual percentage of industrial uses in the County and change to use-by-right zoning (County Development Standards and Regulations § 4-27-02).

The proposed Amendments include the reclassification of Industrial properties to three new subcategories of “Low,” “Medium,” and “High,” in addition to concentrations of I-2 and I-3 zoned property currently designated as “Industrial” in the ComPlan being proposed as “Mixed Use Commercial” and “Mixed Use.” The new Industrial Low category allows for “low impact industrial uses that primarily operate in buildings” (Future Land Use Categories page I). The new

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Mixed Use and Mixed Use Commercial categories allow for “commercial, office, multifamily residential, and institutional uses,” and for “land use for areas transitioning to industrial or heavy commercial developments where activities and operations are contained within buildings,” including “limited residential uses” (Future Land Use Categories page G and H). Mixed Use Commercial may be compatible with I-1 zoning, but Mixed Use is not compatible with any industrial zoning (Future Land Use Categories pp. G and H).

The uses envisioned for these categories run contrary to the zoning for many properties, and to long-established uses. For example, I-2 zoning allows for heavy industrial uses, including heavy construction contractors, along with light industrial uses, such as sheet metal shops and general building contractors, and light manufacturing or processing uses, such as machine shops, and moderate manufacturing and processing uses, such as cement manufacturing. I-3 zoning is intended for the heaviest of industrial uses and allows all of the uses allowed in I-2 in addition to uses such as asphalt and concrete production.

These uses are essential to the continued growth of Adams County. However, the County’s proposed ComPlan designations are not consistent with uses permitted in the zone districts they will effect. Additionally, we could find no designations of “Industrial High” in the proposed amendments, which is the new future land use designation consistent with I-3 zoning. Ultimately, this unilateral downgrading by the County of long-time industrial properties will have the effect of limiting the ability of the County to grow and provide the necessary supplies and infrastructure that the addition of new residential and mixed-use development at an affordable cost requires, in addition to threatening the sustainability of established businesses.

B. Properties Designated for Residential Development

Furthermore, some property designations deserve additional thought based on location and environmental contamination, as there are Mixed Use developments proposed on or adjacent to land that cannot legally be approved for residential development. In the County’s description of the proposed Mixed Use Commercial future land use, it acknowledges that “[l]imited residential uses may be acceptable in a vertical mixed-use setting if all environmental conditions and concerns have been remediated and land-use adjacencies are mitigated” (Future Land Use Categories page H). However, the County has not acknowledged that most of these sites currently contain viable businesses, many of which are industrial. While the ComPlan may be a “visioning” document, this immediate drive toward residential uses on many industrial properties

is without basis, either by virtue of environmental issues or by other land use conflicts, and greatly undermines legally operating businesses, discussed in more detail below.

C. Conformance with the Comprehensive Plan is Mandatory Under the Code, Which Functions as an Administrative Rezoning

The County's proposed Amendments are problematic on their own, but also particularly in view of the mandatory nature of the ComPlan in Adams County. The County's Development Standards and Regulations ("Code") define the Comprehensive Plan as, "a plan adopted by the County or a municipality within the County that **guides** land use, growth, and development decisions" (Code § 6-02-17). Emphasis added. However, because the Code explicitly requires conformance with the ComPlan in over a dozen express provisions, the ComPlan is not advisory, but decisively regulatory. Thus, the County's intent of meeting its vision "incrementally through rezoning and public and private investments," will instead result in abrupt changes for some property owners, prohibit future improvements to their businesses, and force county staff and the Board of County Commissioners to shut down conforming businesses upon the expiration of certain permits whether or not they desire to do so (Future Land Use Categories p. D).

The Code provisions that explicitly require conformity with the ComPlan include those for certificates of designation, urban renewal plans, major and minor subdivisions, recycling facilities, and any extension of time to obtain a building permit pursuant to a conditional use permit, in addition to approvals that more naturally incorporate the ComPlan, such as ODPs, PDPs, FDPs, and PUDs (Code §§ 2-02-04-06, 2-02-10-06-01, 2-02-19-01, 2-02-19-02-05, 2-02-09-07-03, 2-02-19-03-05, 2-02-20-02-05, and 2-02-09-10). The Code additionally allows the discretion to require conformity with the ComPlan for all site-specific development plans, administrative review permits, conditional use permits, inert fill permits, and all land use approvals generally (Code §§ 1-07-03, 2-02-02-04, 2-02-09-05, 2-02-12-05:9., 4-04-02-02, 4-05-02-07, 1-01-09-01, and 1-08-02).

D. The County Intends to Make Conformance with the Comprehensive Plan a Requirement for Site-Specific Development Plans

In November 2021, the BOCC listened to its constituents and tabled pending Code amendments to alter the applicable provisions for I-1, I-2, and I-3 properties. However, in case number PLN2021-00012, staff forwarded for approval to the BOCC language that further incorporated the requirement of ComPlan conformity into approvals for site-specific development plans. The



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language read “[t]he use and site plan are in general conformity with the Adams County Comprehensive Plan,” and was proposed to be added to provisions for administrative review permits, conditional use permits, special use permits, and temporary use permits (Code §§ 2-02-02-05, 2-02-04-06, 2-02-09-06, 2-02-012-06, and 2-02-13-05).

Under this proposal, anyone who was entitled to apply for these permits based on their zoning would have to be denied approval when the use was not consistent with the future land use designation imposed by the County in the ComPlan, even if the requested use was consistent with the zoning. This language was ultimately removed for reintroduction at a later time, but the County’s proposed Amendments, which would drastically change the future land use for many industrial properties, would move the County substantially back in this direction. Furthermore, as the Code does in fact already contain provisions that allow the County to include conformity with the ComPlan as a condition for *any* land use approval (§§ 1-01-09-01 and 1-08-02), amendments that strip away industrial future land uses would, at a minimum, thwart any future improvement to properties whose future land use designations have changed, and lead ultimately to extinguishment of property rights, destabilization of investment in properties in the County, and the shutdown of businesses.

E. Requirement to Conform to the Comprehensive Plan May Limit and Eliminate Uses by Right Without Basic Notice Requirements

The County’s proposed Amendments significantly impact individual properties, but the County is not required to give notice to individuals. Code § 2-02-15 lists the processes for rezoning and for amending the Code and ComPlan. For all three, neighborhood meetings are optional, “unless the Director . . . determines the development proposal could have significant neighborhood impacts” (Code § 2-02-15-05:2). All three actions require a public hearing before the Planning Commission (“PC”) and Board of County Commissioners (“BOCC”) (Code § 2-02-15-05:7). For Code text amendments, notice goes only in the official county newspaper, and written notice and posting are not required (Code § 2-02-15-05:6.a.). For rezonings, publication, posting, and written notice are required (Code § 2-02-15-05:6.b.). For ComPlan amendments, the code does not set out the type of notice required, and though the County may believe it has done substantial outreach for such amendments, it has become extraordinarily apparent in recent months that it is still not reaching all of the people it needs to.

By way of example, the proposed Amendments change the County’s future land use plan to ultimately prohibit many industrial uses. When any site redevelopment or changes are needed,

the requirement of conformance with the ComPlan, which makes the future land use designation into a regulatory provision, will prohibit the continuation of the established industrial use. But the Code does not require that the County notify affected property owners. Even the requirement for a neighborhood meeting is at the discretion of the Planning Director. Meaning, staff could amend a future land use plan, hold no neighborhood meeting, and provide no notice other than a standard publication of the PC and BOCC meeting, and a future land use plan could be adopted upon a vote of the PC and BOCC. Then, when various industrial businesses seek to renew permits or improve their sites (which is essential to their continued operations and the basis of their investment-backed expectations), they would be denied because their use did not conform to the ComPlan.

**F. Proposed Amendments and Comprehensive Plan Incorporation into Code
Remove the Element of Choice and Flexibility for Commissioners**

An example of a negative consequence of incorporation of the ComPlan into the Code is the County's urban renewal regulations, which are one of the many Code provisions that are tied to conformity with the ComPlan. Such provisions are intended to assist the BOCC in supporting and greenlighting desirable development that will also serve to "renew" an area. However, because any urban renewal plan must be "consistent with the goals and policies of the Adams County Comprehensive Plan," the flexibility that the BOCC relies upon to support approval of attractive and needed development has been eroded (Code § 2-02-10-06-01:1.). Furthermore, as outlined above, the County has the discretion to require conformity with the ComPlan for site-specific development plan approvals, with the proposal to make conformity mandatory expected to return when the County resumes its regulation amendment process. In addition to the broad impact on site-specific development plans, if the ComPlan amendments as-proposed are passed, when a wide range of desirable opportunities that are now regularly approved come along, such opportunities will now be inconsistent with the future land use, meaning that the staff cannot recommend approval and the BOCC cannot approve. Finally, making amendments to the ComPlan without input from directly impacted property owners, and caution and thoughtfulness on the part of the County regarding the true limits and repercussions of such amendments for both property owners and County objectives, further restricts the BOCC's discretion to welcome projects the County wants and needs.

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II. Brannan Site-Specific Concerns

A. Lipan Plant, 5880 Lipan Street

The Lipan Plant property, pictured below, is zoned I-3 with a current future land use designation of Industrial, and Brannan's batch plant, shop, and yard uses are wholly consistent with the current ComPlan designation. The site is surrounded by rail lines, not visible from adjacent rights-of-way due to the site's topography and distance from public roads, and is associated with the contaminated Broderick Wood Products site, which is under the supervision of EPA and where it is unlikely that any uses but industrial will be allowed.

Given the site conditions and conditions adjacent to the site, the County's proposed future land use designation of Industrial Low is confounding. The Lipan Plant is an industrial use in the epicenter of heavy industry. Under I-3 zoning, an asphalt plant and the outdoor storage needed for such an operation are allowed uses. Under the proposed ComPlan designation of Industrial Low, such uses are no longer consistent with the ComPlan and thus will no longer be allowed if in the future Brannan needs permits or approvals that require conformity with the ComPlan.

For example, outdoor storage is crucial to the operations of asphalt plants such as Brannan's Lipan Plant. If Brannan found that it needed to expand its operations to include outdoor storage in excess of 80% of the entire lot in order to meet the needs of construction in the metro area, it would need to obtain a conditional use permit (Code § 4-11-02-04-09:5.A.). In determining whether to approve that conditional use permit, the Board of County Commissioners may, in its conditions of approval, "attach any conditions necessary to implement the Adams County Comprehensive Plan" (Code § 2-02-09-05:9). Thus, while construction demand may call for an expansion of the use and the site is undoubtedly appropriate for such a use, with a future land use of Industrial Low, the County can freely determine that the use does not implement the ComPlan and deny the permit, giving Brannan no assurance of the sustainability of its business.

Thus, the County's proposed Amendment to Industrial Low is not the appropriate future land use designation for this property. Under the current land use Code, Brannan's industrial use at this property, its I-3 zoning, and its Industrial future land use designation all work together in this ideal location for Brannan's established use. The future land use that most appropriately reflects and supports the site, and that the County should designate through its ComPlan amendment process, is Industrial High.



B. 62nd Asphalt Plant, 690 West 62nd Avenue

Brannan’s property at 690 W 62nd Avenue, pictured below, houses an asphalt paving plant and is zoned I-3 with a current future land use designation of Industrial. The current asphalt plant uses are wholly consistent with the current ComPlan designation and site location. This facility is also an industrial use in the epicenter of heavy industry. Under I-3 zoning, an asphalt plant and the outdoor storage needed for such an operation are uses that are allowed by-right, but the County’s proposed future land use designation is Industrial Low. As detailed above in section II.A., with the change to a future land use of Industrial Low, the sustainability of Brannan’s established use is threatened. This is in addition to the County’s hands being tied regarding approval of uses appropriate to the site and necessary for continued operations and improvements to the site.

Thus, the County’s proposed Amendment to Industrial Low is not the appropriate future land use designation for this property. Under the current land use Code, Brannan’s industrial use at this property, its I-3 zoning, and its Industrial future land use designation all work together in this location for Brannan’s established use. The future land use that most appropriately reflects and

July 6, 2022
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supports the site, and that the County should designate through its ComPlan amendment process, is Industrial High.



C. Ready Mix Facility, 5550 Sheridan Boulevard

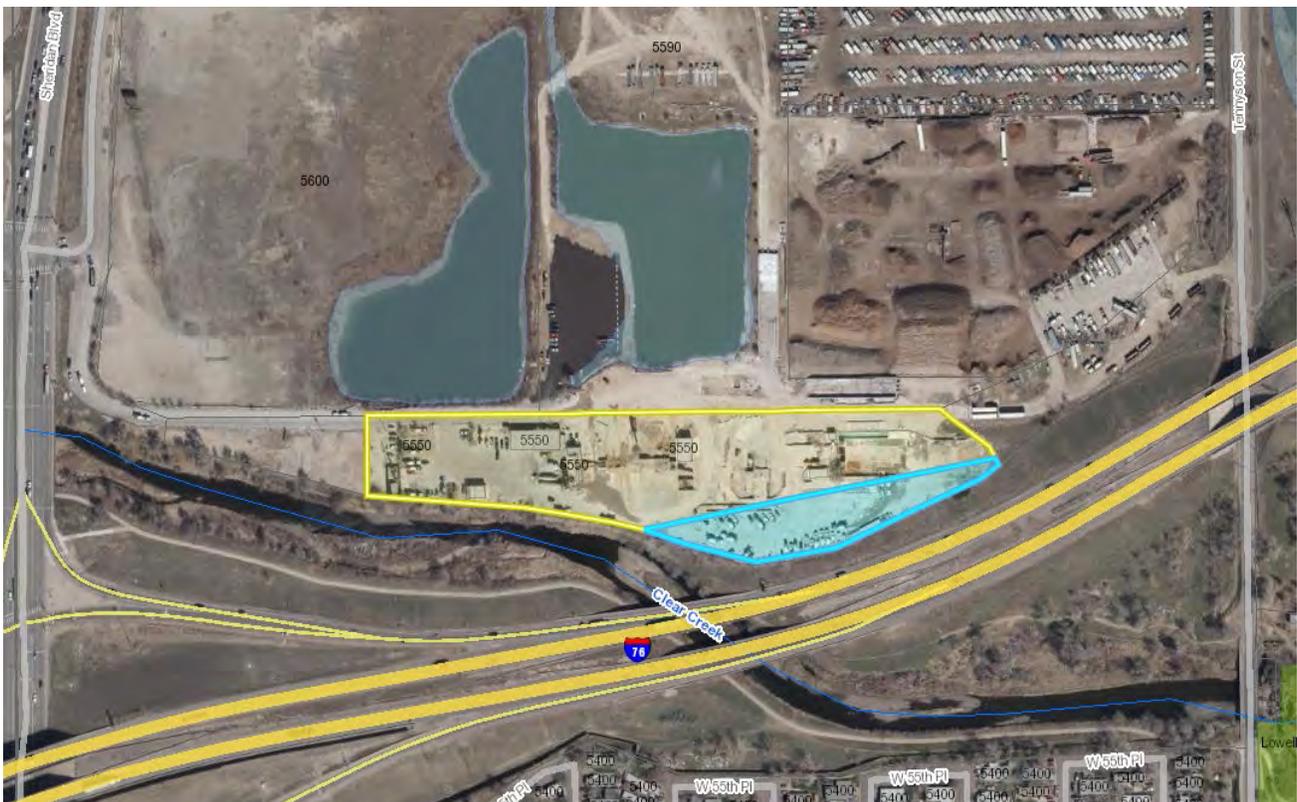
Brannan’s Ready Mix Facility properties, pictured below, are zoned I-2 and house a concrete ready mix plant operating pursuant to a conditional use permit, with a current future land use of Mixed Use Employment. While the property is adjacent to I-76 and thus appropriately sited for industrial uses, the current future land use designation of Mixed Use Employment is not supportive of Brannan’s established use. Furthermore, the proposed future land use of Parks and Open Space, as set out in the Square Lakes Subarea Plan adopted by the Planning Commission on January 13, 2022, is vastly inappropriate.

Upon investigation of the adoption and ratification hearings for the Square Lake Subarea Plan, of which Brannan was not property notified, it was determined that staff noted at hearing that this property is designated Parks and Open Space because it is “unlikely the parcel will be removed from the floodway, . . . and with the Natural Resource Conservation Overlay setbacks from Clear Creek, it would make development on this property difficult.” This property is already developed and is privately owned. Resale value of the property is determined by a future user’s ability to

July 6, 2022
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redevelop the property in conformance with the ComPlan. While a public or private purchase would be based upon market value at the time of the purchase, that value is, again, determined by available uses. Designating this property, adjacent to I-76 and with established industrial uses, as Parks and Open Space reduces future uses to *only* public outdoor recreation, resulting in a significant diminution of value akin to condemnation without due process.

As with the 62nd Plant and Lipan Plant, this property's zoning, ComPlan designation, and location all work together. The property's I-2 zoning and conditional use permit support the established use. For the reasons set out above, it is not appropriate to designate this property as Parks and Open Space. At a minimum, the future land use that the County should apply to this property through its ComPlan amendment process is Industrial Medium.





July 6, 2022

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Accordingly, we ask that you reconsider the proposed ComPlan Amendments discussed above. I welcome to opportunity to discuss any questions you may have.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jessica Alizadeh', is written over a light blue circular stamp.

Jessica Alizadeh
Fairfield and Woods, P.C.

May 31, 2022

VIA ELECTRONIC MAIL

Jenn Rutter
Adams County – Community & Economic Development
4430 S. Adams County Parkway
Brighton, CO 80601

RE: Adams County PLN2022-0000

Dear Ms. Rutter:

We represent several clients such as Fiore & Sons, Inc., A-One Chipseal, Iron Woman Construction & Environmental Services, and Waste Connections of Colorado, Inc., and on behalf of our clients we would like to provide some feedback on the draft Advancing Adams County Comprehensive Plan (the “**Comp Plan**”) and the draft 2022 Future Land Use Map (the “**FLUM**”), as requested by Adams County (the “**County**”). We have grouped our comments into two categories – comments on the Comp Plan and comments on the FLUM.

Comp Plan

We commend the County on its thoughtful and thorough approach to the Comp Plan. We believe that this document will provide the County with a robust framework to guide development for many years to come. We have a few, minor comments and suggestions that we believe will contribute to the Comp Plan’s clarity and resiliency. They are as follows:

- Chapter 1: On page 6, we recommend that the statement that the Comprehensive Plan is a visionary document also include that it is “advisory.” Planning law differentiates between comprehensive plans which are advisory and those which are mandatory. All indications are that the County’s intent is that this plan is intended to be advisory, so we recommend including that term of art, for clarity.
- Chapter 2: On Page C, “Reidential” should be spelled “Residential” and “catorgoies” should be spelled “categories.”

- Chapter 2: Include language in Chapter 2 clarifying that the land uses for any property with a future land designation of one of the County's subarea plans is governed by the respective subarea plan, or that in the case of a conflict, the subarea plan governs. This clarification will prevent any confusion relating to future land uses for properties in these areas governed by a subarea plan.
- Chapter 2: Several words on the right-hand side of Page C of Chapter 2 appear to be cut off.
- Chapter 2: Page C of Chapter 2 should clearly state that the Comp Plan's future land use is not intended to force change, but rather to provide the preferred vision for the area. We recommend replacing "In this case, the FLUM sets an expectation for future conditions while the regulatory requirements set by the zoning remain" with "In this case, the FLUM sets an expectation for future conditions in specific areas, but the FLUM is not intended to require property owners to change their property's existing designation or use to match the FLUM's designation. Property owners have the express right to continue any lawfully constructed building, structure, or use." We think this language will provide comfort to existing property owners and businesses who may otherwise have concerns with this language and concept.
- Chapter 2: Page C of Chapter 2 should also expressly acknowledge existing conditions and private property rights, for the same reason as noted above. A good example is the Fort Collins Northwest Subarea Plan, which includes language in several places regarding the need to balance community needs and desires with the rights of property owners.
- Chapter 2: Uses in the Mixed Use Commercial future land use category should be permitted to have outdoor storage. This is consistent with the stated intent of areas transitioning to industrial uses, and is consistent with permitted industrial uses in the Development Standards & Regulations. The exact nature of and performance standards for outdoor storage can be governed by the forthcoming Code revisions; but the Comprehensive Plan shouldn't prohibit this use. Additionally, the Mixed Use Commercial future land use category should include I-2 as a typical zone district.
- Chapter 2: The Industrial Medium designation should include I-3 as a typical zone district to be consistent with Figure 2-3.

- Chapter 2: The standards for the Industrial Medium future land use category should permit some adjacent residential uses, so long as the industrial uses have utilized mitigation and screening/buffering techniques to avoid negative impacts on residential uses. This situation pertains in many places throughout the County. The details of required mitigation, screening/buffering or other performance standards for when industrial uses are located in proximity to residential uses can be provided in the forthcoming Code revisions.
- Chapter 2: The standards for the Industrial Medium and Industrial High future land use category should permit adjacent public uses, because those uses are for types of public infrastructure, such as railroad corridors, that would be unaffected by and can exist harmoniously in proximity to adjacent industrial uses.
- Chapter 2: The standards for the Industrial Low future use category should be revised to say “This land use category includes low impact industrial uses that primarily operate in buildings, but can also include uses that operate openly on a site. This category can be adjacent to residential use because nuisances or pollution are minimal.”
- Chapter 2: Chapter 2 should include a sentence stating that planned unit developments may be land use adjacencies for all future land use categories, where appropriate.
- Chapter 5: Strategy BEC 3.1.01 should clarify that Industrial Medium, Industrial Low and Mixed Use Commercial uses do not constitute “hazardous areas.” The term “hazardous” has a specific legal meaning which we believe is not what is intended to be referenced here.
- Chapter 8: The description of the South Welby Area should remove “indoor” from the description of industrial uses to avoid conflict with permitted uses in the current Development Standards & Regulations.

FLUM

- 80 E. 62nd Avenue: If the Mixed Use Commercial designation does not include the I-2 zone district, 80 E. 62nd Avenue should be designated “Industrial Medium.” It is sandwiched between Interstate 25 and a variety of industrial uses. Additionally, it is located more than one mile away from the closest residences with no closer residential uses envisioned in the FLUM, making it highly unlikely to support successful commercial uses. Although this area may, one day, become more commercially-oriented, the FLUM ought not artificially and prematurely force such a transition. Instead, the FLUM should acknowledge the area’s current, overwhelmingly industrial character, and designate the property as “Industrial Medium.”
- 5680 Emerson Street: Similarly, 5680 Emerson Street should be designated “Industrial Medium.” As with 80 E. 62nd Avenue, the property is located more than one mile away from residential uses with no closer residential uses included in the FLUM, making it unattractive for commercial developers and users.
- The designation of “Industrial Medium” would be much more compatible with land uses in the area, and would ensure that this property continues to be occupied.
- 5550 Franklin Street: If the Industrial Medium designation does not include the I-3 zone district, 5550 Franklin Street should be designated Industrial High. This designation would ensure that higher-intensity industrial uses can be located in an appropriate area of the County where the use will have little impact on residential uses, without pushing the use to the outer limits of the County.

Thank you for the opportunity to comment on the Comp Plan and FLUM, and for your consideration. We look forward to continuing to work with the County to finalize these important documents.

Sincerely,



Carolynne C. White

Sincerely,



Caitlin S. Quander

CC AdvancingAdams@adcogov.org

Jenni Hall – jrhall@adcogov.org

Exhibit 5.4

Buckley Parallel LLC

July 28, 2022

Advancing Adams County
Libby Tart
4430 South Adams County Parkway
Brighton, Co. 80601

Dear Libby,

I am writing Advancing Adams County in regards to the property located at 12895 Buckley Road, Brighton, Co. 80601. The property consists of 41.35 acres of vacant land with a small house and barn. The parcel is bordered by Buckley Road to the East and Cameron Drive to the West. The Union Pacific Railroad and I-76 are also immediately to the West. The property, as shown on the current zoning maps, is designated as A-3.

The owners of the property, Buckley Parallel LLC would like to request a new "Future Land Use Category" for this parcel. The property is currently in a transition area between Brighton and Commerce City. Due to the extension of Buckley Road across E-470, this road has seen a significant increase in traffic and has become a popular transportation corridor between the Cities. The property also enjoys good exposure from I-76 and E-470.

The owners feel that a designation of Industrial Medium (INM) according to the draft FLUM is a more appropriate and economic designation for this parcel. The property enjoys good access, is near major transportation routes and has limited residential development surrounding it. Attached are a few exhibits to go along with this request. We have included an aerial map and an ALTA survey. Additionally, we included a copy of an Adams County resolution from 1956, that at one point appears to have changed the zoning on this property to I-1. If possible, we'd like to get a reading from staff on if this document is pertinent.

Thank you for your time and consideration on this matter. We'd be happy meet about this property or discuss any questions that staff might have.

Sincerely,

Buckley Parallel LLC
Ryan Carlson

ALTA/NSPS LAND TITLE SURVEY

A PARCEL LOCATED IN THE SOUTHEAST QUARTER OF SECTION 29,
TOWNSHIP 1 SOUTH, RANGE 66 WEST OF THE SIXTH PRINCIPAL MERIDIAN,
CITY OF COMMERCE CITY, COUNTY OF ADAMS, STATE OF COLORADO

FOR REVIEW

LEGEND

	FOUND SECTION CORNER AS SHOWN HEREON		FOUND NO. 6 REBAR WITH 3-1/4" ALUMINUM CAP STAMPED "CDOT PLS 10734"
	SET NO. 5 X 18" REBAR WITH 1-1/4" ORANGE PLASTIC CAP STAMPED "AZTEC PLS 38367"		TITLE COMMITMENT SCHEDULE B-2 EXCEPTION ITEMS
	FOUND NO. 5 REBAR WITH 1-1/4" YELLOW PLASTIC CAP STAMPED "C&B LS 24942"	FC	FENCE
	FOUND NO. 5 REBAR WITH 1-1/4" RED PLASTIC CAP STAMPED "HOOS PLS 37971"	PL	PROPERTY LINE

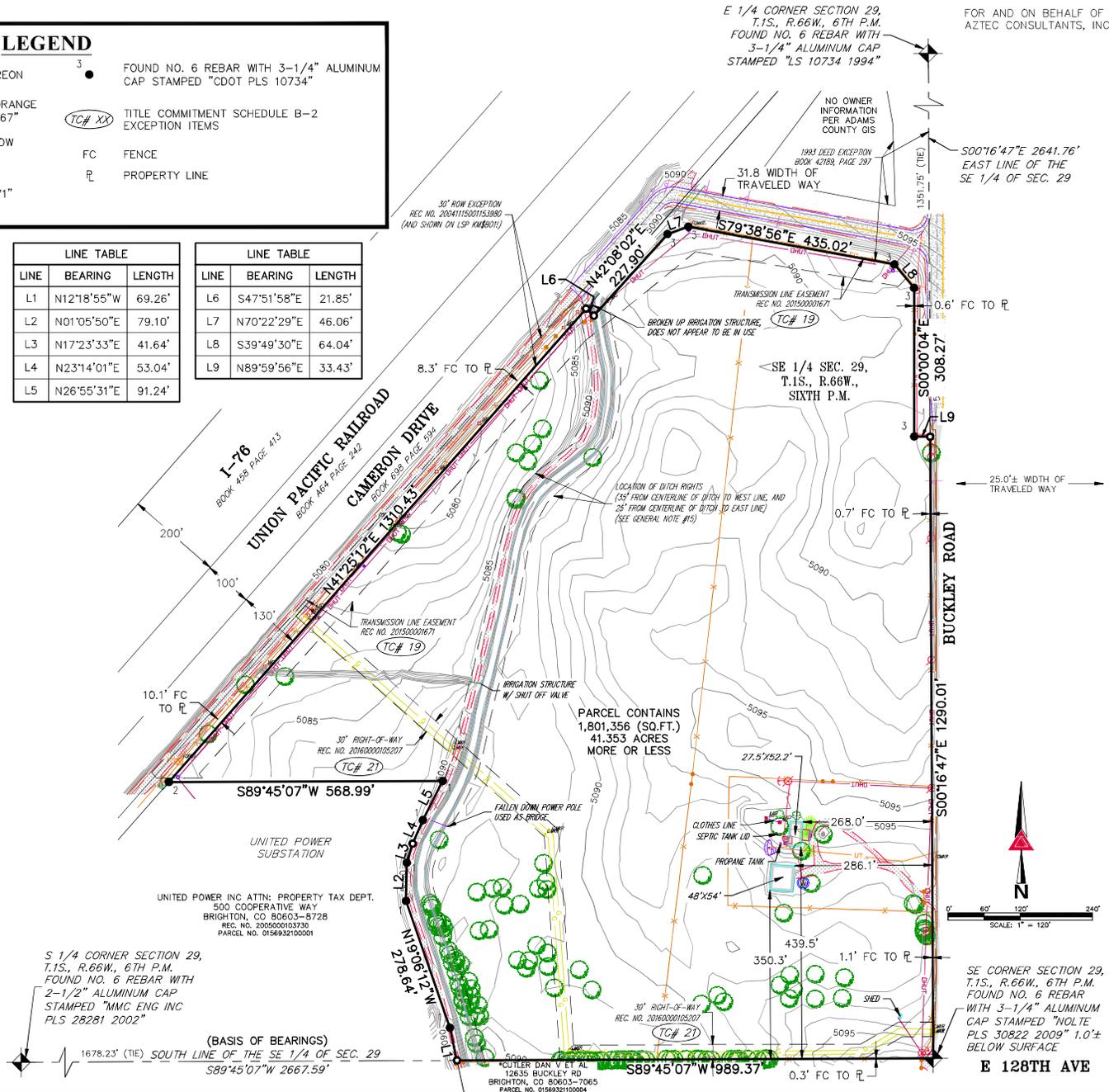
E 1/4 CORNER SECTION 29,
T.1S., R.66W., 6TH P.M.
FOUND NO. 6 REBAR WITH
3-1/4" ALUMINUM CAP
STAMPED "LS 10734 1994"

FOR AND ON BEHALF OF
AZTEC CONSULTANTS, INC.

LEGEND

- STORM BOX CULVERT
- STORM LINE UNDERGROUND
- STORM FES
- WATER LINE UNDERGROUND
- ELECTRIC METER
- ELECTRIC POLE
- ELECTRIC TRANSFORMER
- ELECTRIC UNDERGROUND
- OVERHEAD UTILITY
- GUY WIRE
- TELEPHONE LINE UNDERGROUND
- FIBER OPTIC UNDERGROUND
- FIBER OPTIC MKR
- FIBER OPTICS PEDESTAL
- CABLE TV UNDERGROUND
- GAS LINE UNDERGROUND
- GAS MKR POST
- WELL
- EX CONT-MJR
- EX CONT-MNR
- BUSH DECIDUOUS
- TREE CONIFER
- TREE DECIDUOUS
- FENCE POST
- FENCE
- GATE
- METAL POST
- WOOD POST
- SATELLITE DISH
- SHORE LINE
- EDGE ASPHALT
- EDGE CONCRETE
- EDGE ROAD
- SHOULDER
- LINEMARKING WHITE STRIPE DASHED
- LINEMARKING WHITE STRIPE SOLID
- LINEMARKING YELLOW STRIPE SOLID
- SIGN
- BUILDING
- DECK
- MISC
- STEPS
- STRUCTURE
- HANDRAIL
- WALL
- CONCRETE
- ASPHALT PAVEMENT
- EDGE ROAD
- SHOULDER
- WALL

LINE TABLE			LINE TABLE		
LINE	BEARING	LENGTH	LINE	BEARING	LENGTH
L1	N12°18'55"W	69.26'	L6	S47°51'58"E	21.85'
L2	N01°05'50"E	79.10'	L7	N70°22'29"E	46.06'
L3	N17°23'33"E	41.64'	L8	S39°49'30"E	64.04'
L4	N23°14'01"E	53.04'	L9	N89°59'56"E	33.43'
L5	N26°55'31"E	91.24'			



SCALE	1" = 120'
DATE	08/10/22
BY	
DATE	
COMMENT	

AZTEC
CONSULTANTS, INC.

300 East Mineral Ave., Suite 1
Littleton, Colorado 80122
Phone: (303) 713-1898
Fax: (303) 713-1897
www.aztecconsultants.com

ALTA/NSPS LAND TITLE SURVEY
SE 1/4 SEC. 29, T.1S., R.66W., 6TH P.M.
ADAMS COUNTY, COLORADO

PREPARED FOR
CARLSON

12460 1ST STREET, EASTLAKE, CO 80614

SHEET
TWO

OF 2 SHEETS

JOB NO. 130722-03

☆ Parcel #: 0156929000006

[Property Report](#)

- 12895 BUCKLEY RD

- MOWERY TIMOTHY AND DRANGE JORDAN K



Google

© Google

[Add to Results](#) | [View Additional Details](#)

Brighton

12800

Commerce City

Cameron Dr

Brighton Lateral

Buckley Rd

Berr Lake

12895

12770

12700

Hillshade...



0 200 400ft

At a public meeting of the Board of County Commissioners for Adams County Colorado held at the Court House in Brighton on Monday, the 26th day of April, A. D. 1956, there were present

- Del. J. Clayvott Commissioner Chairman
- Wm. Eppinger Commissioner
- E. G. Waymire Commissioner
- Clifford J. Gobble County Attorney
- Clyde L. Miller Clerk of the Board

that the following proceedings, among others were had and done, to-wit:

RESOLUTION BY COMMISSIONERS

WHEREAS, a public hearing was held in the office of the Board of County Commissioners, at 2:00 O'Clock P. M. covering zoning on the following described property:

1. Along the area between 6th and 6th, Monaco and Leyden, Residential 2 with Building Code.
2. Zone the following described property Industrial One (I-1):
That part of the South 1/2 of Section 29, Township 2 South, Range 67 West, described as follows: 79.84 acres, being W 1/2 SE 1/4 lying west of the Union Pacific Railroad right of way and E 1/2 SE 1/4 lying East of the westerly line of Blocks 14 and 15, Henebry's 1st Add. to report, as extended to East-West quarter section line; plus 100 foot strip off North side of SW 1/4 extending to the east right of way line of U. S. Highway # 85, all in Section 29, Township 2 South, Range 67 West. Balance of the said section West of the Union Pacific Railroad zoned A-1, except the area now zoned in the above description. All that part of Section 19 and 20 East of the Platte River. The North 1/2 of Section 21, that part of the South of Section 17, South and East of the Platte River. Sections 1, 2, 11, 12, 13 and 14. That part of Sections 3 and 4 South and East of the Platte River. All above in Township 2 South, Range 67 West. All that part of Sections 23, 26, 34 and 35, East of the Platte River and all of Sections 24, 25 and 36, Township 1 South, Range 67 West. All of Sections 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17 and 18, Township 2 South, Range 66 West and all of Sections 19, 20, 28, 29, 30, 27, 31, 32, 33 and 34, Township 1 South, Range 66 West except area now zoned in above descriptions. All described area to be covered by Building Code.
3. Rezone from A-1 to C-2 the following described property subject to the City of Brighton's approval. That portion of the East 1/2 of the NE 1/4, Section 13, Township 1 South, Range 67 West described as follows:
Beginning at the point of intersection of the east line of said Section 13 with the east boundary line of County Road # 31; thence South of said Section line 432.15 feet; thence West 201 feet to the easterly boundary line of said road 475.5 feet to point of beginning, situated in the County of Adams, State of Colorado.
4. Rezone from A-1 to I-1 with Building Code the following described property:
The Southeast 1/4 of the Northwest 1/4 of Section 25, Township 2 South, Range 68 West of the 6th P. M. except road and ditch rights of way. Union Pacific Railroad right of way as described in Book 39, Page 389 of Adams County Records and parcel conveyed to Great Western Sugar Company as described in Book 107,

and a duly made and returned the foregoing Resolution was adopted by the following vote:

Waymire	Aye
Eppinger	Aye
Clayvott	Aye

Commissioners

STATE OF COLORADO
County of Adams

Clyde L. Miller, County Clerk and ex-officio Clerk of the Board of County Commissioners do hereby certify that the annexed foregoing Order is truly copied in the Records of the Proceedings of the Board of County Commissioners for said Adams County, this 5th day of April, 1956.

WITNESS WHEREOF, I have set my hand and placed the seal of said County at Brighton March 26th day of April, A. D. 1956.

Clyde L. Miller
County Clerk

STATE OF COLORADO
County of Adams

At a Regular Meeting of the Board of County Commissioners for Adams County Colorado
held at the Court House, in Brighton on Monday the 26th day of
March A. D. 19

- | | |
|--------------------|-----------------------|
| Del. J. C. Gandy | Commissioner Chairman |
| Wm. Springer | Commissioner |
| E. G. Waymire | Commissioner |
| Clifford J. Cobble | County Attorney |
| Clyde L. Miller | Clerk of the Board |

When the following proceedings, among others were had and done, to-wit:

RESOLUTION BY COMMISSIONERS

Page 134, Adams County Records, including all irrigation water rights of appurtenant thereto, containing 35 acres more or less.

5. Rezone the following described property, proposed Ross Subdivision, from A-1 to R-1A with Building Code: A tract of land containing 17.83 acres and situated in the South 1/2 of the SW 1/4 of Section 34, Township 3 South, Range 66 West of the 6th P. M., Adams County, Colorado, described as follows: beginning at a point 650 feet west and 127 feet north of the South quarter corner of Section 34; thence North 0° 23' East a distance of 1165.7 feet; thence North 89° 56' West a distance of 668.3 feet; thence South 0° 34' East a distance of 1165.7 feet; thence South 89° 56' East a distance of 668.3 feet to true point of beginning.

IT IS RESOLVED by the Board of County Commissioners, that the foregoing zoning be approved.

Clerk of the Board
 Wm. Springer
 E. G. Waymire
 Del. J. C. Gandy
 County of Adams
 Clyde L. Miller
 County Attorney
 26th

Exhibit 5.5
May 31, 2022

Jen Rutter, AICP
Adams County Community & Economic Development Office
4430 South Adams County Parkway, Ste W2000A
Brighton, CO 80601

COMMENTS FOR THE DRAFT COMPREHENSIVE PLAN – ADVANCING ADAMS

Thank you for sharing with me the County’s draft of the Advancing Adams Comprehensive Plan (“Plan”) - we appreciate the County’s continual goals improving future planning to ensure a prosperous community in which to operate and live. Overall, I am in full support of the modifications being proposed. However, one item that I would like to raise as a high-level concern of the draft Plan relates around the proposed reduction of planned industrial-zoned land along the I-76 corridor and the impacts that causes to the overall market dynamics.

Background: Our concerns stem from industrial lots that are to be repurposed in the new Plan as Mixed-Use Commercial (“MUC”) along the I-76 corridor, a long-tenured industrial staple and hub for the greater Denver MSA. Historically, this corridor has received significant infrastructure investments from the County and developers alike that specifically allow for convenient and safe truck traffic to improve the access for industrial uses. Not only is the area designed for industrial-focused uses, but most of the existing uses are also industrial in nature. This specific location is strategic and vitally important today and for the future, as the industrial users along the corridor include meaningful truck terminals, last mile distributors and industrial service companies (all of which have some yard components) for whom it is critical to be centrally located with convenient access to I-76, I-25, and I-70 for the ability to serve their customer base of residents in and around the County and greater Denver MSA.

Comments & Requested Changes: In lieu of updating the general I-76 corridor to MUC, we would suggest the general area maintain its existing intended industrial uses in many of the areas of such corridor, with a combination of Industrial High (“INH”) and Industrial Medium (“INM”). However, we are cognizant that this is a main highway that runs through the County, with all visible properties being the first impression for all who drive along I-76. Therefore, we would suggest that you address the concern of first impressions with specific code requirements around development within the INH and INM zone districts as it relates to setbacks, landscaping, building frontage finishes, screening, etc.

We believe the most effective plan for the area would be focused on upgrading existing industrial sites instead of repurposing the corridor and continuing to push industrial land further away from the critical city center and freeway interchanges. This sentiment is heightened by the proposed Plan repurposing a meaningful amount of land north of the I-25 / I-70 intersection from Industrial to MUC / Public (as seen in contrasting Exhibits A and B), which only increases the I-76 corridor’s critical strategic importance for appropriately serving the region’s growing and crucial industrial needs. Pushing incremental industrial land farther outside the County would be greatly detrimental to the sector, as the opportunities would be increasingly less attractive to all potential users and thus reduce area demand and efficiencies.

Please note that we are not proposing all MUC-designated land be reverted to Industrial. We understand that many dynamics, and thus future needs, within Adams County are changing and that the Comprehensive Plan should offer appropriate flexibility to meet said needs.

As seen in Exhibit B, we have highlighted several pockets where we believe INM and INH land use categories are of particular importance given the existing use and industrial-focused road infrastructure. We would generally request industrial land uses in these locations be allowed to remain as-is, or to be redeveloped under

the same zoning requirements, to ensure that the area adequately serves a growing customer and user base in a sector that continues to see high, growing demand. More specifically, we believe additional light yard, as allowed in the I-2 zoning code, will be necessary in future redevelopments to adequately serve a growing user requirement.

I would appreciate the opportunity to discuss at any time to assure our message is delivered in the appropriate manner, as letters can be a bit misconstrued. We are very happy with the plan and greatly appreciate you and your team's extensive and very hard work.

Sincerely,

A handwritten signature in black ink, appearing to read 'JH', with a stylized flourish at the end.

Josh Heiney
Managing Director
Comunale Properties

EXHIBIT A: 2012 COMPREHENSIVE PLAN – FUTURE LAND USES

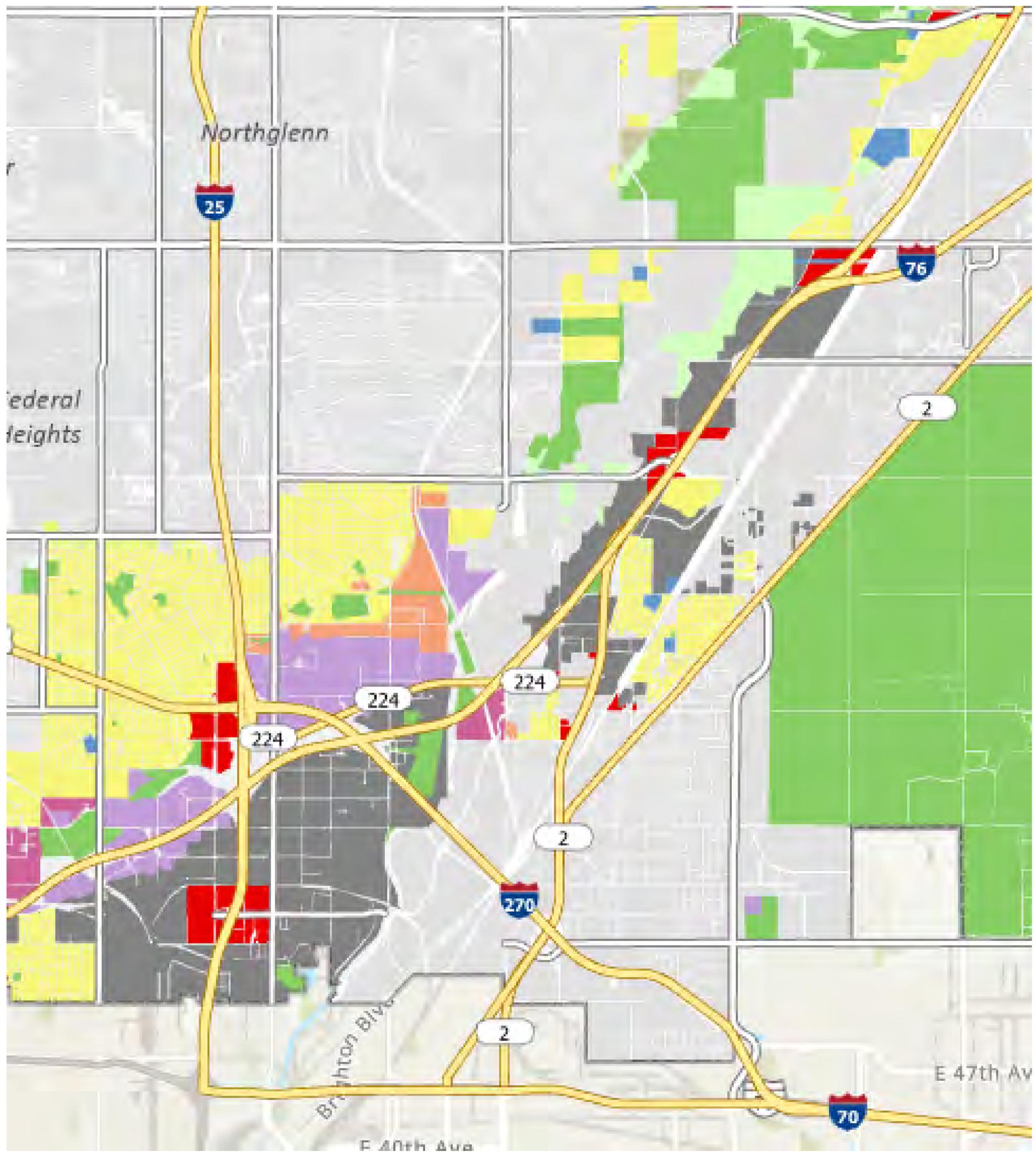
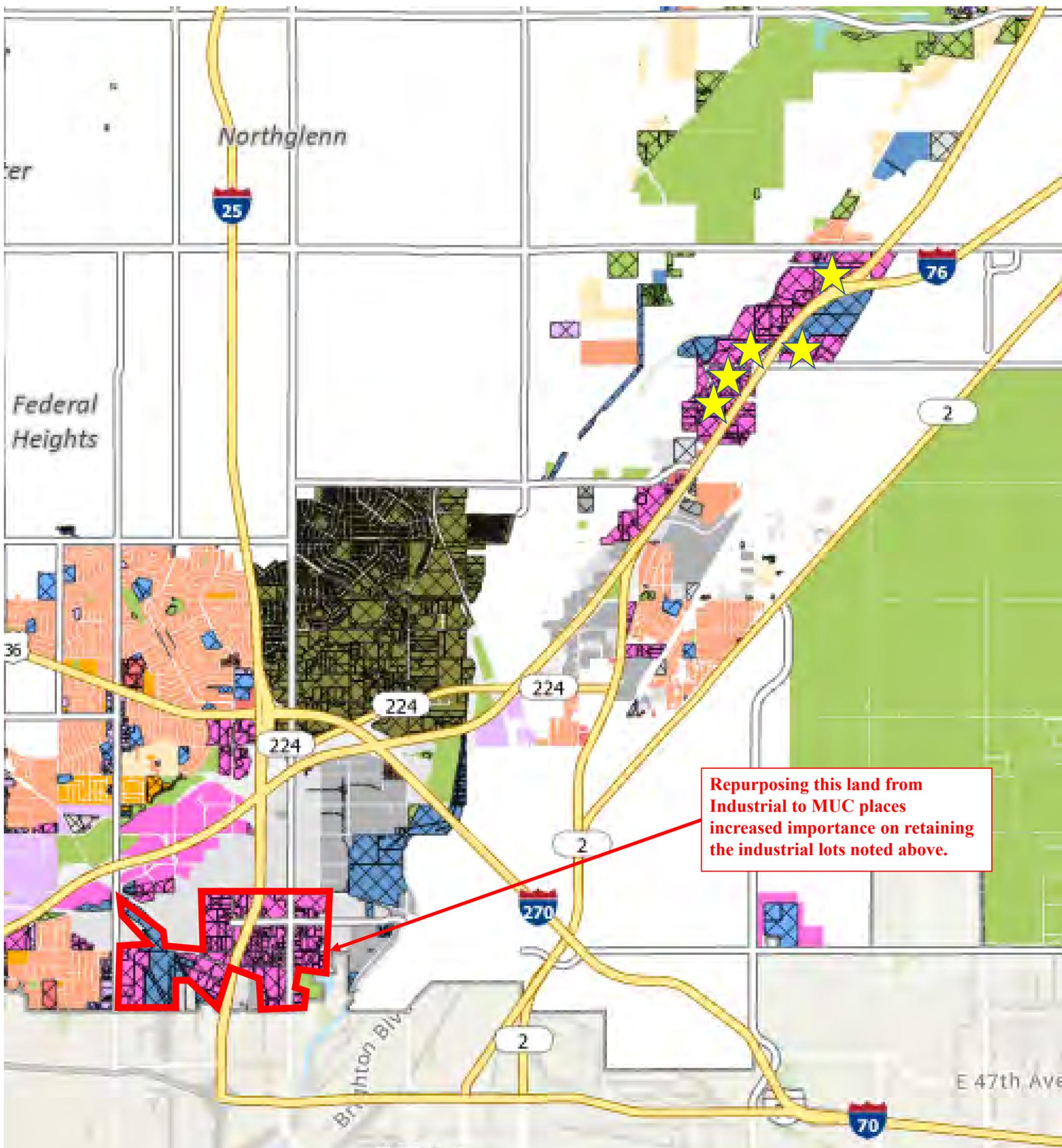


EXHIBIT B: PROPOSED 2022 COMPREHENSIVE PLAN – FUTURE LAND USES WITH OVERLAY OF COMUNALE’S PROPOSED INDUSTRIAL LOTS



★ = *Comunale's Proposed Industrial Lots*

May 26, 2022

Via Electronic Mail to: jrutter@adcogov.org

Jen Rutter
Adams County
4430 South Adams County Parkway
Brighton, Colorado 80601

Re: Adams County Draft Comp Plan

Dear Jen,

Thank you for providing an opportunity to comment on the draft Comp Plan. We have two overarching comments that we ask the County to incorporate into the Comp Plan, as well as some more specific comments for consideration further below:

1. Ensure the comp plan acknowledges all existing conditions and clarifies a path forward when the comp plan vision or future land use conflicts with existing conditions that can't be changed.
2. Rather than preclude industrial in Mixed Use and preclude residential in Mixed Use Commercial, allow both uses in both designations, but adjust the language so Mixed Use leans residential and Mixed Use Commercial leans commercial.

Overall, we understand and support the goal of locating mixed-use density adjacent to rail stations. The challenge we have is that while the Comp Plan states: "a key component of the planning process is the evaluation of existing conditions," the plan itself, at least for the 2300, 2400, and 2860 W 60th Ave properties, doesn't recognize any existing conditions aside from the most recent condition, the rail.

For the properties that are 2300, 2400, and 2860 W 60th Ave. (Clear Creek Station Development, aka CCSD), located adjacent to the Clear Creek – Federal Station, the Comp Plan, in particular the Future Land Use Map, seems to ignore numerous existing conditions. The existing conditions that long pre-date the station, include:

1. being in a floodplain,
2. being in a natural resource conservation overlay,
3. being in a flammable gas overlay,
4. being a historic methane-producing landfill, and
5. being adjacent to a planned regional stormwater outfall upgrade that brings stormwater from south of the interstate and rail line all the way to Clear Creek.

Each of these conditions will have an impact on how and when the property can be redeveloped. If the goal is to facilitate development consistent with the Comp Plan, we feel it is important that the Plan recognize them and the potential implications for redevelopment. The Comp Plan as drafted doesn't prevent this site from developing, but does have implications and costs that may long delay that redevelopment. We would welcome a conversation with staff to talk through a few changes that could accelerate and enable rather than hinder that redevelopment.

- Future Land Use Map: Designates the CCSD property as Mixed Use
 - Lists the typical zone districts as C-0, C-1, C-2, R-3, R-4, MU, TOD; however, these properties are currently I2 and I3 which would otherwise map to Industrial High (INH) recognizing the current limitations of the environmental condition of the land.
 - FLUM proposed designation of MU does not allow any industrial usage

- Consider a more robust mixed use Commercial District
 - We believe there are industrial developments that could be consistent with the County’s goals for the TOD site (e.g., as an employment center, etc.) even in a mixed use setting.
 - One solution would be to designate the CCSD property Mixed Use Commercial; however, that designation would prohibit residential development, which could be viable on the property if either public financing or market conditions allow for it.
 - We recommend the County consider having the MUC designation include all of the uses in Mixed Use and add the additional more intense commercial uses. This would be consistent with other Metro Denver jurisdictions which have MU Residential and MU Commercial districts that emphasize one or the other without prohibiting either.
 - Consider a path to allow a single use when consistent with other portions of the Comp Plan or existing realities.
 - For example, a single user retail user or employment center may be a favorable outcome for this site and the County.

- Page 8 and 12: References a Phase 1 Existing Conditions and Opportunities Report to be included in an Appendix and states: “A key component of the planning process is the evaluation of existing conditions,”
 - The Phase I Existing Conditions Report doesn’t appear to be available - will it be shared for comment ahead of finalizing the Comp Plan?
 - Shouldn’t the Comp Plan include the existing maps and overlays the County has related to various existing conditions?
- Page 13: “While the plan is visionary and aspirational, it is grounded by capacity, fiscal considerations, conceptual feasibility, scope of a comprehensive plan, and statutory authority, amongst other considerations.”
 - As discussed above, sites such as ours with significant expensive and legal hurdles to residential and retail development are by definition fiscally challenged.
 - Acknowledging those challenges and allowing for more intense commercial uses that take into account the fiscal constraints seems consistent with the stated objectives here.
- Page 25, COH 1.1: “Adams County’s policy is to promote smart growth that concentrates higher residential densities in areas served by transit and with access to employment, education, and amenities, while limiting residential growth in areas of significant agricultural value or with environmental sensitivity.”
 - CCSD site is adjacent to transit, but it also has environmental and geotechnical challenges and sensitivities.
 - We believe the document should acknowledge in statements like this that the two objectives can be in conflict with each other and when they are, the County will take a pragmatic approach to ensure development consistent with the Plan objectives. I.e. given the choice between a TOD site without residential development and a vacant undeveloped TOD site, the county may opt for an employment center as a rationale to ensure development period.
- Page 28, COH 5.1.01: “Establish transitions in land use between residential and industrial areas to reduce exposure to air and noise pollutants”
 - CCSD site is adjacent to RTD and interstate highway, as well as adjacent to heavy industrial uses of asphalt reprocessing and numerous automotive facilities.
 - This makes it a natural fit for transitioning and potentially higher intensity commercial uses.

- Page 49, BEC 1.2.03: “Explore criteria for siting new industrial uses to mitigate the social and environmental impacts and avoid worsening historical inequities.”
 - Siting industrial (Industrial Light or Industrial Medium) at CCSD could be an opportunity to turn a site with long-standing environmental impacts into a tax-producing, job-creating benefit to the County without displacing residential or ag land, however, the FLUM as drafted precludes this. It could also be a welcomed opportunity to provide jobs immediately adjacent to transit, which is rarely seen.
 - Reference below to Strategy CSP 2.5
- Page 88, Strategy CSP 2.2: “Encourage, educate, and coordinate with property owners and stakeholders on remediation process for contaminated brownfield sites to expand development potential to realize county goals. Continue the ongoing work to understand and address brownfields along this corridor to ensure developers have a full picture of the mitigation measures needed to build on a brownfield, particularly historic landfills.”
 - We agree with this statement and would like it if the document included references to the County’s map of known brownfield sites and called out properties affected by it as candidates for this type of intervention and coordination when considering development proposals and/or rezonings consistent with the Plan.
 - For example, on a brownfield site adjacent to a transit station, as single office, retail, or light industrial building may be the most economically feasible way to achieve the larger transit objective, even if it doesn't allow for a true mix of uses.
- Page 89, Strategy CSP 2.5: “Encourage clean, light, and employee based industrial uses on industrial zoned properties to reduce environmental impacts and ensure compatibility with future development of the station area.”
 - Encouraging the development of clean modern job creating industrial development (such as the TruStile on 71st) is not compatible with station area development, and we ask the County to include it as a possible future land use for the CCSD property.

Sincerely,

CCSD Team
Sarah, Cameron, Alex, Jon, & Ken

cc: Jenni Grafton: jgrafton@adcogov.org
 Ryan Nalty: rnalty@adcogov.org
 Sarah Lavery: sarah@efgdenver.com
 Cameron Bertron: cameron@efgdenver.com
 Alex Moskovitz: alex@armos.com
 Jon Arnold: jon@armos.com
 Ken Arnold: ken@armos.com

Karl Onsager

From: Karl Onsager
Sent: Tuesday, August 9, 2022 1:32 PM
To: Sarah Laverty
Cc: Jen Rutter; Cameron Bertron; alex@armos.com; jon@armos.com; ken@armos.com
Subject: RE: Advancing Adams map comment

Good afternoon Sarah,

Thank you for your continued interest and feedback. Based on your input, we have added the following to the Chapter 2 narrative and also Strategy BEC3.1.08: "There may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation overlay, may undermine the Plan's stated development goal, and in those instances existing and future development will need to accommodate these existing conditions."

We should have a revised final draft up on the website soon.

Karl Onsager, AICP

Senior Implementation Planner, *Community & Economic Development*
ADAMS COUNTY, COLORADO
4430 South Adams Parkway, 1st Floor
Brighton, CO 80601
o:720-523-6817 | KOnsager@adcogov.org
www.adcogov.org

From: Sarah Laverty <sarah@efgdenver.com>
Sent: Friday, August 5, 2022 10:03 AM
To: Karl Onsager <KOnsager@adcogov.org>
Cc: Jen Rutter <JRutter@adcogov.org>; Cameron Bertron <cameron@efgdenver.com>; alex@armos.com; jon@armos.com; ken@armos.com
Subject: RE: Advancing Adams map comment

Please be cautious: This email was sent from outside Adams County

Hi Karl,

Appreciate your response, and apologies for the long delay responding.

In thinking about your response, we agree that lining up the existing conditions, the future conditions, and the Comp Plan requirements and goals is never spot on, so we appreciate you/AdCo acknowledging it. And given that you all recognize this is a somewhat inherent and unavoidable reality when drafting Comp Plans, it seems appropriate to add language to the plan to acknowledge this. Could be something as simple as a sentence stating that the County understands there will be times when certain objectives set forth in the Comp Plan may conflict or be inconsistent with others, and in those instances, staff will weigh the preponderance of the facts as presented and recommend accordingly.

Even better would be to get a step further and state that the Plan recognizes there may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation

overlay, are in conflict with the Plan's stated development goal, and in those instances development will need to accommodate these existing conditions.

By way of an example, we noticed the language surrounding the Pecos Station is inconsistent from the language (or lack thereof) around the Clear Creek Station. For the Pecos Station, the Existing Conditions Plan states: "The Pecos Street RTD station is located over an old landfill. Although the County sought to create additional land uses in this area, the presence of methane gases limits the uses that could be placed here. This has resulted in the primary use as a park-and-ride lot. Urban trees cannot be supported on this former landfill because of the contaminants that are present." For the Clear Creek Station the plans are silent on the existence of the methane-producing landfill and simply says it should be Mixed-Use or TOD development.

But to your point, it may not be practical to go through and find every inconsistency, that's why we would recommend some global language that acknowledges and makes clear there is a path forward when this situation arises. Is this something the County would be amenable to adding as language in the Comp Plan?

For the station area planning, please do keep us in the loop. We're aligned (I think) with the County on what we think a great outcome for this area could be, but as brownfield developers can bring some perspective on what it takes to overcome the existing conditions to get there, and how language can be tweaked so ensure those two things work together instead of against each other.



Sarah Laverty

Director of Development
EFG-Denver, LLC (dba EnviroFinance Group)

1401 Lawrence St. #1600
Denver, CO 80202
C. 970-319-1997

sarah@efgdenver.com

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From: Karl Onsager <KOnsager@adcogov.org>

Sent: Tuesday, July 19, 2022 3:00 PM

To: Sarah Laverty <sarah@efgdenver.com>; Cameron Bertron <cameron@efgdenver.com>; alex@armos.com; jon@armos.com; ken@armos.com

Cc: Jen Rutter <JRutter@adcogov.org>

Subject: RE: Advancing Adams map comment

I am happy to discuss further with you. Let me know when you are available and we can get something scheduled. Otherwise, public comment or public hearing would be the next venue. As for conflicting objectives, we discuss frequently as staff that "nobody bats a thousand against a comprehensive plan." Generally we weigh the preponderance

of the facts as presented to us and recommend accordingly. Sometimes that comes down to how the criteria of approval are written in development standards.

So you know, we will be looking at the station areas more closely in the near future. We can make sure you are part of those conversations also.

Karl Onsager, AICP

Senior Implementation Planner, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams Parkway, 1st Floor

Brighton, CO 80601

o:720-523-6817 | KOnsager@adcogov.org

www.adcogov.org

From: Sarah Laverty <sarah@efgdenver.com>

Sent: Tuesday, July 19, 2022 2:43 PM

To: Karl Onsager <KOnsager@adcogov.org>; Cameron Bertron <cameron@efgdenver.com>; alex@armos.com; jon@armos.com; ken@armos.com

Cc: Jen Rutter <JRutter@adcogov.org>

Subject: RE: Advancing Adams map comment

Please be cautious: This email was sent from outside Adams County

Thanks Karl and Jen. Understand the desire not to deviate from the Mixed-Use designation, but is there a venue to discuss or get feedback on our other comments, including about what to do when the plan imposes two conflicting objectives on the same parcel?



Sarah Laverty

Director of Development

EFG-Denver, LLC (dba EnviroFinance Group)

1401 Lawrence St. #1600

Denver, CO 80202

C. 970-319-1997

sarah@efgdenver.com

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From: Karl Onsager <KOnsager@adcogov.org>

Sent: Tuesday, July 19, 2022 10:55 AM

To: Sarah Laverty <sarah@efgdenver.com>; Cameron Bertron <cameron@efgdenver.com>; alex@armos.com; jon@armos.com; ken@armos.com

Cc: Jen Rutter <JRutter@adcogov.org>

Subject: Advancing Adams map comment

Good morning,

I apologize for the delayed response. Thank you for your comment on Advancing Adams. It will be added to the public hearing documents. I have added the comment to the map (<https://adamsinnovation.maps.arcgis.com/apps/webappviewer/index.html?id=a197c01f6a3b41ecbc2af2e07e888963>) along with staff's response: "Properties were designated as Activity Center in the 2012 Imagine Adams plan. Staff does not recommend a change from Mixed Use at this time which is further supported by the Clear Creek TOD plan." Please don't hesitate to contact me with any questions.

Karl Onsager, AICP

Senior Implementation Planner, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams Parkway, 1st Floor

Brighton, CO 80601

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360 South Garfield Street
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DENVER – BOULDER
fostergraham.com

March 31, 2022

Via Electronic Mail to: lbajelan@adcogov.org

Layla Bajelan, Senior Long Range Planner
Community & Economic Development
Adams County Government Center
4430 South Adams County Parkway
Brighton, CO 80601

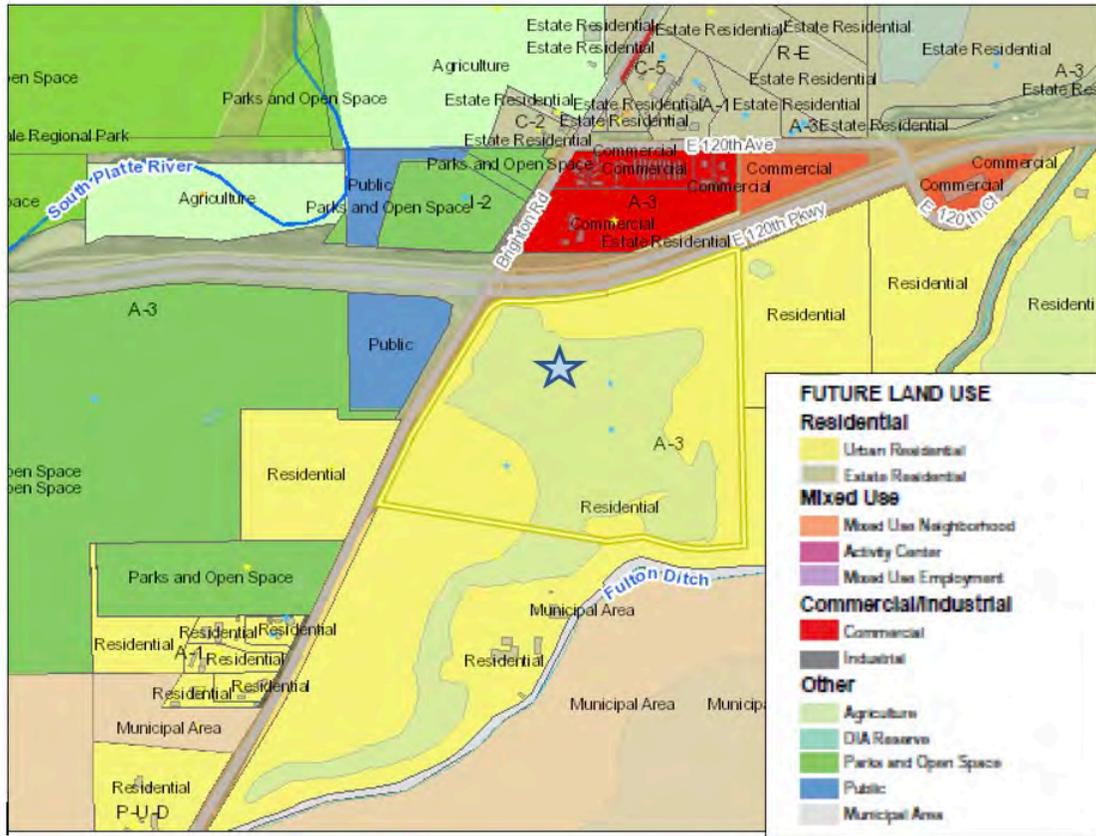
Re: Adams County Comprehensive Plan Update

Dear Ms. Bajelan:

Foster Graham Milstein, & Calisher, LLP (“FGMC”) represents Mann Lake Holdings, LLC (“Mann Lake Holdings”) for certain real property generally located at the southeast corner of 120th Avenue and Brighton Road in Adams County, Colorado, addressed at 11910 Brighton Road (the “Property”). The Property is subject to the Adams County Development Standards and Regulations (the “Code”) and is located within the A-3 Zone District. Under the Code, the A-3 Zone District primarily allows traditional agricultural uses such as dryland or irrigated farming and one single-family residential home. Mann Lake Holdings is currently exploring several opportunities to develop the Property for a variety of flexible mixed uses which may require a rezoning of the property. Pursuant to the Code, rezoning requests must be consistent with the adopted County Comprehensive Plan (the “Plan”), which provides guidance for the criteria applicable to a property’s land use designation under the Plan’s Future Land Use categories.¹

The Property is identified within the Plan’s map by the blue star on the following page.

¹ Code § 2-02-15-06-02(1).



Pursuant to the Plan’s map, the Property is currently designated Urban Residential which is described as an area for single or multiple family housing, typically at urban densities of dwelling per acre or greater.² FGMC and Mann Lake Holdings understands that Adams County is currently in the process of updating the Plan such that there is potential that the Property’s Future Land Use category may change. This letter expresses Mann Lake Holdings’ position that Adams County should give positive consideration of changing the Future Land Use category of the Property to allow a variety of more flexible uses that better complement the surrounding area.

I. Adams County Comprehensive Plan Update

In 2021, Adams County began the process of updating the County Comprehensive Plan with an anticipated adoption in December of 2021.³ However, a December 2021 adoption did not occur and the County is still proactively considering what changes should be adopted for the Plan. On March 10, 2021, the County completed the first phase of the updating process called the Advancing Adams Comprehensive Plan Existing Conditions and Opportunities Report (the

² Adams County Comprehensive Plan, 2012, p. 97

³ Advancing Adams Project Web Site, <https://www.adcogov.org/advancing-adams>

“Report”).⁴ The Report identified and analyzed five strategic corridors of the County, to include the segment of 120th Ave. where the Property is located. The corridor functions as a transition from east to west in the County for those traveling to and from Denver International Airport. This segment of 120th Ave. is also adjacent to the Riverdale Regional Park and the Riverdale Animal Shelter. The 2018 Riverdale Regional Park Master plan identified exciting opportunities to further establish this area as a destination for nature and culture. The Report’s Existing Conditions and Analysis of this corridor identified the corridor’s importance as an intersection between municipalities: Thornton to the West and Commerce City and Brighton to the east.⁵ Importantly, the Report provided that a key opportunity for this corridor is the fostering of partnerships with adjacent municipalities “to determine a common vision for the roadway, improve pedestrian and bicycle connections to Riverdale Regional Park and facilitate coordinated implementation.” This is important in handling the anticipated increased traffic in the area with the closure of the East 124th Avenue access to highway U.S. 85. Overall, the Report identifies this corridor as being an area for unique opportunities in wayfinding, character and image.

II. Change to Allow More Flexible Use

Given, the importance of the corridor where the Property is located as a connection to adjacent municipalities and its identified ability to handle unique opportunities, it is best that the Property’s future land use designation reflect the County’s analysis of the area and therefore change from Urban Residential. Under the current Plan, the Urban Residential land use designation requires (1) adequate urban services and transportation facilities; (2) central water and sewer services; and (3) avoidance of incompatible uses in residential neighborhoods.⁶ However, currently there is a lack of water and sewer services available to serve the Property, as well as the potential for conflicts that new residential development might create with adjacent properties and the potential for nearby oil and gas surface development. These conditions support changing the County Comprehensive Plan designation for the Property to allow more flexible uses in light of the existing and projects conditions of the surrounding area.

The Report identifies seven types of land use frameworks going forward in the City which include Natural, Rural, Suburban, Urban Edge, Urban Activity Center, Campus Districts, and Industrial.⁷ Based on the characteristics of the Campus District, displayed in the image below, this framework best matches the Property and the surrounding corridor in which it is located.⁸

⁴ Advancing Adams Project Web Site, <https://www.adcogov.org/sites/default/files/Comprehensive-Plan-90-percent-draft.pdf>

⁵ Report, p. 157 (2021).

⁶ Adams County Comprehensive Plan, 2012, p. 101

⁷ Report, p. 165 (2021).

⁸ Report, p. 165 (2021).

CAMPUS DISTRICTS	
DESCRIPTION	Areas that serve a specific purpose, usually highly specific based on uses that could range from institutions to creative districts.
LAND USES	<ul style="list-style-type: none"> » Residential High » Residential Medium » Commercial » Institutional » Activity Center » Mixed Use » Industrial High » Industrial Low » Parks and Open Space
DEVELOPMENT PATTERN	Block patterns, building form, and building scale vary based on the specific use. Some campus districts will present in the form of a campus and others may appear more like an Urban Activity Center pattern.
PARKS, OPEN SPACE AND TRAILS	<ul style="list-style-type: none"> » Open space » Parks » Trail Connections
MOBILITY	The transportation network varies by district, typically responding to specific conditions due to land use, built form and surrounding context.

As discussed above, the corridor where the Property is located has been identified as an area suitable for unique development opportunities that further implement the vision for 120th Ave. as a regional destination for events, culture, and connections to nature. Given the Report’s references to unique opportunities and the importance of connecting to adjacent municipalities, the corridor must have the flexibility of allowing different types of land uses for development within the area. As seen above, the Campus District allows uses from residential to mixed use to industrial. This allowance of different land use types within the corridor will help the corridor better respond and complement any potential nearby developments in adjacent municipalities therefore maintaining a connection and building a cohesive vision. As Adams County is still in the process of updating the Plan, these frameworks may change. Nevertheless, to acknowledge the existing conditions of the Property and its surrounding area and to support the development of unique opportunities, it is best that the Property’s future land use designation shift to allow more flexible uses like those proposed in the Campus District framework.

III. Conclusion

For the foregoing reasons, Mann Lake Holdings respectfully requests that Adams County, as it proceeds with its plans to update the County Comprehensive Plan, give positive consideration to changing the current designated future land use category of the Property. As discussed above, such change will be more consistent with the opportunities identified in the Advancing Adams Comprehensive Plan Report and allow for better more coordinated land uses along the 120th Ave. corridor. If you would like to discuss the contents of this letter further, please don't hesitate to reach out.

Sincerely,

FOSTER, GRAHAM, MILSTEIN & CALISHER LLP

A handwritten signature in black ink, appearing to read "David Wm. Foster". The signature is fluid and cursive, with the first name "David" being the most prominent.

David Wm. Foster



360 South Garfield Street
6th Floor Denver, CO 80209
T 303-333-9810 F 303-333-9786

DENVER – BOULDER
fostergraham.com

July 21, 2022

Via Electronic Mail to: KOnsager@adcogov.org

Karl Onsager, Senior Implementation Planner
Community & Economic Development
Adams County Government Center
4430 South Adams County Parkway
Brighton, CO 80601

Re: Adams County Comprehensive Plan Update

Dear Mr. Onsager:

Foster Graham Milstein, & Calisher, LLP (“FGMC”) represents Mann Lake Holdings, LLC (“Mann Lake”) for certain real property located at 120th Ave. and Brighton Rd., addressed at 11910 Brighton Road (the “120th Ave. Property”). FGMC also represents Concrete Express, Inc. (“CEI”) for certain real property addressed at 5590 Franklin St. in Adams County, Colorado, (the “Franklin Street Property”). Mann Lake and CEI have been closely following the ongoing update to the Adams County Comprehensive Plan (the “Plan”), which provides guidance future development under the Plan’s future land use categories. We understand that Adams County is currently in the process of updating the Plan and anticipates adoption in the next several months. This letter has been developed to share CEI’s and Mann Lake’s input regarding the future land use categories and the proposed land use designations for the 120th Ave. Property and the Franklin Street Property.

I. 120th Ave. Property

In the 2012 version of the Plan, the land use designation for the 120th Ave. Property is Urban Residential. The intent of the Urban Residential designation is for the development of single and multiple family housing, typically at urban densities of one dwelling per acre or greater. The plan states that “these areas are intended to provide for development of residential neighborhoods with a variety of housing types, with adequate urban services and transportation facilities.”¹ For a number of reasons, Urban Residential is not the most suitable land use designation for the 120th Ave. Property. The Urban Residential land use designation requires (1) adequate urban

¹ Adams County Comprehensive Plan, 2012, p. 97

services and transportation facilities; (2) central water and sewer services; and (3) avoidance of incompatible uses in residential neighborhoods.² However, currently there is a lack of water and sewer services available to serve the Property, as well as the potential for conflicts that new residential development might create with nearby properties. Given the importance of the corridor where the 120th Ave. Property is located as a connection to adjacent municipalities and its identified ability to handle unique opportunities, it is best that the Property's future land use designation reflect the County's analysis of the area and therefore change from the 2012 designation of Urban Residential.

The draft Future Land Use map for the new Comprehensive Plan shows the 120th Ave. Property as Agricultural, which we do not think is appropriate given the vision for the surrounding area and the 120th Ave. corridor described in the draft Plan. We encourage the County to select a future land use designation that allows more flexibility in light of the existing and projected conditions of the surrounding area. As discussed above, the corridor where the Property is located has been identified as an area suitable for unique development opportunities that further implement the vision for 120th Ave. as a regional corridor that connects important destinations. Given the Plan's references to unique opportunities and the importance of connecting to adjacent municipalities, the corridor must have the flexibility of allowing different types of land uses for development within the area.

FGMC sent a letter dated March 31, 2022 regarding the future land use designation for the 120th Ave. Property. Subsequently, Kristin Sullivan from FGMC met with you to discuss options for an appropriate land use designation for the 120th Ave. Property. During the meeting, you suggested a designation of Mixed Commercial. After the meeting, FGMC confirmed with you that our client concurred with your recommendation, as this category is reflective of the vision established in the draft Plan for the 120th Ave. corridor. We recently learned that the staff discussed this proposed land use designation in a meeting with Planning Commission that we did not know occurred, and the Planning Commission recommended another land use category. We remain supportive of this initial suggestion of Mixed Commercial. Further, we encourage the staff to be more communicative and transparent with property owners, especially those who are engaged and actively trying to follow the progression of the Plan.

II. Franklin Street Property

The Franklin Street Property is currently designated Industrial in the 2012 Comprehensive Plan, which is described in the plan as “a setting for a wide range of employment uses, including manufacturing, warehouses, distribution, and other industries.”³ In the proposed update to the Plan, the future land use designations for industrial have been divided into three categories: Industrial – Low, Industrial – Medium, and Industrial – High. The Franklin Street Property is

² Adams County Comprehensive Plan, 2012, p. 101

³ Adams County Comprehensive Plan, 2012, p. 99

proposed to be mapped as Industrial – Medium in the draft Plan. CEI is supportive of this designation as it reflects the context of this part of Adams County, which is appropriately separated from incompatible uses such as residential. We encourage the County to proactively identify areas for all land uses that are necessary to create a balanced community, including industrial uses. Industrial uses are necessary to provide necessary infrastructure support for a growing region, including those that conduct roadway and infrastructure construction.

III. Input on General Land Use Categories

As mentioned above, the draft Plan creates a new structure for the land use categories in the future land use map. One of the key changes is that the industrial category has been divided into three subcategories. In addition, there is a new category called Mixed Commercial. In many areas within the Future Land Use map, the current draft proposes that existing industrial areas be changed to Mixed Commercial. The description for the Mixed Commercial category is as follows:

Mixed Commercial

Serves as a land use for areas transitioning to industrial or heavy commercial developments where activities and operations are contained within buildings. Mixed Use Commercial areas often have environmental considerations or adjacent to more intense industrial uses that do not necessarily support residential uses. Limited residential uses may be acceptable in a vertical mixed-use setting if all environmental conditions and concerns have been remediated and land-use adjacencies are mitigated.

The creation of the Mixed Commercial category is understood to serve as a category that is less intense than all three industrial categories in order to create land use transitions to areas with residential uses. However, the use of this category within the draft Future Land Use map far exceeds this intent. There are areas mapped as Mixed Commercial that are very appropriate for one of the three industrial categories. For example, as shown in the image below, the Mixed Commercial category, shown in pink, is mapped throughout the Washington Street area on both sides of I-25 all the way to the border with the City and County of Denver. This area is well established as an industrial area, and it does not have residential uses that need transition or protection from additional industrial development.

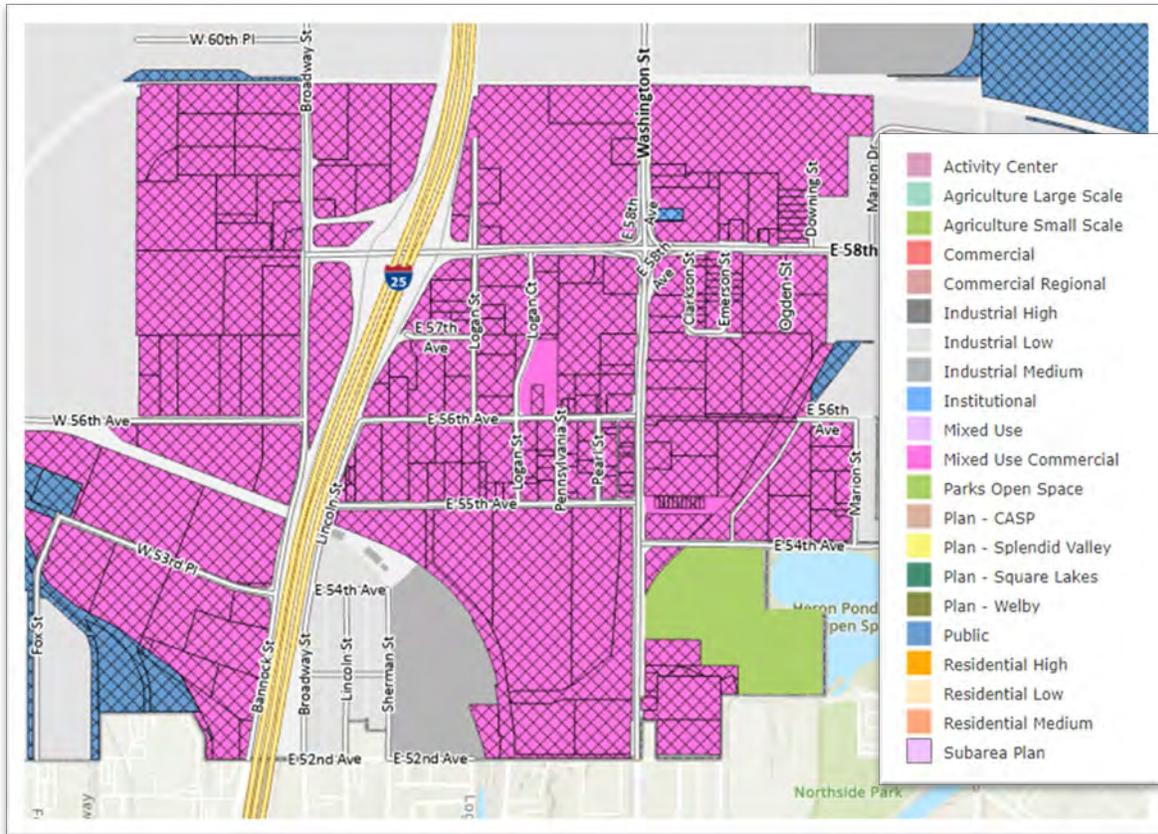


Figure 1. Advancing Adams, Draft Future Land Use Map

Further, it is our understanding that there are only two properties mapped with the newly created Industrial – High designation, which prompts questions about the legitimacy of the structure proposed by the land use categories. CEI respectfully requests that Adams County give more consideration to the importance of planning for essential industrial uses that have been instrumental in the history of Adams County. Industrial uses will continue to be necessary to support the growth of Adams County and the region. The trend to disfavor industrial uses through a series of policy proposals is concerning to those who work in critical industries to support the region’s needs through infrastructure construction, sanitary services, logistics and wholesale trade, and many other similar industries.

IV. Conclusion

Thank you for your consideration of these comments on the draft Comprehensive Plan. We appreciate the opportunity to be involved and strongly encourage you to continue to communicate with property owners regarding future outreach opportunities as the draft Plan is

finalized and the adoption process commences. If you would like to discuss the contents of this letter further, please don't hesitate to reach out.

Sincerely,

FOSTER, GRAHAM, MILSTEIN & CALISHER LLP

A handwritten signature in black ink, appearing to read "David Wm. Foster". The signature is fluid and cursive, with a prominent initial "D" and "F".

David Wm. Foster

Jen Rutter

From: James <>
Sent: Thursday, June 9, 2022 1:37 AM
To: Jen Rutter
Subject: Adams County Proposed Comprehensive Plan Amendment

You don't often get email from . [Learn why this is important](#)

Please be cautious: This email was sent from outside Adams County

Dear Jen Rutter,

I'm very concerned about the proposed changes by Adams County.

I'm the owner of an I-2 property located at 10201 Brighton Rd, Henderson, Colorado.

I'm 70 years of age, my wife has continuing health problems resulting from Covid-19, and the rental income I receive from the I-2 property is my retirement income.

My tenants are all extremely hard working conscientious people with small family owned businesses performing essential services.

I'm also concerned about how any plan amendments would affect my property value, or if my investing in improvements could affect my property rights.

Thank you.

Best regards,

James Gibson
Ft Gibson LLC

--

Sent from Gmail Mobile



May 31, 2022

Adams County Commissioners
4430 South Adams County Parkway
Brighton, CO 80601

Dear Adams County Commissioners,

Thank you for the opportunity to comment on your proposed Comprehensive Plan.

By way of introduction, I am the CEO of Hutchison Inc. a third-generation family-owned business proudly entering its 70th year of business. We serve farm and ranch suppliers, as well as lumber yards. Since 1974, Commerce City has been home to corporate headquarters for the company. Over the years, the Hutchison family has expanded their business operations in Commerce City and currently employs 50 at the 28-acre site that houses corporate functions, a manufacturing plant, distribution center, and fleet maintenance facility.

In attempting to review your plan we are having trouble opening and using the interactive maps in connection with the Comprehensive Plan and therefore, we cannot identify by map the proposed plan for each property, more specifically the Hutchison property.

In addition, we are having trouble understanding the rezoning of all properties in Adams County and the effect that will have on property owners, in particular industrial property owners, in Adams County and the use of their properties.

Because of the rezoning, we are not clear on the effect the new rules will have on our business and our ability to continue to operate our business at its current location.

Please let us know if a revised proposed Comprehensive Plan becomes available for public review which has access to maps and further information on rezoning.

Thank you,

Blake Hutchison
Chief Executive Officer Hutchison, Inc.

Jen Rutter

From: Christine M. Francescani <CFrancescani@fwlaw.com>
Sent: Tuesday, May 31, 2022 7:43 PM
To: Jen Rutter
Subject: RE: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Please be cautious: This email was sent from outside Adams County

Hi Jen,

Thank you for the opportunity to comment on the proposed comprehensive plan amendments. We are working with IPOC on a review of the proposed amendments, and while we do not have comments at this time, we do plan to participate in the amendment and public hearing process on IPOC's behalf.

Best,
Christine



Christine M. Francescani
Of Counsel
303-894-4435
CFrancescani@fwlaw.com | fwlaw.com
1801 California Street, Suite 2600
Denver, CO 80202-2645



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From: Jen Rutter <JRutter@adcogov.org>
Sent: Friday, May 6, 2022 4:34 PM
To: Jen Rutter <JRutter@adcogov.org>
Subject: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Good afternoon,

Attached is the request for comments for the draft Comprehensive Plan – Advancing Adams (Case #**PLN2022-00007**). The draft Plan and draft Future Land Use Map can be found at www.AdvancingAdams.org. You can also view the request for comments at <http://www.adcogov.org/planning/currentcases>.

We have entered the last public outreach phase for Advancing Adams. There will be several outreach events in various parts of the County, a virtual event, and are welcoming comments through the [online Comment Map](#). I have attached a flyer with information about upcoming Open Houses.

Comments on the draft Plan and Map are due by **Tuesday, May 31, 2022**. Please send your comments and questions to me at jrutter@adcogov.org. Thanks in advance for your review of this case.

Thank you,
Jen



Jen Rutter, AICP

Planning & Development Manager, *Community & Economic Development*

ADAMS COUNTY, COLORADO

4430 South Adams County Parkway, 1st Floor, Suite W2000A

Brighton, CO 80601

o: 720.523.6841 | jrutter@adcogov.org

www.adcogov.org

County operating hours: Tuesday through Friday, 7 a.m. to 5:30 p.m.

Exhibit 5.11

From: [Byron Kominek](#)
To: [Libby Tart](#)
Subject: Re: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)
Date: Wednesday, May 18, 2022 5:38:38 PM

Please be cautious: This email was sent from outside Adams County

Quick look at it I can tell the language around it was selected carefully to just "explore" agrivoltaics. Not sure how much semantics plays out in the utilization of this document for the county, but altering that word towards "encourage" / "support" / "seek partnerships to develop ..." - ideas showing more action towards development goals vs exploratory / educational means I think would be more impactful to a reader trying to prioritize what they should spend their time on.

Do note that the Botanical Gardens has been trying to figure out how to get an agrivoltaics system set up at their Chatfield site - where that is not in Adams County, you should know they've hit lots of barriers to getting it set up and interested parties may hope for alternative sites to develop ...

Cheers
Byron



Byron Kominek
Jack's Solar Garden Owner
(970) 344-8066
www.jackssolargarden.com

From: Libby Tart <LTart@adcogov.org>
Sent: Wednesday, May 18, 2022 5:12 PM
To: Byron Kominek <byron@jackssolargarden.com>
Subject: RE: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Thanks so much Byron! The Comprehensive Plan is located online at this link: https://www.adcogov.org/sites/default/files/Advancing_Adams_Comp_Plan_DRAFTwm_2022-05-06_LR.pdf. The Cultural Heritage Chapter, Chapter 7 (pages 81-92 in the .pdf), specifically notes agrivoltaics and cultural heritage as agriculture. If you have any comments, please feel free to send them my way by the end of the month and I'll place them in our shared comment notes for review.

Many thanks for all of your participation as a focus group participant! We look forward to hearing more about Jack's Solar Garden and hopefully piloting agrivoltaics within Adams County soon!

Sincerely,
Libby



Libby Tart, AICP
Senior Long Range Planner
Planning & Development Division
Community & Economic Development

ADAMS COUNTY, COLORADO
4430 South Adams County Parkway, 1st Floor, Suite W2000A
Brighton, CO 80601
o: 720.523.6858 | ltart@adcogov.org
www.adcogov.org

From: Byron Kominek <byron@jackssolargarden.com>
Sent: Wednesday, May 18, 2022 4:32 PM
To: Libby Tart <LTart@adcogov.org>
Subject: Re: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Please be cautious: This email was sent from outside Adams County

Hi Libby,

I won't be available to be of support tomorrow. If there is anything in particular I can review pertaining to solar / community solar / agrivoltaics ... let me know and I'd be happy to have a look over it.

CHears
Byron



Byron Kominek

Jack's Solar Garden Owner

(970) 344-8066

www.jackssolargarden.com

From: Libby Tart <LTart@adcogov.org>

Sent: Wednesday, May 11, 2022 2:58 PM

To: Libby Tart <LTart@adcogov.org>

Cc: Jen Rutter <JRutter@adcogov.org>; Jenni R. Hall <JRHall@adcogov.org>; Karl Onsager <KOnsager@adcogov.org>

Subject: Request for Comments - Adams County Comprehensive Plan (PLN2022-00007)

Good afternoon former Advancing Adams Focus Group participants!

We wanted to circle back and invite all of you to an open house to take in comments, questions and feedback on the Comprehensive Plan next **Thursday, May 19th from 3-4 p.m.** in the Adams County Conference Center, 4430 South Adams County Parkway, Brighton, CO 80601, Brantner Gulch A room. Staff from the Transportation Master Plan (TMP) and Parks, Open Space and Trails Plan (POST) will be on hand as well to answer questions on aspects of their individual plans. A separate briefing for the TMP and POST is anticipated in June/July.

If you are unable to make this specific stakeholder-focused open house, we have other options located on the attached flyer (two in person, one virtual) or can make ourselves available by appointment.

If you cannot make any of our in person or virtual events, we welcome review and comment on the draft Comprehensive Plan and Future Land Use Map case – Advancing Adams (Case #**PLN2022-00007**) on the www.AdvancingAdams.org website or at <http://www.adcogov.org/planning/currentcases> with the above case name.

Comments on the draft Plan and Map are due by **Tuesday, May 31, 2022**. Please send your comments and questions to jrutter@adcogov.org. Thanks in advance for your review of this case!

Sincerely,

Libby



Libby Tart, AICP

Senior Long Range Planner

Planning & Development Division

Community & Economic Development

ADAMS COUNTY, COLORADO

4430 South Adams County Parkway, 1st Floor, Suite W2000A

Brighton, CO 80601

o: 720.523.6858 | ltart@adcogov.org

www.adcogov.org

Exhibit 5.12

Advancing Adams Comprehensive Plan Review

May 31, 2021

Mark Molen
Molen & Associates
2090 E 104th Ave #101
Thornton, CO 80233

- **Overlay Zone – The Flammable Gas Overlay Zone District** was created for the purpose of establishing appropriate uses that can deal with the difficulties associated with the danger of explosive gases and land subsidence. It is more appropriate for all the properties in the FGO zone district to be zoned industrial. Industrial properties in the FGO can be used for truck parking and outside storage where land subsidence occur, and the explosive hazard can be better managed. According to a 2014 study by EPA titled *Closed Waste Sites as Community Assets: A Guide for Municipalities, Landfill Owners, and Regulators*, nearly all the successful utilizations are parks, golf courses, solar farms, or industrial reuse areas. They all make good use of property that will experience land subsidence and potential explosive hazard conditions. Personal experiences from assisting with redevelopment on former landfills has shown that design and construction is very challenging both for the developer and the regulators. Explosions have occurred within the past 20 years and differential settlement from subsidence can be seen at nearly every location. No matter what is built on the landfill dealing with the differential settlement and flammable gas is a significant concern.
- **Development on Former Landfills –** In the Denver Metro area redevelopment on a landfill has been challenging. Degradation of waste in the landfill is minimal due to the lack of moisture in the landfilled materials. The City of Denver has built a solar farm on old, landfilled property. The old County Line Road landfill in Douglas County has been utilized with outdoor athletic fields. In other cases, like the new Mile High Stadium and the River Point in Sheridan, solid waste was removed or moved so that structures could be built. It is difficult and often cost prohibitive to remove the waste. The residences at Lowery have had to deal with this and the waste pits remain and are separated from the development. Residential uses in the areas of the FGO should be prohibited. Industrial, preferably heavy industrial uses should be encouraged. Experience has shown that residences near the Berkley Village landfill has made it impossible for homeowners to remodel their homes due to the extensive regulations associated with the FGO.
- Changing any of the FGO to zoning that is not entirely industrial is a mistake and should be reconsidered. The areas specifically outlined in the FGO (3-40-02) should be industrial and not changed to Mixed Use Commercial. The industrial use in these areas is appropriate with the settlement of the land and the explosion hazards.
- **Pecos Street Transit Station –** Far too much of the area laid out for this Corridor is not suitable for the development discussed in the Comprehensive Plan. Nearly 50% of the corridor area is in the FGO district. Consider extending a transition from the transit station to the Midtown development area by means of a transit transfer to local buses, share cars or bike paths. The industrial nature of this area is historic and should remain that way. Create a pathway that is pedestrian and bike friendly that goes underneath 62nd Parkway and either along the south side of I-76 crossing beneath the freeway at the Huron Street bridge and install a pedestrian bridge

across Clear Creek to the east end of the Midtown development. Leave the industry in its place and give the transit passengers a way to get to a neighborhood friendly zone. Create another pedestrian path to the park at 64th and Vallejo Street extending on to the west side of the Midtown development. The idea of residential and vibrant pedestrian areas around the Pecos Transit Station is far too grandiose and should be reconsidered.

- Federal Boulevard Transit Station – This area is like the Pecos Transit Station and should be reconsidered. About one-quarter or more of this area is in the FGO. The corridor should be limited to Federal Blvd between 56th Avenue and 62nd Avenue, and only include a widened pedestrian path. The path would connect the areas north of 62nd and Federal and South of 56th Avenue and not include the broad area along Clear Creek. Much of the area along Clear Creek has been landfilled and has the same concerns mentioned previously.
- Industrial property is increasingly more valuable. Industrial businesses are the ones that employ Adams County residents in four of the five three largest employment sectors in Adams County, Trade, Transportation, Utility and Construction sectors. Reducing the ability of the industrial property owners to expand or even remain in their locations is a mistake. This will eliminate local jobs and make it difficult for Adams County to support the community as it should.

Specific notices in the Plan are:

Page 22 Estimated number of housing units built by decade has the dates 2000 to 2019 which is actually two decades, not one like all of the others on the list.

Page 84 Figure 8-1 – the map shows the wrong placement of 104th Avenue and 120th Avenue.

Page 61 Figure 6-2 – the County and State growth rates, average pay by industry sector shows that the increases are all in government jobs and construction. Without a thriving economy this is unsustainable in these sectors. Think about it. Adams County needs to encourage industry to keep jobs and help them with better wages with tax incentives or tax breaks. Without the common man having a “good job” how can Adams County continue to have a strong tax base?

General comments:

I have been around long enough to know the former Planning Manager’s excitement for placing the first bicycle trail in Adams County. It wasn’t that long ago. Adams County has done well over the years, thanks in large part to the industries that have had a place to do business. I’ve been friends with many who have grown their businesses from less than 10 employees to several hundred, and none are in the technical or medical sectors. This is where Adams County has had a lot of success. We should celebrate those that have made Adams County what it is today and not penalize them by forcing them to change the land where their businesses have grown. The Advancing Adams Plan reflects the opposite of what we should expect from our local government.



Jessica Alizadeh
(303) 894-4456
jalizadeh@fwlaw.com

July 7, 2022

VIA EMAIL: JRUTTER@ADCOGOV.ORG

Re: Utility Trailer Sales of Colorado, LLC – Comments Regarding the Proposed Comprehensive Plan Amendments

Dear Ms. Hall:

This firm represents Utility Trailer Sales of Colorado, LLC (“Utility Trailer Sales”), located at 9200 Brighton Road. On behalf of Utility Trailer Sales, thank you for the opportunity to provide preliminary comments on the proposed Future Land Use Categories (“Amendments”) to the Adams County Comprehensive Plan (“ComPlan”). Our comments below pertain to both general concerns about the County’s proposed amendments and to Utility Trailer Sales’ property.

I. General Concerns

A. General Effect of Proposed Amendments

The County’s proposed ComPlan amendments appear to overlook the thoughtful and necessary location of industrial activities within the County. County land use regulations currently have many requirements for conformance with the ComPlan. Because of this, if the proposed amendments are approved, applications for things such as improvements to existing facilities and site plans, and to reconstruct in the event of a casualty, will become difficult and in some cases impossible for the County to approve, leading to a decrease in the actual percentage of industrial uses in the County and change to use-by-right zoning (County Development Standards and Regulations § 4-27-02).

The proposed Amendments include the reclassification of Industrial properties to three new subcategories of “Low,” “Medium,” and “High,” in addition to concentrations of I-2 and I-3 zoned property currently designated as “Industrial” in the ComPlan being proposed as “Mixed Use Commercial” and “Mixed Use.” The new Industrial Low category allows for “low impact industrial uses that primarily operate in buildings” (Future Land Use Categories page I). The new Mixed Use and Mixed Use Commercial categories allow for “commercial, office, multifamily

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residential, and institutional uses,” and for “land use for areas transitioning to industrial or heavy commercial developments where activities and operations are contained within buildings,” including “limited residential uses” (Future Land Use Categories page G and H). Mixed Use Commercial may be compatible with I-1 zoning, but Mixed Use is not compatible with any industrial zoning (Future Land Use Categories pp. G and H).

The uses envisioned for these categories run contrary to the zoning for many properties, and to long-established uses. For example, I-2 zoning allows for heavy industrial uses, including heavy construction contractors, along with light industrial uses, such as sheet metal shops and general building contractors, and light manufacturing or processing uses, such as machine shops, and moderate manufacturing and processing uses, such as cement manufacturing. I-3 zoning is intended for the heaviest of industrial uses and allows all of the uses allowed in I-2 in addition to uses such as asphalt and concrete production.

These uses are essential to the continued growth of Adams County. However, the County’s proposed ComPlan designations are not consistent with uses permitted in the zone districts they will effect. Ultimately, this unilateral downgrading by the County of long-time industrial properties will have the effect of limiting the ability of the County to grow and provide the necessary supplies and infrastructure that the addition of new residential and mixed-use development at an affordable cost requires, in addition to threatening the sustainability of established businesses.

B. Properties Designated for Residential Development

Furthermore, some property designations deserve additional thought based on location and environmental contamination, as there are Mixed Use developments proposed on or adjacent to land that cannot legally be approved for residential development. In the County’s description of the proposed Mixed Use Commercial future land use, it acknowledges that “[l]imited residential uses may be acceptable in a vertical mixed-use setting if all environmental conditions and concerns have been remediated and land-use adjacencies are mitigated” (Future Land Use Categories page H). However, the County has not acknowledged that most of these sites currently contain viable businesses, many of which are industrial. While the ComPlan may be a “visioning” document, this immediate drive toward residential uses on many industrial properties is without basis, either by virtue of environmental issues or by other land use conflicts, and greatly undermines legally operating businesses, discussed in more detail below.

C. Conformance with the Comprehensive Plan is Mandatory Under the Code, Which Functions as an Administrative Rezoning

The County's proposed Amendments are problematic on their own, but also particularly in view of the mandatory nature of the ComPlan in Adams County. The County's Development Standards and Regulations ("Code") define the Comprehensive Plan as, "a plan adopted by the County or a municipality within the County that **guides** land use, growth, and development decisions" (Code § 6-02-17). Emphasis added. However, because the Code explicitly requires conformance with the ComPlan in over a dozen express provisions, the ComPlan is not advisory, but decisively regulatory. Thus, the County's intent of meeting its vision "incrementally through rezoning and public and private investments," will instead result in abrupt changes for some property owners, prohibit future improvements to their businesses, and force county staff and the Board of County Commissioners to shut down conforming businesses upon the expiration of certain permits whether or not they desire to do so (Future Land Use Categories p. D).

The Code provisions that explicitly require conformity with the ComPlan include those for certificates of designation, urban renewal plans, major and minor subdivisions, recycling facilities, and any extension of time to obtain a building permit pursuant to a conditional use permit, in addition to approvals that more naturally incorporate the ComPlan, such as ODPs, PDPs, FDPs, and PUDs (Code §§ 2-02-04-06, 2-02-10-06-01, 2-02-19-01, 2-02-19-02-05, 2-02-09-07-03, 2-02-19-03-05, 2-02-20-02-05, and 2-02-09-10). The Code additionally allows the discretion to require conformity with the ComPlan for all site-specific development plans, administrative review permits, conditional use permits, inert fill permits, and all land use approvals generally (Code §§ 1-07-03, 2-02-02-04, 2-02-09-05, 2-02-12-05:9., 4-04-02-02, 4-05-02-07, 1-01-09-01, and 1-08-02).

D. The County Intends to Make Conformance with the Comprehensive Plan a Requirement for Site-Specific Development Plans

In November 2021, the BOCC listened to its constituents and tabled pending Code amendments to alter the applicable provisions for I-1, I-2, and I-3 properties. However, in case number PLN2021-00012, staff forwarded for approval to the BOCC language that further incorporated the requirement of ComPlan conformity into approvals for site-specific development plans. The language read "[t]he use and site plan are in general conformity with the Adams County Comprehensive Plan," and was proposed to be added to provisions for administrative review

permits, conditional use permits, special use permits, and temporary use permits (Code §§ 2-02-02-05, 2-02-04-06, 2-02-09-06, 2-02-012-06, and 2-02-13-05).

Under this proposal, anyone who was entitled to apply for these permits based on their zoning would have to be denied approval when the use was not consistent with the future land use designation imposed by the County in the ComPlan, even if the requested use was consistent with the zoning. This language was ultimately removed for reintroduction at a later time, but the County's proposed Amendments, which would drastically change the future land use for many industrial properties, would move the County substantially back in this direction. Furthermore, as the Code does in fact already contain provisions that allow the County to include conformity with the ComPlan as a condition for *any* land use approval (§§ 1-01-09-01 and 1-08-02), amendments that strip away industrial future land uses would, at a minimum, thwart any future improvement to properties whose future land use designations have changed, and lead ultimately to extinguishment of property rights, destabilization of investment in properties in the County, and the shutdown of businesses.

E. Requirement to Conform to the Comprehensive Plan May Limit and Eliminate Uses by Right Without Basic Notice Requirements

The County's proposed Amendments significantly impact individual properties, but the County is not required to give notice to individuals. Code § 2-02-15 lists the processes for rezoning and for amending the Code and ComPlan. For all three, neighborhood meetings are optional, "unless the Director . . . determines the development proposal could have significant neighborhood impacts" (Code § 2-02-15-05:2). All three actions require a public hearing before the Planning Commission ("PC") and Board of County Commissioners ("BOCC") (Code § 2-02-15-05:7). For Code text amendments, notice goes only in the official county newspaper, and written notice and posting are not required (Code § 2-02-15-05:6.a.). For rezonings, publication, posting, and written notice are required (Code § 2-02-15-05:6.b.). For ComPlan amendments, the code does not set out the type of notice required, and though the County may believe it has done substantial outreach for such amendments, it has become extraordinarily apparent in recent months that it is still not reaching all of the people it needs to.

By way of example, the proposed Amendments change the County's future land use plan to ultimately prohibit many industrial uses. When any site redevelopment or changes are needed, the requirement of conformance with the ComPlan, which makes the future land use designation into a regulatory provision, will prohibit the continuation of the established industrial use. But

the Code does not require that the County notify affected property owners. Even the requirement for a neighborhood meeting is at the discretion of the Planning Director. Meaning, staff could amend a future land use plan, hold no neighborhood meeting, and provide no notice other than a standard publication of the PC and BOCC meeting, and a future land use plan could be adopted upon a vote of the PC and BOCC. Then, when various industrial businesses seek to renew permits or improve their sites (which is essential to their continued operations and the basis of their investment-backed expectations), they would be denied because their use did not conform to the ComPlan.

F. Proposed Amendments and Comprehensive Plan Incorporation into Code Remove the Element of Choice and Flexibility for Commissioners

An example of a negative consequence of incorporation of the ComPlan into the Code is the County's urban renewal regulations, which are one of the many Code provisions that are tied to conformity with the ComPlan. Such provisions are intended to assist the BOCC in supporting and greenlighting desirable development that will also serve to "renew" an area. However, because any urban renewal plan must be "consistent with the goals and policies of the Adams County Comprehensive Plan," the flexibility that the BOCC relies upon to support approval of attractive and needed development has been eroded (Code § 2-02-10-06-01:1.). Furthermore, as outlined above, the County has the discretion to require conformity with the ComPlan for site-specific development plan approvals, with the proposal to make conformity mandatory expected to return when the County resumes its regulation amendment process. In addition to the broad impact on site-specific development plans, if the ComPlan amendments as-proposed are passed, when a wide range of desirable opportunities that are now regularly approved come along, such opportunities will now be inconsistent with the future land use, meaning that the staff cannot recommend approval and the BOCC cannot approve. Finally, making amendments to the ComPlan without input from directly impacted property owners, and caution and thoughtfulness on the part of the County regarding the true limits and repercussions of such amendments for both property owners and County objectives, further restricts the BOCC's discretion to welcome projects the County wants and needs.

II. Utility Trailer Sales Site-Specific Concerns

Utility Trailer Sales, pictured below and located at 9200 Brighton Road, Henderson, CO 80640, was established in Commerce City until 2008, when the business moved to Adams County. The business contributes an important service in the Denver Metro area, as well as serving national

and local transportation needs for food, medical supplies, building materials, fuels, and refrigerated and dry freight goods by providing truck and trailer sales, rentals, and service. Utility Trailer Sales carries 2,662 different part numbers at a value of \$1.41 million, and relies significantly on their ability to utilize outdoor storage on their property for the sustainability of their business. Utility Trailer Sales is also listed through the Department of Homeland Security as a “critical supplier designee” because of its importance to national ground transportation support services, and operated as an essential business through pandemic stay at home orders.

The property is zoned I-2 with a current future land use designation of Industrial and is located adjacent to I-76, making it particularly appropriate for industrial and outdoor storage uses. Utility Trailer Sales’ operations are consistent with the current future land use designation, but the County’s proposed future land use of Mixed Use Commercial does not support the need for this type of business in the County, and does not support the use that was established on the site in 2008, at the County’s invitation. It is very concerning that, at a minimum, the County’s proposed designation of Mixed Use Commercial sends mixed messages.





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Furthermore, if the Board of County Commissioners approves the Mixed Use Commercial future land use designation for this site, Utility Trailer Sales may ultimately be unable to make site improvements that would support their continued operations. For example, inert fill operations are required for many types of site improvements and it is not unreasonable to assume that Utility Trailer Sales may need such a permit in the future. Permits for fill operations are by temporary or special use, and the Board of Adjustment, which denies or approves such permits, may again, “attach any conditions necessary to implement the Adams County Comprehensive Plan” (Code §§ 2-02-12-05:9., 4-04-02-02, and 4-05-02-07). With a future land use designation of Mixed Use Commercial, the Board of Adjustment would have the power to simply deny the request to be able to improve the site in the guise of implementing the ComPlan (Code § 2-02-12-05:9.). Even an application for a temporary use permit for construction site fencing could be denied by the Board of Adjustment for this reason (Code § 4-05-02-04).

The County has noted in its proposed ComPlan amendments that the typical zone districts for the Industrial Medium designation are I-1 and I-2 (Future Land Use Categories, page I). Utility Trailer Sales’ property is zoned I-2, which allows Utility Trailer Sales’ use by-right. In order to avoid extinguishment of property rights and destabilization of investment in properties in the County, and to ensure Utility Trailer Sales’ continued successful operations, the future land use for this property must support the established use and should be designated Industrial Medium at a minimum.

Accordingly, we ask that you reconsider the proposed ComPlan Amendments discussed above. I welcome to opportunity to discuss any questions you may have.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Jessica Alizadeh', is written over a light blue horizontal line.

Jessica Alizadeh
Fairfield and Woods, P.C.



Brownstein Hyatt Farber Schreck, LLP
303.223.1100 main
410 Seventeenth Street, Suite 2200
Denver, Colorado 80202

August 31, 2022

VIA ELECTRONIC MAIL

Planning Commission
Adams County
4430 S. Adams County Parkway
Brighton, CO 80601

RE: Adams County PLN2022-0000

Dear Commissioners:

We represent Scannell Properties, LLC, and on behalf of our client, we would like to request that you recommend to the Adams County (the "**County**") Board of County Commissioners an Advancing Adams Comprehensive Plan Future Land Use Map designation of "Industrial Low" for a majority of the following properties located at the southwest corner of East 104th Avenue and Highway 85 on the east and west side of Brighton Road

- 0172116100002
- 0172116100003
- 0172116000030
- 0172116000031
- 0172116000032
- 0172116000002
- 0172116000003
- 0172116000033

and a designation of "Commercial Mixed Use" for the following properties located directly adjacent to Highway 85:

- 0172115003003
- 0172115000001

The properties are currently proposed to be designated as "Agriculture Small Scale," "Commercial," and "Public." However, designations of "Industrial Low" and "Commercial Mixed Use" would be more proper for several reasons.

First, the “Industrial Low” designation is intended for areas with industrial uses within buildings and this designation is intended to be integrated with adjacent “Industrial Medium” land uses. Here, the properties are north of areas designated as “Industrial Medium,” which include a variety of existing industrial uses, such as businesses with storage containers, pallet rentals, and fabrication services. This proximity to “Industrial Medium” designated properties meets exactly the purpose of the “Industrial Low” designation. The “Industrial Low” designation also contemplates adjacent residential uses so long as any negative impacts are mitigated. The presence of East 104th Avenue ensures that the residential uses north of E. 104th Avenue will be protected from any industrial uses south of the road. Additionally, the “Industrial Low” designation ought to apply to properties east and west of Brighton Road to act as a transition between the rural areas west along East 104th Avenue, the residential homes north of East 104th Avenue, on one hand, and the more intensive industrial uses south along Brighton Road, on the other hand.

Second, the “Commercial Mixed Use” designation is intended for areas transitioning to industrial or heavy commercial developments where activities and operations are contained in buildings. Areas with this designation often have environmental considerations or are adjacent to more intensive industrial uses that do not necessarily support residential uses. Additionally, the “Commercial Mixed Use” designation can be integrated with residential uses if negative impacts are mitigated. Here, the area adjacent to Highway 85 is ideally suited for the “Commercial Mixed Use” designation because of its proximity to the highway and adjacency to the heavier industrial uses along Brighton Road. It is not directly adjacent to residential uses. Moreover, the area is already served by several existing shopping centers, so these properties are not well suited for the “Commercial” designation.

Third, a designation of “Industrial Low” and “Mixed Use Commercial” would better help the County meet its objective in creating a corridor on East 104th Avenue because it will facilitate development that promotes multi-modal connectivity and a more cohesive sense of character.

Finally, these designations are supported by the Future Land Use Map Recommendation Along I-76, where the Planning Commission recommended the properties east of Brighton Road be designated as “Industrial Low,” with the far eastern portion of the properties designated as “Mixed Use Commercial.” However, as discussed above, the properties west of Brighton Road should also be designated “Industrial Low.”

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Thank you for the opportunity to comment, and for your consideration. We look forward to continuing to work with the County on this important matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Carolynne C. White". The signature is written in a cursive style with a large initial 'C'.

Carolynne C. White

24600705.2

Exhibit 5.15 Map Comment Responses and Staff Recommendations

Comment on the future land use	Name	Suggest a future land use type	Staff Comments and Recommendations
Lat: 39.85351 Lon: -104.95896 This particular open space has become an unofficial homeless encampment with several RV's and even a make shift home made out of wood. It has recently become trashed and polluted. I think a park would be perfect for this area as the nearest part in this subdivision is Rotella part. There are plenty of trees and vegetation, all that would be needed is the clean-up, pavement of walkways and installation of playground equipment.	Rolando Tello	Parks Open Space	Comment noted.
Agricultural uses are not viable at this location and residential uses are not likely due to the surrounding land uses and the location along a major, regional roadway and near a planned grade separated interchange at U.S. 85. The County's investment in the 120th Ave. corridor, the regional nature and high traffic volumes of 120th Ave., and the planned interchange at U.S. 85 and 120th make this property suitable for a broader range of uses. After having discussions with staff, we support the future land use designation of Mixed-Commercial at this location	Mann Lake Holdings	Mixed Use Commercial	Comment noted. Staff recommends changing designation to Mixed Use per Planning Commission direction
I am very concerned with the land use revision being considered. Outside storage is the lifeblood of our business. Our property is zoned I-2 The change in zoning regulations would condemn the use of the property and literally put us out of business.	ROXY VENDENA	Industrial High	Comment noted. Future land uses in the Square Lake area are administered and potentially updated through the Square Lake Subarea Plan.
As much open space as possible	Marc Volland	Parks Open Space	Comment noted.
A future land use of Parks and Open Space significantly limits the potential value of a property, because the pool of potential buyers is shrunk to basically one. A property with current zoning of I-2 should not be downgraded to open space. It's frustrating to see Adams County trying to run off the industrial businesses that provide jobs to county residents. Parks and Open Space are good, but they don't pay the bills. It's also frustrating that a choice was made by the county to put commuter rail through an industrial area, and now the County wants that industrial area to go away. Industrial property owners make significant long-term investments in their land and business, which benefit Adams County through job creation, property taxes and sales taxes. At least a mixed use designation would still help maintain the value of the property, but Open Space is very limiting.		Industrial Medium	Comment noted. Based on input from the County Parks and Open Space Department, staff recommends maintaining the Parks & Open Space designation.
We'd like to be included in all communication.	Kyle Schmidt		Added to contact list.
The current land use of this area is Industrial. There are many small businesses in this area who perform essential services such as paving, tractor trailer repair, delivery truck repair, manufacturing, and construction services. There is also already significant traffic on these roads without moving this area to Mixed Use. Additionally, most of the buildings in this area are built on filled landfills or quarries and require specialty construction to reduce movement of foundations.	Drew Goodman	Industrial Medium	Comment noted. Staff recommends a designation of Industrial Medium.
This land just needs to stay I-2 like it has been for years. The mixed use development will just drive industrial business out. The area here are what have built Adams county.	David White	Industrial High	Comment noted. Future land uses in the Square Lake area are administered and potentially updated through the Square Lake Subarea Plan.
i think the plan is well researched and thoughtful with a vision for the long-term future of Adams County.	tom green		General comment noted
It's imperative that the county keeps Industrial zoning. We will lose so many businesses if we lose more I-Zoning.	Kyle Schmidt		Comment noted. Mixed Use Commercial does envision lighter industrial zones like I-1.
This property needs to remain I2 zoned as it's an industrial area and surrounded by other I-zoned properties.	Kyle Schmidt	Industrial Medium	Comment noted. Staff has revised it's recommendation to Industrial Medium based on existing conditions, context, and available services.

<p>I don't see the need to change this future use of this property. This parcel is bounded on the west, north and east by CDOT property. Specifically, the parcel to east of 275 is a CDOT regional detention pond that could never be developed. The north and east is CDOT right of way for the interstate. Since the parcel to the south is industrial, I see no need to propose a future use as mixed used. I suggest you keep the property's use the same as it currently is which is industrial (I-3).</p>	<p>Paul Snyder</p>	<p>Industrial High</p>	<p>Staff does not recommend a reclassification to Industrial High as that category is a placeholder for things like oil refineries or other heavy industry with lasting impacts.</p>
<p>Why do you bother pretending to care about what the citizens say or want. You do whatever the developers want regardless of any citizen comment.</p>		<p>Parks Open Space</p>	<p>Comment noted.</p>
<p>We are located on the west side of the Brighton Lateral Ditch which has a public walkway. We wish to continue to have public access to this area with the City of Brighton maintaining the ditch landscape.</p>	<p>David Thomas</p>	<p>Residential Low</p>	<p>Area not in unincorporated Adams County and not subject to comprehensive plan. Email response sent.</p>
<p>I attempted to send a comment but the system would not allow me to do so.</p> <p>The comment failed and disappeared.</p> <p>Here is my second try at sending a comment This map is not particularly helpful without supporting documentation explaining the plan. No documentation was provided other than a map.</p> <p>Please provide supporting information.</p> <p>Melinda Mullett Analyticsinformatix@gmail.com 720.421.0131</p>	<p>Melinda Mullett</p>	<p>Mixed Use</p>	<p>Area not in unincorporated Adams County and not subject to comprehensive plan. Email response sent.</p>
<p>I attempted to send a comment but the system would not allow me to do so.</p> <p>The comment failed and disappeared.</p> <p>Melinda Mullett Analyticsinformatix@gmail.com 720.421.0131</p>	<p>Melinda Mullett</p>	<p>Mixed Use</p>	<p>Area not in unincorporated Adams County and not subject to comprehensive plan. Email response sent.</p>
<p>Why are you not enforcing current zoning laws to go after bad actors instead of passing new laws which will hurt good actors. Why would business owners invest in there properties if it is contingent on conditional use permit?</p>	<p>Ryan Jones</p>	<p>Industrial Medium</p>	<p>General comment noted. Future land uses in the Welby Subarea Plan are administered and potentially updated in that plan.</p>
<p>Please no future schools in this area. Horrible aviation noise related issues. All of this blue hatched area. No schools please...</p>	<p>Andrea Christensen</p>	<p>Mixed Use Commercial</p>	<p>The land use category of Public is intended for utilities rather than the Institutional category which may include schools and government buildings. The property is in the Public Category. Thank you for the comment.</p>
<p>Adams County must stop its proposed redefining of outdoor storage on commercial property. To change the definition of outdoor storage would be to take away historic property rights from land owners. This is not the way to "clean up" Adams County. Use existing laws to punish bad actors do not punish all commercial property owners. Work with businesses because without them you will destroy Adams County.</p>	<p>Bill Paige</p>	<p>Commercial</p>	<p>Staff has revised it's recommendation to Industrial Medium based on existing conditions, context, and available services.</p>

<p>NUMEROUS YEARS OF INDUSTRIAL USE HISTORY IN THIS AREA. DEVELOPMENT OCCURRING OVER TIME OF VARYING INDUSTRIAL USES AND VERY LIMITED 1950'S RESIDENTIAL PROPERTY WITHIN. THIS AREA IS AN OLD LANDFILL WITH MOSTLY BRICK AND SAND CONTENTS. FUTURE USE SHOULD REMAIN INDUSTRIAL TO SUPPORT OTHER INDUSTRIES THROUGHOUT THE METRO AREA AND THE STATE.</p>	<p>DENNIS RICHEY</p>	<p>Industrial Medium</p>	<p>The current land use designation is Industrial Medium. No change to FLUM designation.</p>
<p>Many of Brannan Sand and Gravel's properties are located in I-2 and I-3 zoning currently, and are surrounded by compatible land uses, in heavy industrial areas. All of our properties in I-2 and I-3 are listed as Industrial Low, Mixed Use, Square Lakes or Welby subarea plan in the proposed Comprehensive Plan. These changes in zoning are incompatible with current uses and will affect our properties very strongly. Nearly all of the industrial areas are zoned to a much lower category in the Comprehensive Plan. Industrial and construction properties are often not looked at positively, but are very important and necessary for Adams County, the Denver Metro, the Front Range and the entire state.</p>	<p>Joshua Oliver</p>	<p>Industrial Low</p>	<p>Comment noted. Staff does not recommend a change from Industrial Low. Industrial Low designation establishes a better transition to the adjacent Mixed Use Commercial envisioned for the area.</p>
<p>This area should remain industrial. Surrounding area is mostly industrial. This land was designated Industrial many years ago. The previous use was a concrete landfill. The County and it's Commissioners should send invitations to their open houses and public meetings at least 1month in advance. Word can get out and people can make plans to attend. Dumping the notification on Friday late in the day and having the public meetings in 3 days is crap. This is how I would plan a meeting I hope nobody will show up for. (I believe intentional) This keeps happening , What's the rush?</p>	<p>Jeff Richey</p>	<p>Industrial Medium</p>	<p>The current land use designation is Industrial Medium. The comment regarding public meetings will be forwarded to appropriate parties. No change to FLUM designation.</p>
<p>I am the CEO of Hutchison Inc. a third-generation family-owned business proudly entering its 70th year of business. We serve farm and ranch suppliers. Since 1974, Commerce City has been home to corporate headquarters for the company. We currently employ 50 at the 28-acre site. In attempting to review your plan we are having trouble opening and using the interactive maps in connection with the Comprehensive Plan and therefore, we cannot identify by map the proposed plan for our properties. In addition, we are having trouble understanding the rezoning of all properties in Adams County and the effect that will have on property owners, in particular industrial property owners, in Adams County and the use of their properties to continue to operate our business at its current location. Please let us know if a revised proposed Comprehensive Plan becomes available for public review which has access to maps and further information on rezoning.</p>	<p>Blake Hutchison</p>	<p>Industrial Medium</p>	<p>Comment noted. Future land use category is currently Industrial Medium. No change.</p>
<p>We are a small business operating for the last 20+ years within this proposed future zoning of residential. This area has always been light/mod industrial. The companies residing in this area are the ones that have helped build Adams County (past & future). There are several multi-generational construction businesses located in this very small area. Other than light rail, this area does not include an "inclusive community" that every county is trying to achieve. I-76 runs over Tennyson St. in this area making an even more undesirable situation for residential housing. Furthermore the homeless situation that Adams County has not dealt with, makes it even more undesirable for future residential. We encourage the county to consider this and leave the area following the CURRENT zoning rules. We all maintain our properties well and are good neighbors for the current residential areas. Most of this section of Tennyson (with the exception of the trailer park) are Industrial buildings.</p>	<p>Jennie Young</p>	<p>Industrial Medium</p>	<p>Comment noted. The Mixed Use Commercial designation does envision some industrial uses. Staff does not support a change to Industrial Medium given the adjacent residential as Mixed Use Commercial provides a better transition. As a note, the Imagine Adams FLU was Urban Residential.</p>
<p>I have comments to submit. I don't know where I can email them.</p>	<p>Mark Molen</p>	<p>Commercial</p>	<p>General comment noted and email response sent.</p>

Consider for Mixed Use (MU) designation to better reflect adjacent development patterns and plans; to *exclude* Industrial Uses at this location within the 64th Avenue mixed-use district.		Mixed Use	Comment noted. Staff recommends keeping Mixed Use Commercial designation.
Consider for Mixed Use (MU) designation to better reflect City of Aurora comprehensive plan mixed-use commercial designation; to *exclude* Industrial Uses at this location.		Mixed Use	Comment noted. 2012 Imagine Adams designation was Industrial. Staff recommends keeping Industrial Low designation.
The new designation for my land into Mixed Use will make this property useless for my business. this is a brand new facility we built to operate our company with outdoor storage, fleet and inventory. I will not be able to add shop space and warehouse space for future growth of my business. We boarder commercial warehouse, crestview water's building/yard that has outdoor storage and fleet. Crestview moves to "public" so they will not be forced out and we are being treated very unfair. This facility is our livelihood and we must be able to change our buildings, fleet and storage based on the current and future market in order to stay competitive. This new zoning will not allow us to operate here. We are great employeers for Adams county residents, support the community and run a clean and honest operation.	Hunter Hartman	Industrial Medium	Imagine Adams designation was Residential. The Mixed Use Commercial category is more in line with P.U.D and adjacent zoning.
This parcel is currently a wetland. Changing the zoning to mixed use commercial would eliminate this valuable ecological resource		Parks Open Space	Comment noted. Staff recommends Agriculture Small Scale to align with parcel size and existing zoning.
The current use of this parcel and the surrounding parcels is Medium Industrial. Transitioning this area to Mixed-Use Commercial would tell the small businesses located here that they are no longer welcome in the area.		Industrial Medium	Comment noted. Staff has revised it's recommendation to Industrial Medium based on existing conditions, context, and available services.
The current use of this parcel and the surrounding parcels is Medium Industrial. Transitioning this area to Mixed-Use Commercial would tell the small businesses located here that they are no longer welcome in the area.		Industrial Medium	Comment noted. Staff has revised it's recommendation to Industrial Medium based on existing conditions, context, and available services.
These new storage proposals would put us out of business. Please enforce current laws to deal with the bad actors. Why pass new laws when we can't enforce current ones. Also conditional Use permits will that are not permanent are of no use to any of us who have invested our money back in to our companies that provide services directly to Adams county and residents of Adams county.	Ryan Jones	Industrial High	Comment noted. Staff does not support a designation of Industrial High. Location where comment is made is designated for commercial and currently zoned residential.
why are all the mixed uses where there is a difference in elevation would we be able the put and asphalt and concrete plant into one of your mixed use.	Ben Frei	Industrial High	Comment noted. Staff would not support an Industrial High category, however, Industrial Low may be appropriate given the surrounding context. Industrial High is a place-holder for things like oil refineries or heavy industry with lasting impacts. Staff has revised it's recommendation to Industrial Low based on existing conditions, context, and available services.

<p>We own and operate a towing and recovery business in Adams County. We provide service to the Colorado State Patrol, Brighton Police and Broomfield Police. We store vehicles that have been in accidents, abandoned on properties- highways-etc, under investigations until insurance companies either retrieve vehicles The new changes would SEVERELY impact our business and the capability to provide our service. If we were limited on outside storage, it would cause a HUGE issue. With what is happening in todays world, many times we are at a financial loss on vehicle-- due to no insurance, abandonment of disabled vehicle and at times - campers to which the homeless has been evicted or abandoned the destroyed unit. Due to police account restrictions, code enforcement laws of certain cities, hoa's - we are limited as to where we can even park our towing equipment and be able to respond with the time length of up to 30 mins.</p>	<p>Kim Weber</p>	<p>Industrial Low</p>	<p>Staff has revised it's recommendation to Industrial Medium based on existing conditions, context, and available services.</p>
<p>If I am correct, our business Complete Trailers LLc and Complete Trailers Service will move from Industrial which included outside storage to Commercial mixed use. We are zone I2. We have to have outside storage for our sales side. We sell trailers to Schools, Counties, States, Race car enthusiasts, Homeland security, Electrical, Pumbing, HVAC Construction, Landscape, Cement work trades, Atv, motorcycle, Concession, Military, Emergency response, Camping and many more uses. We offer full service and repair for these trailers as well and it requires outside storage until the units can be repaired. Our property has never looked as good as we maintain it. If moving to Commercial Mixed Use eliminates outside storage for units we sell similar to all Automobile dealerships, it will mean a possible loss for all employees jobs , moving if we can find anywhere to go or closing our business. Our type of business is related to Automobillesales and display not clearly trailer sales and service</p>	<p>Jay Costa</p>		<p>Staff has revised it's recommendation to Industrial Medium based on existing conditions, context, and available services.</p>
<p>Study leased farm lands' payments to the County to determine if these revenues can be a funding stream for ag education, infrastructure projects and services for regenerative ag and carbon sequestration conservation purposes. Identify and hire a land conservation consultant, e.g. Christine Quinlan, to evaluate land potential for ag and conservation outside Historic Splendid Valley parameters, especially east of I-76.Study and establish composting service policies and incentives for residential and commercial food waste become viable compost material and to keep food waste out of the landfills(reduce methane and other greenhouse gas emissions). --- [Response to staff comment] Thanks for your response. I was not sure how the difference is between small and large agriculture. If large agriculture fits zoning then I support that. My request is to keep agriculture lands from being divided and paved over for storage units, housing or warehouses.</p>	<p>Christy Dowling</p>	<p>Agriculture Small Scale</p>	<p>Comment noted. Agriculture Large Scale aligns with existing A-3 zoning and desired minimum lot size of 35 acres.</p>
<p>Dear Adams County planning department, I would like to suggest a future land use for this 160 acer(4x40 parcels) property - 14625 Manilla Road to be made into a PUD with clustered residential or zoning to A1 with 2.5 acre lots for building housed. This property is across the Manilla road from the Cavanaugh Hills development which is zoned in the same way I beleive. Thank you for your consideration. Ravi Maraju</p>	<p>Ravi Maraju</p>	<p>Residential Medium</p>	<p>Comment noted. Staff does not recommend a change in designation at this time. The comment will be added to the public record and staff packet for Planning Commission consideration.</p>

<p>Dear Adams County planning department, I would like to suggest a future land use for this 152 acre property on County Road 4 to be made into a PUD with clustered residential or zoning to A1 with 2.5 acre lots for building houses. This property is less than 1 mile from high density residential sub divisions on 168th and Country Road 31.</p> <p>Thank you for your consideration. Ravi Maroju</p>	Ravi Maroju	Residential High	Comment noted. Property in Weld County.
See Public Comment 5.1	Albert Frei & Sons		Comment noted. Property was Activity Center in Imagine Adams Plan. Staff does not recommend a change from Mixed Use.
See Public Comment Response 5.1	Albert Frei & Sons		Property was Activity Center in 2012 Imagine Adams plan. Staff does not recommend a change from Mixed Use.
See Public Comment Response 5.1	Albert Frei & Sons		Property is designated for Industrial Low. Staff does not recommend a change.
See Public Comment Response 5.1	Albert Frei & Sons		Properties incorrectly designated as Parks & Open Space. Staff recommends designation changed to Residential Low.
See Public Comment Response 5.1	Albert Frei & Sons		Property is administered through the Splendid Valley District Plan.
See Public Comment Response 5.3	Brownstein Hyatt Farber Schreck, LLP on behalf of Fiore & Sons, Inc., A-One Chipseal, Iron Woman Construction & Environmental Services, and Waste Connections of Colorado, Inc.	Industrial Medium	Staff does not recommend a change from Industrial Low to better transition from surrounding Mixed Use Commercial
See Public Comment Response 5.3	Brownstein Hyatt Farber Schreck, LLP on behalf of Fiore & Sons, Inc., A-One Chipseal, Iron Woman Construction & Environmental Services, and Waste Connections of Colorado, Inc.	Industrial Medium	Staff does not recommend a change from Mixed Use Commercial to better establish a 'Gateway Corridor' into the county and support other plan policies.

See Public Comment Response 5.3	Brownstein Hyatt Farber Schreck, LLP on behalf of Fiore & Sons, Inc., A-One Chipseal, Iron Woman Construction & Environmental Services, and Waste Connections of Colorado, Inc.	Industrial High	Staff does not recommend a designation of Industrial High as that category is a placeholder for uses like oil refineries. Staff recommends keeping the Industrial Medium designation.
See Public Comment Response 5.5	Comunale Properties	Industrial Medium	Staff does not recommend a change from Mixed Use Commercial to better establish a 'Gateway Corridor' into the county and support other plan policies.
See Public Comment Response 5.6	EFG Denver	Mixed Use Commercial	Properties were designated as Activity Center in the 2012 Imagine Adams plan. Staff does not recommend a change from Mixed Use at this time which is further supported by the Clear Creek TOD plan.
See Public Comment Response 5.2	Fairfield & Woods on behalf of Brannan Sand and Gravel Company, LLC	Industrial High	Staff does not recommend a designation of Industrial High as that is a placeholder category for uses like oil refineries. Staff recommends keeping the Industrial Low designation to better transition to adjacent Mixed Use Commercial.
See Public Comment Response 5.2	Fairfield & Woods on behalf of Brannan Sand and Gravel Company, LLC	Industrial Medium	This property is administered through the Square Lake Sub-Area plan. No change is recommended at this time.
See Public Comment Response 5.8	James Gibson Ft Gibson LLC		Staff has revised it's recommendation to Industrial Medium based on existing conditions, context, and available services.
See Public Comment Response 5.13	Public Utility Trailers	Industrial Medium	Comment noted. Staff recommends a designation of Industrial Medium.
See Public Comment Response 5.7	Foster Graham Milstein, & Calisher, LLP ("FGMC") on behalf of Mann Lake Holdings and Concrete Express, Inc.	Mixed Use Commercial	Comment noted. Staff agrees with Planning Commission direction and recommends Mixed Use as the designation. Staff recognizes the opportunity to be more communicative with engaged stakeholders going forward.
See Public Comment Response 5.7	Foster Graham Milstein, & Calisher, LLP ("FGMC") on behalf of Mann Lake Holdings and Concrete Express, Inc.	Industrial Medium	Comment noted. Staff agrees Industrial Medium is the appropriate designation and recommends keeping it as such.
We are concerned that our land use rights will be changed and our business can not continue to function.		Commercial	Comment noted. Property where comment is placed is zoned A-3 and designated as Local District Mixed Use in 2012 plan. Staff recommends maintaining Mixed Use designation as appropriate.

See Public Comment Response 5.4	Buckley Parallel LLC	Industrial Medium	Comment noted. The property is designated as Agriculture in the Brighton FLUM and 2012 Imagine Adams Plan and is in relatively close proximity to Barr Lake. Staff does not recommend a change from Agriculture Large Scale at this time.
My property is bounded by I-25 on the east, I-76 on the north, a CDOT regional detention pond on the west, and industrial zoned property on the south. There is no reason to change the future land use from industrial to mixed commercial. It is illogical to do so. My property is an island surrounded by CDOT owned property and related structures and industrial. Please keep my property as industrial.	Paul Snyder	Industrial Medium	Comment noted. Based on available services and surrounding context of Mixed Use Commercial and Industrial Low, staff has revised its recommendation to Industrial Low for the subject property.
This parcel 0172102123001 is within the Commerce City city limits. It should not be shown on the Future Land Use map.	City of Brighton		Technical correction made
This is an odd location for a park (0172102000021) in that it is immediately adjacent to a major arterial and surrounded by right-of-way on 3 sides.	City of Brighton	Residential Low	Changed to recommendation to Commercial per PC input to match Imagine Adams FLUM
An industrial designation on 0157136002001 look toward the future uses of this area and would be more appropriate as Mixed Use. The incorporated area east of here is potentially developing into a large sports complex that will host tournaments and be a travel-to destination. The Adams Crossing area to the east is proposed to be developed as a dense, mixed-use development with retail and residential uses.	City of Brighton	Mixed Use	Recommended designation changed to Mixed Use to match surrounding area
Parcels -156920000038, 156920000039, 0156920000015, 0156920000010, 0156920000011, and 0156920000012 are or will be Parks and Open Space for the City of Brighton.	City of Brighton	Parks Open Space	Properties are subject to the Splendid Valley District Plan. Future land uses are administered through that plan.
Brighton objects to the change in designation from Local District Mixed Use to Agriculture for parcels 0157123000026, 0157124000015, 0157126000004, and 0157125200001. These properties are part of the gateway into the Historic Splendid Valley and Brighton and will be one of the first things travelers see past E-470 along Highway 85. These are large, very visible parcels. In addition, Second Creek runs through these lands and will eventually have a trail connection which would help connect the South Platte River Trail to the Historic Splendid Valley via the trailhead and Willow Bay property west of Brighton Road.	City of Brighton		Property is adjacent to the Splendid Valley District Plan but not within the plan boundary. Plan. Staff recommends maintaining Agriculture Small Scale designation
We are unclear as to why this property has been designated Institutional. This is a private residence. Please consider returning this to residential.	City of Brighton	Residential Low	Technical correction made
We have current annexation applications that are not always consistent with this map. We should discuss.	Town of Bennett	Residential Medium	Comment noted. Annexation approved by Town of Bennett 7/12/2022. To be removed from AA FLUM.
The Mixed Use Commercial area now designated northeast of Brighton Road and 124th Avenue is served by City of Brighton water utilities due to groundwater quality issues for wells in this area. As the water service provider, Brighton has concerns with the potential for mixed use development here as we have limited water resources that should be focused within City limits. If water is available for such a use, it is likely that water will be required to be dedicated to the City in order to obtain a new water tap or increase the size of an existing tap. The future change in access at the Highway 85 and 124th Avenue intersection would also make it harder for a commercial uses to remain viable due to limited traffic from and access to Highway 85 in the future. We would suggest low density residential as a better long-term land use designation.	City of Brighton	Residential Low	Comment noted. No change to staff recommendation of Mixed Use Commercial per Planning Commission direction.

The Mixed Use Commercial area now designated southwest of Brighton Road and 124th Avenue is served by City of Brighton water utilities due to groundwater quality issues for wells in this area. As the water service provider, Brighton has concerns with the potential for mixed use development here as we have limited water resources that should be focused within City limits. If water is available for such a use, it is likely that water will be required to be dedicated to the City in order to obtain a new water tap or increase the size of an existing tap. The future change in access at the Highway 85 and 124th Avenue intersection would also make it harder for a commercial use to remain viable due to limited traffic from and access to Highway 85 in the future. We would suggest low density residential as a better long-term land use designation.	City of Brighton	Residential Low	Comment noted. No change to staff recommendation of Mixed Use per Planning Commission direction.
•Mixed Use Commercial (MUC): Much of the lands around DEN have been identified in the Plan as Mixed Use Commercial (MUC); previous the DIA Reserve. The proposed MUC land use category includes possible residential development. The Plan notes that "Limited residential uses may be acceptable in a vertical mixed-use setting if all environmental conditions and concerns have been remediated and land-use adjacencies are mitigated." DEN suggests that rather than considering remediation and mitigation measures with respect to residential development near DEN, the Plan should affirmatively declare that residential use should simply not be allowed adjacent to DEN.	Denver International Airport	Mixed Use Commercial	Comment noted. Additional symbology may be added to clarify the limitation on uses.
•Public Institutional: DEN suggests making clear in the Plan that the airport overlay applies in the area, and that sensitive land uses, such as schools, should be prohibited in areas adjacent to DEN.	Denver International Airport	Public	Comment noted. The Public category is for utilities and does not envision schools.
See Referral Comment 4.8. Southeast corner of 128th & ZUNI (parcel 0157333000001) should be designated Residential Medium rather than the proposed Residential Low	Westminster	Residential Medium	This property is a non-conforming A-3 property at 9.9 acres. The Westminster FLUM indicates Residential Medium is appropriate. Staff recommends Residential Medium.
Shaw Heights residential area, multiple parcels, generally south of 92nd, west of Federal Blvd, north and east of Circle Drive, west of US-36 should be designated Residential Low rather than Residential Medium	Westminster	Residential Low	The properties in this area are zoned R-1-C and do not have the lot sizes to meet the intent of the Residential Low category. County staff does not recommend a reclassification to Residential Low.
Parcels along the west side of Lowell Blvd south of 68th Avenue ideally would be designated Agricultural Small Scale to align with Westminster's identified "Area to Remain Low Density/Agriculture", however if this is not possible then we would recommend the Residential Low designation (Parcels 0182506400002 through 0182506400005) in lieu of the Advancing Adams proposed Mixed Use designation	Westminster	Residential Low	The four properties in this area are currently zoned R-1-C. One is vacant while the other three have single family homes. One property with a dwelling unit is 0.95 acres while the other three are less than 0.5 acres and do not meet the lot size as indicated in the Residential Low or Agriculture Small category. Given that these properties are within the 1/2 mile radius of the Westminster light rail station, staff recommends maintaining the Mixed Use category.
Parcels 0182505409011 and 0182505409012 south of 70th Ave and west of Zuni should reflect the current and proposed 20-acre expansion to the Metro District park as a Parks and Open Space designation in the Plan	Westminster	Parks Open Space	The property is proposed for both residential and park uses and staff does not support with designating 0182505409011 as Parks & Open Space 0182505409013 and 0182505409012 are appropriate for Parks and Open Space Designation.
This land should have the ability to have industrial low. It is Agricultural land, and by eliminating the industrial use on this land, you are limiting the potential buyer pool for the property owner and negatively affecting the potential sale price. The FLU should include industrial here.	Ryan Searle	Industrial Low	Imagine Adams designation was Commercial. Staff agrees that allowing light industrial uses would increase development feasibility while meeting goals of the plan. Updated staff recommendation to Mixed Use Commercial.

<p>The area at the intersection of Belle Creek and E104th is best utilized for Mixed Use Commercial per Planning Commission's recommended Future Land Use Map Recommendation Along I-76.</p>		<p>Mixed Use Commercial</p>	<p>Imagine Adams designation was Commercial. Staff agrees that allowing light industrial uses would increase development feasibility while meeting goals of the plan. Updated staff recommendation to Mixed Use Commercial.</p>
<p>This privately owned parcel is best utilized for Industrial Low per Planning Commission's recommended Future Land Use Map Recommendation Along I-76.</p>		<p>Industrial Low</p>	<p>Staff has reviewed the property and has updated its recommendation to Mixed Use Commercial which envisions low industrial uses.</p>
<p>From Brighton Rd. to near the intersection of Belle Creek Blvd. and E 104th Ave. is best utilized for Industrial Low per Planning Commission's recommended Future Land Use Map Recommendation Along I-76.</p>	<p>Adam Frankenberg</p>	<p>Industrial Low</p>	<p>2012 Imagine Adams Plan designation was Industrial. Staff has updated its recommendation to Industrial Low.</p>
<p>From Brighton Rd. to near the intersection of Counter Dr. and E 104th Ave. is best utilized for Industrial Low to align with the property east of Brighton per Planning Commission's recommended Future Land Use Map Recommendation Along I-76.</p>		<p>Industrial Low</p>	<p>2012 Imagine Adams Plan designation was Industrial. Staff has updated its recommendation to Industrial Low.</p>
<p>From Brighton Rd. to near the intersection of Counter Dr. and E 104th Ave. is best utilized for Industrial Low to align with the property east of Brighton per Planning Commission's recommended Future Land Use Map Recommendation Along I-76.</p>		<p>Industrial Low</p>	<p>Imagine Adams designation was Commercial. Staff agrees that allowing light industrial uses would increase development feasibility while meeting goals of the plan. Updated staff recommendation to Mixed Use Commercial.</p>

Community & Economic
Development Department
www.adcogov.org



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Brighton, CO 80601-8218
PHONE 720.523.6880
FAX 720.523.6967
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Request for Comments

Case Name: Advancing Adams - Comprehensive Plan
Project Number: PLN2022-00007

May 6, 2022

The Adams County Community & Economic Development Department is requesting comments on the following application: **comprehensive plan amendment to adopt the Advancing Adams Comprehensive Plan**. This request will be effective **COUNTY-WIDE**.

Visit www.AdvancingAdams.org to view the draft Comprehensive Plan and draft Future Land Use Map.

Please forward any written comments on this application to the Community & Economic Development Department at 4430 South Adams County Parkway, Suite W2000A Brighton, CO 80601-8216 or call (720) 523-6841 by 05/31/2022, in order that your comments may be taken into consideration in the review of this case. If you would like your comments included verbatim please send your response by way of e-mail to JRutter@adcogov.org.

Once comments have been received and the staff report written, the staff report and notice of public hearing dates may be forwarded to you upon request. The full text of the proposed request and additional colored maps can be obtained by contacting this office or by accessing the Adams County web site at www.adcogov.org/planning/currentcases.

Thank you for your review of this case.

Jennifer Rutter, AICP
Planning & Development Manager

BOARD OF COUNTY COMMISSIONERS

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DISTRICT 1

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DISTRICT 3

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DISTRICT 4

Lynn Baca
DISTRICT 5

PUBLICATION REQUEST

Case Name: Comprehensive Plan Update: Advancing Adams

Case Number: PLN2022-00007

Planning Commission Hearing Date: September 8, 2022 at 6:00 p.m.

Board of County Commissioners Hearing Date: September 27, 2022 at 9:30 a.m.

Case Manager: Karl Onsager

Request: Comprehensive Plan Update

Location of Request: Unincorporated County-Wide

Applicant: Adams County

Public Hearings Location: 4430 S. Adams County Pkwy., Brighton, CO 80601 Please visit <http://www.adcogov.org/bocc> for up-to-date information. The full text of the proposed request and additional colored maps can be obtained by accessing the Advancing Adams website at www.advancingadams.org.

PUBLIC NOTICE

PUBLICATION REQUEST

Case Name: Comprehensive Plan Update:
Advancing Adams

Case Number: PLN2022-00007

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September 8, 2022 at 6:00 p.m.

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Public Hearings Location: 4430 S. Adams
County Pkwy., Brighton, CO 80601 Please visit
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website at www.advancingadams.org.

Legal Notice No. CCX674

First Publication: August 18, 2022

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Publisher: Commerce City Sentinel Express

The Denver Post, LLC

PUBLISHER'S AFFIDAVIT

City and County of Denver)
State of Colorado)
)

The undersigned Nicole Maestas
being first duly sworn under oath, states
and affirms as follows:

1. He/she is the legal Advertising Reviewer of The Denver Post, LLC, publisher of The Denver Post and Your Hub.
2. The Denver Post and Your Hub are newspapers of general circulation that have been published continuously and without interruption for at least fifty-two weeks in Denver County and meet the legal requisites for a legal newspaper under Colo. Rev. Stat. 24-70-103.
3. The notice that is attached hereto is a true copy, published in The Denver Post on the following date(s):

August 12, 2022

Nicole Maestas
Signature

Subscribed and sworn to before me this
12 day of August, 2022.

Rosann R Wunsch
Notary Public

(SEAL) ROSANN R WUNSCH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID 20024002315
MY COMMISSION EXPIRES FEBRUARY 26, 2026

Case Name: Comprehensive Plan Update: Advancing Adams
Case Number: PLN2022-00007
Planning Commission Hearing Date: September 8, 2022 at 6:00 p.m.
Board of County Commissioners Hearing Date: September 27, 2022 at 9:30 a.m.
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PUBLIC NOTICE

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Case Name: Comprehensive Plan Update:
Advancing Adams

Case Number: PLN2022-00007

Planning Commission Hearing Date:
September 8, 2022 at 6:00 p.m.

**Board of County Commissioners Hearing
Date:** September 27, 2022 at 9:30 a.m.

Case Manager: Karl Onsager

Request: Comprehensive Plan Update

Location of Request: Unincorporated
County-Wide

Applicant: Adams County

Public Hearings Location: 4430 S. Adams
County Pkwy., Brighton, CO 80601 Please visit
<http://www.adcogov.org/bocc> for up-to-date
information. The full text of the proposed
request and additional colored maps can be
obtained by accessing the Advancing Adams
website at www.advancingadams.org.

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Last Publication: August 18, 2022

Publisher: Brighton Standard Blade

PUBLIC NOTICE

PUBLICATION REQUEST

Case Name: Comprehensive Plan Update:
Advancing Adams

Case Number: PLN2022-00007

Planning Commission Hearing Date:
September 8, 2022 at 6:00 p.m.

Board of County Commissioners Hearing Date: September 27, 2022 at 9:30 a.m.

Case Manager: Karl Onsager

Request: Comprehensive Plan Update

Location of Request: Unincorporated
County-Wide

Applicant: Adams County

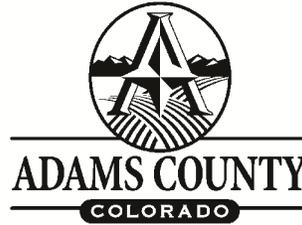
Public Hearings Location: 4430 S. Adams
County Pkwy., Brighton, CO 80601 Please visit
<http://www.adcogov.org/bocc> for up-to-date
information. The full text of the proposed
request and additional colored maps can be
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website at www.advancingadams.org.

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First Publication: August 18, 2022

Last Publication: August 18, 2022

Publisher: The Northglenn-Thornton Sentinel
Westminster Window



Public Hearing Notification

Case Name:	Advancing Adams - Comprehensive Plan
Case Number:	PLN2022-00007
Planning Commission Hearing Date:	09/08/2022 at 6:00 p.m.
Board of County Commissioners Hearing Date:	09/27/2022 at 9:30 a.m.

August 17, 2022

A public hearing has been set by the Adams County Planning Commission and the Board of County Commissioners to consider the following request:

Adams County Comprehensive Plan Update

The Comprehensive Plan is a applies to unincorporated portions of the county. The Advancing Adams 2022 Comprehensive Plan is an overarching plan that addresses the community's vision for future land uses, housing and population growth, the natural and built environments, economic development, cultural heritage, and corridors and subareas. The plan is intended to be a visonary document

The hearing will be held in the Adams County Hearing Room located at 4430 South Adams County Parkway, Brighton CO 80601-8216. This will be a public hearing and any interested parties may attend and be heard. The Applicant and Representative's presence at these hearings is requested. If you require any special accommodations (e.g., wheelchair accessibility, an interpreter for the hearing impaired, etc.) please contact the Adams County Community and Economic Development Department at (720) 523-6800 (or if this is a long distance call, please use the County's toll free telephone number at 1-800-824-7842) prior to the meeting date.

For further information regarding this case, please contact the Department of Community and Economic Development, 4430 S Adams County Parkway, Brighton, CO 80601, 720-523-6800. This is also the location where maps and/or text certified by the Planning Commission may be viewed.

The full text of the proposed request and additional colored maps can be obtained by contacting this office or by accessing the Adams County web site at www.AdvancingAdams.com.

Thank you for your review of this case.

BOARD OF COUNTY COMMISSIONERS

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DISTRICT 4

Lynn Baca
DISTRICT 5

171933106035	Parks Open Space	Residential Medium	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172102000021	Parks Open Space	Commercial	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172109400003	Parks Open Space	Residential Medium	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172130000053	Parks Open Space	Residential Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000267	Parks Open Space	Agriculture Small Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000025	Parks Open Space	Agriculture Small	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000268	Parks Open Space	Agriculture Small Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172306000006	Parks Open Space	Agriculture Small Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182507402001	Parks Open Space	Mixed Use Commercial	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182507100026	Parks Open Space	Residential Medium	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182508211002	Parks Open Space	Residential Medium	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182509102003	Parks Open Space	Mixed Use Commercial	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182518100005	Parks Open Space	Mixed Use Commercial	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182518100006	Parks Open Space	Mixed Use Commercial	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
156900000173	Parks Open Space	Agriculture Large Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
156900000174	Parks Open Space	Agriculture Large Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
156933200003	Parks Open Space	Residential Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172303200003	Parks Open Space	Residential Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000243	Parks Open Space	Residential Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000154	Parks Open Space	Agriculture Small Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000244	Parks Open Space	Agriculture Large Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000123	Parks Open Space	Agriculture Large Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000290	Parks Open Space	Agriculture Small Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172300000289	Parks Open Space	Agriculture Small Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172719200001	Parks Open Space	Agriculture Large Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
157126101001	Parks Open Space	Residential Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
181328300007	Parks Open Space	Agriculture Large Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172525200001	Parks Open Space	Agriculture Large Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182505200074	Parks Open Space	Residential Medium	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
181526100002	Parks Open Space	Residential Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182501210001	Parks Open Space	Mixed Use Commercial	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182501208041	Parks Open Space	Industrial Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
182501208042	Parks Open Space	Industrial Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
181526300002	Parks Open Space	Agriculture Small Scale	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
157323301008	Parks Open Space	Residential Low	Technical correction. Recommendation based on Parks Department input, lot size, zoning, and context
172116400001	Public	Industrial Low	Recommendation to Industrial Low per PC direction and existing zoning and context
172116000042	Public	Industrial Low	Recommendation to Industrial Low per PC direction and existing zoning and context
157110100005	Public	Institutional	Technical correction for admin building and not utility site.
157333000001	Residential Low	Residential Medium	Recommendation per Westminster comment
172102100004	Residential Low	Commercial	Recommendation to align with 2012 designation and Commerce City Comp Plan

172102100005	Residential Low	Commercial	Recommendation to align with 2012 designation and Commerce City Comp Plan
172102000003	Residential Low	Commercial	Recommendation to align with 2012 designation and Commerce City Comp Plan
172102000004	Residential Low	Commercial	Recommendation to align with 2012 designation and Commerce City Comp Plan
182505409013	Residential Medium	Parks Open Space	Technical correction to align with PUD plan per Westminster comment
182505409012	Residential Medium	Parks Open Space	Technical correction to align with PUD plan per Westminster comment
172115000001	Mixed Use Commercial	Mixed Use Commercial	Updated Recommendation to Mixed Use Commercial from Commercial for development flexibility
172115003003	Mixed Use Commercial	Mixed Use Commercial	Updated Recommendation to Mixed Use Commercial from Commercial for development flexibility
172116100002	Mixed Use Commercial	Mixed Use Commercial	Updated Recommendation to Mixed Use Commercial from Commercial for development flexibility
172116100003	Mixed Use Commercial	Mixed Use Commercial	Updated Recommendation to Mixed Use Commercial from Commercial for development flexibility
172116000031	Mixed Use Commercial	Industrial Low	Imagine Adams 2012 designation was Industrial. Updated recommendation to Industrial Low
172116000002	Mixed Use Commercial	Industrial Low	Imagine Adams 2012 designation was Industrial. Updated recommendation to Industrial Low
172116000030	Mixed Use Commercial	Industrial Low	Imagine Adams 2012 designation was Industrial. Updated recommendation to Industrial Low
172116000032	Mixed Use Commercial	Industrial Low	Imagine Adams 2012 designation was Industrial. Updated recommendation to Industrial Low
172116000033	Mixed Use Commercial	Industrial Low	Imagine Adams 2012 designation was Industrial. Updated recommendation to Industrial Low
172116000003	Mixed Use Commercial	Industrial Low	Imagine Adams 2012 designation was Industrial. Updated recommendation to Industrial Low
172500000138	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156700000216	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730201001	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203008	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202001	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202008	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203009	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730201007	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730201002	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202007	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202002	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203007	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203006	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730201006	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730201003	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203002	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203005	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202003	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202006	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730201004	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202004	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730202005	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203003	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156730203004	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156729101001	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN

156730300001	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156700000287	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
181900000176	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN
156728200001	Mixed Use Commercial	Mixed Use Commercial*	Added symbology for area within noise contour provided by DEN

6.5 Text Change Log (Public Comment Draft to Public Hearing Draft)

Chapter	Change to: (grammar/ wording to general narrative, substantiative modification to general narrative, modified policy, modified strategy)	Public Comment Draft	Public Hearing Draft
1	Grammar/ Wording to general narrative	Chapter 1	Clarified language, formatting, grammar throughout Chapter 1
1	Substantiative modification to general narrative	Chapter 1	Added language throughout that emphasize the plan is visionary such as “The Comp Plan is intended to be a visionary policy.”
1	Substantiative modification to general narrative	‘How to use plans’ table	Changed to Figure 1-4 for list of re-adopted plans
2	Grammar/ Wording to general narrative	Chapter 2	Clarified language, formatting, grammar Page 11
2	Substantiative modification to general narrative	-	Added “There may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation overlay, may undermine the Plan’s stated development goal, and in those instances existing and future development will need to accommodate these existing conditions.” To Page 11
2	Grammar/ Wording to general narrative	-	Added “exurban” to Residential Low
2	Wording to general narrative	Figure 2-3 depicts the land area to current zoning as a quantity and percentage. Note, some zones coordinate specifically with a FLUM category while others, I-1 for instance, may apply to	Added “Figure 2-3 depicts the land area to current zoning and uses as a quantity and percentage. Note, some zones coordinate specifically with a FLUM category while others, I-1 for instance, may apply to several categories (Industrial Low and Mixed-Use

		several categories (Industrial Low and Mixed-Use Commercial).	Commercial). Some properties zoned I-3 were allocated into the Industrial Medium category for purposes of calculation based on operations and uses more consistent with the Industrial Medium character, and likewise with I-2 into the Industrial Low category. Note, the table is illustrative and not intended to conflict with Future Land Use Categories listed below." To narrative for Figure 2-3.
2	Grammar/ Wording to general narrative	Mixed Use Commercial areas often have environmental considerations or adjacent to more intense industrial uses that do not necessarily support residential uses.	Mixed Use Commercial areas often have environmental considerations or [are] adjacent to more intense industrial uses that do [not] necessarily support residential uses.
2	Substantiative modification to general narrative	Changes to Industrial High	Changed Typical Zone Districts to "I-3 or Higher" Added "Uses generally have State or Federal regulatory oversight. Examples include oil-refineries, land-fills, toxic waste processing, etc." to description. (Page 18)
2	Substantiative modification to general narrative	-	Added: " <i>Typical Zone Districts</i> depicted in the future land use categories is intended to illustrate zone districts conventionally found in a category and not an exclusive list of potentially appropriate zone districts and may be evaluated along with additional criteria."
2	Grammar/ Wording to general narrative	This land use category includes low impact industrial uses that primarily operate in buildings. While it should be avoided, this category can be adjacent to residential use because nuisances or pollution are minimal.	This land use category includes low impact industrial uses that primarily operate in buildings. This category may be adjacent to residential use if nuisances or pollution are minimal and sufficiently mitigated.

2	Formatting	-	Changed order of land use categories
2	Substantiative modification to general narrative	Change to Mixed Use Commercial	*  Area formerly in Imagine Adams DIA Reserve category and not suitable for FAA sensitive uses such as residential uses or schools.
3	Grammar/ Wording to general narrative	Chapter 3	Clarified language, formatting, grammar (Page 22-23)
4	Grammar/ Wording to general narrative	Chapter 4	Clarified language, formatting, grammar (Page 31-34)
4	Modified policy	Policy NRE 4.1: Adams County has a long history of mining and landfill uses that have created a visible impact on the landscape. Ensuring the county's resources are extracted, conserved, recycled, and used responsibly will allow for future generations to enjoy the land, water, and air as we do today.	Policy NRE 4.1: Adams County has a long history of mining and landfill uses that have created a visible impact on the landscape. Ensuring the county's resources are extracted , conserved, recycled, and used responsibly will allow for future generations to enjoy the land, water, and air as we do today.
5	Grammar/ Wording to general narrative	Chapter 5	Clarified language, formatting, grammar (Page 41-42)
5	Modified strategy	Strategy BEC 2.2.04: Support development that reduces "Vehicle Miles Traveled." Emphasize the 20-minute community in established neighborhoods and identified town centers and urban centers by encouraging service and commercial supportive densities and development patterns to attract and sustain community resources, such as healthy food, healthcare, childcare,	Strategy BEC 2.2.04: Support development that reduces "Vehicle Miles Traveled." Emphasize the 20-minute community in established neighborhoods and identified town centers and urban centers by encouraging service and commercial supportive densities and development patterns to attract and sustain community resources, such as healthy food, healthcare, childcare, education, neighborhood commerce, and other community benefits. Review development standards to realize the 20-minute

		<p>education, neighborhood commerce, and other community benefits. Review development standards to realize the 20-minute community model while discouraging major developments that are disconnected from existing communities, result in overly burdensome commutes or travel to community resources, do not support or attract community resources, and strain the County's ability to provide adequate services.</p>	<p>community model while discouraging major developments that are disconnected from existing communities, result in overly burdensome commutes or travel to community resources, do not support or attract community resources, and strain the County's ability to provide adequate services.</p>
5	Modified strategy	<p>Strategy BEC 2.2.08: Promote opportunities that align the future land use and zoning to build both horizontal and vertical mixed-use development. Consider additional housing units, appropriate mixing of uses, height, walkable design, and reduced setbacks when proposed mixed-use development is creating multiple buildings for an activity center style development connected to high-capacity transit rather than single-property, single-building mixed use construction.</p>	<p>Strategy BEC 2.2.08: Promote opportunities that align the future land use and zoning to build both horizontal and vertical mixed-use development. Consider additional housing units, compatible mixing of uses, height, walkable design, and reduced setbacks when proposed mixed-use development is creating multiple buildings for an activity center style development connected to high-capacity transit rather than single-property, single-building mixed use construction.</p>

5	Modified strategy	<p>Strategy BEC 2.2.09: Review County operations, such as plowing and street service, and revise to avoid creating unintended barriers to walking and biking, especially around key transit and trail connections. For instance, plowing that blocks pedestrian access points to sidewalks or transit stations or street operations that undermine bike routes without providing alternatives.</p>	<p>Strategy BEC 2.2.09: Review County operations, such as plowing and street service, and revise to avoid creating unintended barriers to walking and biking, especially around key transit and trail connections. For instance, plowing that blocks pedestrian access points to sidewalks or transit stations or street operations that undermine bike routes without providing alternatives.</p>
5	Modified Strategy	<p>Strategy BEC 3.1.08: Support remediation efforts on brownfield and contaminated sites and encourage viable uses that further county goals and community benefits.</p>	<p>Strategy BEC 3.1.08: Support remediation efforts on brownfield and contaminated sites and encourage viable uses that further county goals and community benefits. There may be times when existing conditions, including but not limited to landfills or properties within a flammable gas or natural resource conservation overlay, may undermine the Plan’s stated development goal, and in those instances existing and future development will need to accommodate these existing conditions.</p>
6	Grammar/ Wording to general narrative	Chapter 6	Clarified language, formatting, grammar (Page 51-58)
6		<p>Strategy ED 2.1.05: Promote cross-departmental coordination when implementing infrastructure improvements through Capital Improvement projects to promote equity and access at neighborhood scale.</p>	<p>Strategy ED 2.1.05: Promote cross-departmental coordination when implementing infrastructure improvements through Capital Improvement Plans [projects] to promote equity and access at neighborhood scale.</p>

6	Modified Strategy	Strategy ED 2.1.04: Pursue the recruitment and retainment of businesses that offer full-time and high-paying jobs with competitive benefits that are commensurate with the cost of living in the area.	Strategy ED 2.1.04: Pursue the recruitment and retainment [retention] of businesses that offer full-time and high-paying jobs with competitive benefits that are commensurate with the cost of living in the area.
6	Modified Strategy	Strategy ED 3.1.03: Focus more intensive industrial uses in strategic locations that are served by supporting infrastructure and removed from residential areas, such as the Colorado Air and Space Port and the Rocky Mountain Rail Project.	Strategy ED 3.1.03: Focus more intensive industrial uses in strategic locations that are served by supporting infrastructure and removed from residential areas, such as the Colorado Air and Space Port and the Rocky Mountain Rail Project.
7	Grammar/ wording to general narrative	Chapter 7	Editing for grammar, clarity. Removed redundancy and repetitive text.
7	Modified policy	Policy CH 1.2: Explore and encourage agricultural innovation practices.	Policy CH 1.2: Explore and encourage innovative practices agricultural.
7	Modified strategy	Strategy CH 3.1.02: Explore identifying and surveying historic structures and encourage reinvestment and/or adaptive reuse of historic structures.	Strategy CH 3.1.02: Consider exploring identifying and surveying historic structures and encourage reinvestment and/or adaptive reuse of historic structures.
7	Modified policy	Policy CH 3.2: Preserve the historic and uniqueness of Adams County's character along designated roads and highways.	Policy CH 3.2: Preserve the historic character and uniqueness of Adams County's along designated roads and highways.

7	Modified strategy	Strategy CH 3.3.01: Ensure the history of place within Adams County's neighborhood and parks planning is documented at the time of subarea, master planning, or amending an existing plan. Keep history alive.	Strategy CH 3.3.01: Ensure the history of place within Adams County's neighborhood and parks planning is documented at the time of subarea, master planning, or amending an existing plan. Keep history alive.
7	Modified strategy	Strategy CH 2.1.05: Support efforts within communities to collaborate on positioning cultural arts as a destination through urban design and placemaking techniques.	Strategy CH 2.1.05: Support efforts within communities to collaborate on positioning cultural arts as a destination through urban design and placemaking techniques.
7	Modified strategy	Strategy CH 2.1.07: Ensure the continuation of abundant cultural arts and education programs at Riverdale Regional Park. Continue to foster relationships with the Denver Zoo, Botanic Gardens, and events like the Dragon Boat Festival in addition to the work of the CSU extension Service and 4-H programming within the park. Continue to support the Adams County Fair as a meaningful experience for residents and visitors.	Strategy CH 2.1.07: Ensure the continuation of abundant cultural arts and education programs at Riverdale Regional Park. Continue to foster relationships with the Denver Zoo, Botanic Gardens, and events like the Dragon Boat Festival in addition to the work of the CSU extension Service and 4-H programming within the park. Continue to support the Adams County Fair as a meaningful experience for residents and visitors.

8	Modified Vision	<p>FEDERAL BOULEVARD CORRIDOR VISION:</p> <p>A corridor that supports a strong pedestrian environment, bicycle movement connected to the corridor, parking that does not dominate the streetscape, and design that enables a mixed use community that includes retail, employment, entertainment, and housing with safe and comfortable access to the light rail station, bus stops, and trails.</p>	<p>FEDERAL BOULEVARD CORRIDOR VISION:</p> <p>A corridor that supports a strong pedestrian environment, bicycle movement connected to the corridor, parking that does not dominate the streetscape, and design that enables a mixed use community that includes retail, employment, entertainment, and housing with safe and comfortable access to the light rail station, bus stops, and trails.</p>
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RESOLUTION APPROVING CASE #PLN2022-00007; ADVANCING ADAMS
COMPREHENSIVE PLAN

Resolution 2022-____

WHEREAS, this case involved an application for: An amendment to the Adams County Comprehensive Plan, commonly known as the Advancing Adams Comprehensive Plan, on the following described property:

APPROXIMATE LOCATION: Unincorporated Adams County.

WHEREAS, Adams County adopted the Imagine Adams Comprehensive Plan on November 8, 2012 by Planning Commission and ratified the Imagine Adams Comprehensive Plan on December 3, 2012; and,

WHEREAS, demographic changes, population growth and development, and public investment in the last 10 years necessitate an amendment to the comprehensive plan; and,

WHEREAS, the County conducted comprehensive surveys and studies of existing conditions and future growth of unincorporated Adams County to prepare Advancing Adams; and,

WHEREAS, Advancing Adams has been crafted by looking to existing conditions, development trends and expectations, conducting outreach, and seeking community input to update the plan vision; and,

WHEREAS, the Planning Commission held a public hearing on the application on the 8th day of September, 2022; and,

WHEREAS, substantial testimony was presented by members of the public and County staff; and,

WHEREAS, Advancing Adams is incorporated herein as Exhibit A; and,

WHEREAS, the Future Land Use Map associated with Advancing Adams is incorporated herein as Exhibit B.

NOW THEREFORE, BE IT RESOLVED, by the Planning Commission of Adams County, Colorado, that based on the evidence presented at the hearing, the Advancing Adams Comprehensive Plan and associated maps are adopted in their entirety as set forth in Exhibits A and B based on the following findings-of-fact:

1. The Comprehensive Plan amendment is consistent with the goals and policies of the Adams County Comprehensive Plan.
2. The Comprehensive Plan amendment is consistent and/or compatible with the land use, transportation, and open space maps in the Adams County Comprehensive Plan.
3. The Comprehensive Plan amendment advances the health, safety, and welfare of the citizens and property owners of Adams County.