

City of Centennial, Colorado



I-25 Corridor Sub-area Plan

AUGUST 2013

CITY OF CENTENNIAL, COLORADO

**PLANNING AND ZONING COMMISSION
RESOLUTION 2013-PZ-R-12**

**A RESOLUTION OF THE CITY OF CENTENNIAL PLANNING AND ZONING
COMMISSION ADOPTING THE INTERSTATE 25 CORRIDOR SUB-AREA PLAN AS
A COMPONENT OF THE 2004 CITY OF CENTENNIAL COMPREHENSIVE PLAN**

WHEREAS, the City of Centennial, acting through its Planning and Zoning Commission, is empowered pursuant to C.R.S. §§ 31-23-201, *et seq.*, to make, adopt, amend, and/or supplement a master or comprehensive plan for the physical development of the municipality, including any areas outside its boundaries; and

WHEREAS, in November of 2004, the City of Centennial Planning and Zoning Commission adopted, and the Centennial City Council ratified, a Comprehensive Plan (“Comprehensive Plan”) to serve as the framework document that guides the City’s future growth and development; and

WHEREAS, one of the express goals of the Comprehensive Plan is to serve as the framework document that will be implemented “through the adoption of corridor plans, sub-area plans, and other specific planning efforts in order to achieve the City’s vision for the future;” and

WHEREAS, in furtherance of the goals of the Comprehensive Plan, the City initiated a planning effort involving City planning staff, City consultants, City elected and appointed officials, property owners, citizens and other stakeholders, to evaluate a specific geographic area generally located west of South Fulton Street, east of South Yosemite Street, south of Arapahoe Road and north of E. County Line Road, known as the Interstate 25 Corridor Sub-Area Plan, for purposes of achieving a vision for the area and proactively planning for and analyzing potential growth and redevelopment within the study area; and

WHEREAS, through this planning effort, the City’s planning team conducted stakeholder interviews, public meetings and open houses to develop a sub-area plan that achieves certain identified development objectives for the study area; and

WHEREAS, a copy of the Interstate 25 Corridor Sub-Area Plan (the “Sub-Area Plan”) is attached to this Resolution as **Exhibit A** and is incorporated herein by reference; and

WHEREAS, in accordance with C.R.S. § 31-23-208, the Planning and Zoning Commission held a public hearing conducted on August 14, 2013, following the publication of notice as required by law; and

**NOW THEREFORE, BE IT RESOLVED BY THE PLANNING AND ZONING
COMMISSION FOR THE CITY OF CENTENNIAL, COLORADO, THAT:**

Section 1. The Sub-Area Plan attached hereto as **Exhibit A** is hereby adopted by the Planning and Zoning Commission, and the sub-area plan shall be referred to as the "Interstate 25 Corridor Sub-Area Plan". Copies of the Sub-Area Plan have been and will be made available for public inspection at the Centennial Civic Center, 13133 E. Arapahoe Road, Centennial, Colorado 80112 during regular business hours. The Sub-Area Plan expressly includes maps and descriptive matter intended by the Commission to form the whole of the Sub-Area Plan, all of which materials are contained within the Sub-Area Plan.

Section 2. In accordance with § 31-23-208, C.R.S., this Resolution, when attached to the plan, shall serve to document the Sub-Area Plan's approval by the Planning and Zoning Commission and the identifying signatures of the Chairman and Secretary of the Planning and Zoning Commission.

Section 3. Following ratification and approval of the Sub-Area Plan by the City Council as required by C.R.S. § 31-23-206(1) and Section 12-14-204 of the 2011 Land Development Code, the City Clerk shall send a certified and attested copy of the Sub-Area Plan to the Board of County Commissioners of Arapahoe County. Attachment by the City Clerk of a certified copy of this Resolution and a copy of the City Council resolution ratifying said Sub-Area Plan (Resolution No. 2013-R-60) shall constitute certification and attestation of the Sub-Area Plan.

Section 3. Effective Date. This Resolution shall take effect upon its approval by the City of Centennial Planning and Zoning Commission.

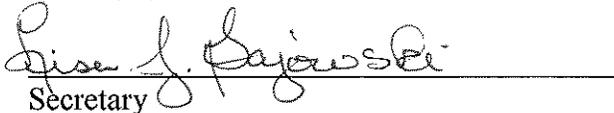
ADOPTED BY THE PLANNING AND ZONING COMMISSION OF THE CITY OF CENTENNIAL, COLORADO, BY AN AFFIRMATIVE VOTE OF NOT LESS THAN TWO-THIRDS OF THE ENTIRE MEMBERSHIP OF THE COMMISSION ON THIS 14th DAY OF August, 2013.

**PLANNING AND ZONING
COMMISSION FOR THE CITY OF
CENTENNIAL, COLORADO**



Marty Hill, Chairman

ATTEST:



Secretary
Planning and Zoning Commission

Approved As To Form:



For City Attorney's Office

CITY OF CENTENNIAL,
COLORADO

RESOLUTION NO. 2013-R-60

A RESOLUTION OF THE CITY COUNCIL OF THE CITY
OF CENTENNIAL, COLORADO RATIFYING THE
PLANNING AND ZONING COMMISSION'S APPROVAL
OF THE INTERSTATE 25 CORRIDOR SUB-AREA PLAN

WHEREAS, the City of Centennial, acting through its Planning and Zoning Commission, is empowered pursuant to C.R.S. §§ 31-23-201, *et seq.*, to make, adopt, amend, and/or supplement a master or comprehensive plan for the physical development of the municipality, including any areas outside its boundaries; and

WHEREAS, following the conclusion of a duly noticed public hearing conducted on August 14, 2013, the Planning and Zoning Commission approved the Interstate 25 Corridor Sub-Area Plan pursuant to Resolution 2013-PZ-R-12; and

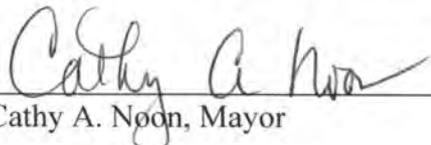
WHEREAS, pursuant to and in accordance with the procedure set forth in Section 12-14-204 of the 2011 Land Development Code and C.R.S. § 31-23-206(1), the City Council desires to ratify the Planning and Zoning Commission's approval of the Interstate 25 Corridor Sub-Area Plan.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Centennial, Colorado as follows:

Section 1. The City Council hereby ratifies and approves the decision of the Planning and Zoning Commission adopting the Interstate 25 Corridor Sub-Area Plan, as more particularly set forth in Resolution 2013-PZ-R-12.

Section 2. Effective Date. This Resolution shall be effective immediately upon adoption.

ADOPTED by a vote of 6 in favor and 3 against this 19th day of August, 2013.

By: 
Cathy A. Noon, Mayor

ATTEST:

By: 
City Clerk or Deputy City Clerk

Approved as to Form:

By: 
For City Attorney's Office

I-25 Corridor Sub-area Plan

AUGUST 2013

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ACKNOWLEDGEMENTS

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Executive Summary

The Executive Summary provides a brief review of the key concepts conveyed in the I-25 Corridor Sub-area Plan.

The key concepts include:

- the purpose of the plan
- the vision and goal for the subarea
- development objectives and policies
- the future land use plan and transportation analysis
- design principles and concepts
- implementation
- document overview
- conclusion.

I-25 Corridor Sub-area Planning Vision:

The I-25 Corridor Sub-area should be a vibrant, competitive, and economically healthy hub along the Interstate that has a sense of place, attracts businesses and employers, and takes advantage of the light rail station while maintaining an efficient and safe multi-modal transportation system.

INTRODUCTION

The City adopted its first Comprehensive Plan in 2004. That document provides high level policies to guide growth and development within the 33 square mile City. Because of the size and geographic distribution of the City, the Comprehensive Plan does not go into detail on localized issues that may be associated with growth and development. As such, the City has embarked upon a series of specialized sub-area plans that supplement the Comprehensive Plan and are tailored to the particular sub-areas strengths, challenges and unique characteristics. (See Figure ES-1 and ES-2)

When developing the Plan, the City had four primary objectives:

- Understand future market demand within the City, its impacts, and the amount of growth the City is willing to accommodate.
- Involve property owners, business owners and adjacent neighborhoods in helping identify issues, opportunities, desires for future growth and redevelopment in the study area.
- Develop a land use plan to guide future growth and redevelopment and study transportation impacts of that land use plan
- Solve access, connectivity and transportation issues in the study area, particularly to the Dry Creek light rail station.



Figure ES-1: The I-25 Corridor Sub-area Plan study area is shown in pink.

In order for the Plan to accurately represent the desires of the community, while at the same time acknowledging the realities of individual interests, it was important that a wide variety of affected stakeholders participated in the plan process. As such, the plan was developed over a 12-month period and included various meetings with property owners, service providers, homeowner and civic associations, special districts, adjacent municipalities, citizens, business owners, and elected and appointed officials. In addition, three public meetings were held, one of which was a two-day design workshop, to solicit feedback and provide guidance to two workgroups who developed the Plan.

The two workgroups included a Citizen and Business Advisory Committee and a Planning Workgroup. The Citizen and Business Advisory Committee consisted of four citizens appointed by District 3 City Council Members, and four property/business owners (two of whom were also citizens of the community). The Planning Workgroup was comprised of the Planning and Zoning Commission and various City Council members. Together, these two groups met frequently both separately and jointly to review data and community input and to discuss, debate and come to consensus on the solutions, ideas, and vision for future development contained within the plan.

The remainder of the Executive Summary provides a brief summary of important principles and ideas contained within the Plan including the sub-area vision and development goal, development objectives and policies, the land use plan, transportation impact analysis, design principles and concepts, and implementation.

PLAN VISION & GOAL

The vision for future growth and development in the study area is that the:

I-25 Corridor Sub-area should be a vibrant, competitive, and economically healthy hub along the Interstate that has a sense of place, attracts businesses and employers, and takes advantage of the light rail station and mountain views while maintaining an efficient and safe multi-modal transportation system.

From this vision, the overarching goal of the plan is:

to create a place that is unique, attractive and inviting.



Figure ES-2: The I-25 Corridor Subarea study area from the air.

DEVELOPMENT OBJECTIVES & POLICIES

In order to see the vision and goal fulfilled, the Plan has a series of development objectives and policies that future development and redevelopment should meet.

Development Objectives:

- Accommodate infill development and redevelopment to maximize land potential in order to provide additional employment.
- Leverage the Dry Creek Light Rail Station to take advantage of the unique opportunities presented by light rail stations, such as special employment, a mix of uses, and walkable places.
- Increase connectivity to and throughout the study area, particularly to the light rail station. (See Figure ES-3)
- Balance the pursuit for new commercial development with the desire for a safe and efficient street system.
- Increase infrastructure capacity to the study area through coordination and planning with service districts and authorities.



Figure ES-3: Installation or widening of pedestrian/bike pathways between existing buildings can provide more direct routes to the Dry Creek Light Rail Station

Development Policies:

- The City will encourage development that is designed to promote a well-scaled, pedestrian friendly environment that harmoniously integrates with its surroundings. (See Figure ES-4)
- The City will encourage the application of the concepts and principles of the plan through a combination of new development/redevelopment, district projects, and capital improvement projects.
- The City will require the installation of needed street and pedestrian improvements at the time of development or redevelopment.
- The City will require that development proposals demonstrate adequate infrastructure and transportation system capacity prior to approval.
- The City will continue to work with utility and infrastructure special districts to ensure adequate sewer, water and electrical capacity for new development within the study area.
- The City will monitor traffic projections due to new development within the study area. Traffic projections due to new development are not anticipated to exceed the capacity of the street network. However, development that may cause the traffic counts to exceed this level will need to provide methods to reduce trip generation. Travel Demand Management strategies may include a circulator bus system, additional connections to the light rail station, the creation of pedestrian routes, bike facilities (bike lanes, bike racks, showers at employment), and Eco pass distribution.
- The City is business-friendly and will encourage the new ideas and concepts to create a unique location in Centennial.

FUTURE LAND USE PLAN & TRANSPORTATION ANALYSIS

While a majority of the study area will remain stable and see no additional development or redevelopment, the planning document contains a Future Land Use Plan to provide guidance for future development and redevelopment within the sub-area. The Land Use Plan (see Figure ES-5 on the following page) will be used to provide guidance for future rezoning applications. The Future Land Use Plan primarily allows for a mix of commercial and office uses with a limited amount of residential and retail uses. Land use designations applied include:

Commercial, Office, Mid-rise Office, Commercial Mixed use, Transit Oriented Multi-use, Transit Oriented Office Focus, and Office/Light industrial. The Plan also applied a Multi-family designation to the areas already developed with condominiums and townhouses.

For stable areas of the study area that are not expected to redevelop in the near term, the land use plan reflects existing uses and intensities. Where future development and redevelopment are expected to occur, the land use plan assigns a land use that will accommodate more intense development than what exists on the ground today.

Because traffic was identified as a major concern from adjacent neighborhoods prior to the start of the planning process (and continuously reinforced throughout the process), the project budget included

a detailed traffic analysis to determine the impact of any increase in development/redevelopment intensities. The traffic analysis, built upon the forecasts projected in the City's 2035 Transportation Master Plan, took into account the maximum potential development/redevelopment of the key parcels of change within the study area.

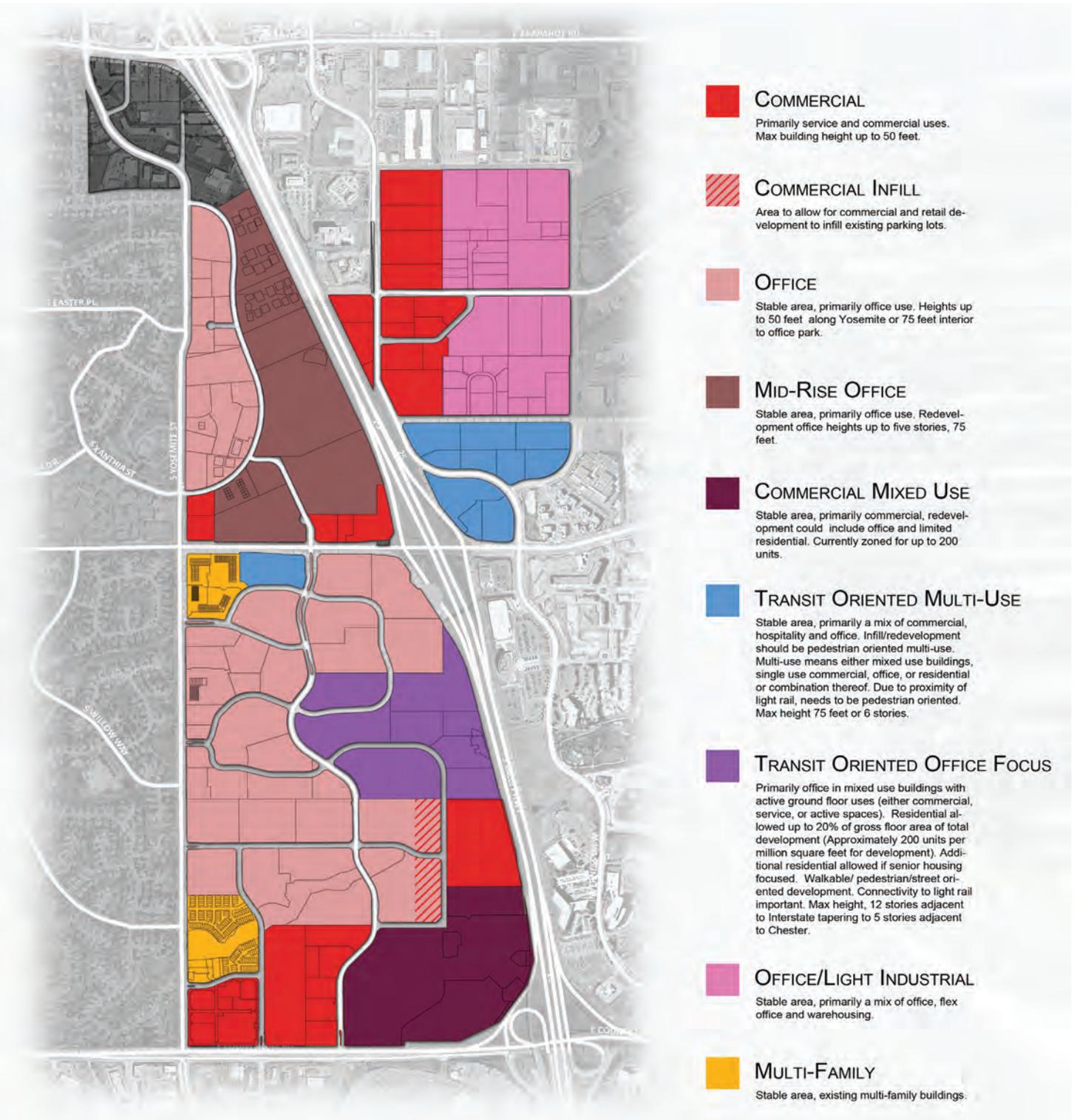
This includes the vacant land south of the light rail station, any vacant infill parcels, and redevelopment of the Promenade Shopping Center and parcels adjacent to I-25 north of Dry Creek Road. In some instances, additional development was analyzed even though the preferred land use plan would not contemplate that level of development.

A summary of the findings from the traffic analysis is:

- Yosemite Street has capacity to handle expected traffic increases due to both regional growth and any additional growth associated with the preferred land use plan without the need for widening.
- The northern segment of Alton Way will likely have to be widened if maximum redevelopment occurs adjacent to the Interstate.
- Chester Street at County Line Road might need widening, in addition to intersection improvements, if the Promenade were to redevelop at a much greater density.
- Additional intersection improvements would be required at various locations in conjunction with development.



Figure ES-4: An illustrative image of the transition of building heights from along I-25 (to the right) towards the center of the study area



- COMMERCIAL**
 Primarily service and commercial uses.
 Max building height up to 50 feet.

- COMMERCIAL INFILL**
 Area to allow for commercial and retail development to infill existing parking lots.

- OFFICE**
 Stable area, primarily office use. Heights up to 50 feet along Yosemite or 75 feet interior to office park.

- MID-RISE OFFICE**
 Stable area, primarily office use. Redevelopment office heights up to five stories, 75 feet.

- COMMERCIAL MIXED USE**
 Stable area, primarily commercial, redevelopment could include office and limited residential. Currently zoned for up to 200 units.

- TRANSIT ORIENTED MULTI-USE**
 Stable area, primarily a mix of commercial, hospitality and office. Infill/redevelopment should be pedestrian oriented multi-use. Multi-use means either mixed use buildings, single use commercial, office, or residential or combination thereof. Due to proximity of light rail, needs to be pedestrian oriented. Max height 75 feet or 6 stories.

- TRANSIT ORIENTED OFFICE FOCUS**
 Primarily office in mixed use buildings with active ground floor uses (either commercial, service, or active spaces). Residential allowed up to 20% of gross floor area of total development (Approximately 200 units per million square feet for development). Additional residential allowed if senior housing focused. Walkable/ pedestrian/street oriented development. Connectivity to light rail important. Max height, 12 stories adjacent to Interstate tapering to 5 stories adjacent to Chester.

- OFFICE/LIGHT INDUSTRIAL**
 Stable area, primarily a mix of office, flex office and warehousing.

- MULTI-FAMILY**
 Stable area, existing multi-family buildings.

Figure ES-5: The Future Land Use Plan for the I-25 Corridor Sub-area

DESIGN PRINCIPLES & CONCEPTS

A number of design principles and concepts are promoted in the Plan. The principles and concepts include:

- Increasing the connectivity throughout the study area by adding pedestrian and bicycle paths and a multi-use path; improving crossings and sidewalks along Yosemite Street and at other key locations; improving the street grid to allow alternative ways to get around; and the possibility for an additional pedestrian bridge over Dry Creek to connect the areas north of Dry Creek to the light rail station.

- Leveraging the light rail station by allowing more intense development and a greater mix of uses on properties near the station and providing a better connection to the region with bridges and paths.

- Encouraging a certain building form and mass as well as building design to create a special destination with pedestrian scale while allowing more intense development to occur (see Figure ES-6). These concepts encourage: 1) a transition of building heights with taller buildings along the Interstate, 2) a transition to 2 and 3-story buildings to the west end of the study area, 3) a consistent building base at the street level, 4) building design to create a framed streetscape, and 5) spacing between buildings to create view corridors of the mountains to the west.

- The creation of community amenities and a quality public realm would add to the creation of a place for the residents and visitors to gather within the City. New development should include community gathering spaces such as: plazas, green spaces, and streetscapes with wide sidewalks and transitions into the buildings.

- The softening of Yosemite Street is another important aspect of the plan. Treatment to Yosemite would provide a buffer between the study area and the residential neighborhoods to the west and also slow traffic in the area while providing better pedestrian opportunities. Improvements to Yosemite include the infill of missing sidewalks, adding a median strip and pedestrian crossings, and potentially roundabouts intersection improvements.

IMPLEMENTATION

The Plan describes the tools and information to allow the plan to be realized. Regional coordination, particularly of infrastructure providers, is necessary to ensure that properties can be ready for development when the market is right. City staff should review and update policies, guidelines, and regulations to incentivize development/redevelopment. Cost estimates are outlined for use in the City's Capital Improvement Plan.



Figure ES-6: Transit-oriented office land use concepts and design principles shown on the now vacant property to the south of the Dry Creek Light Rail Station

DOCUMENT OVERVIEW

Chapter 1: Executive Summary - provides a synopsis of the plan, explains the background and purpose for the plan, discusses the relationship of this plan to other City plans, provides an overview of the process, and outlines the organization of the plan document.

Chapter 2: Planning Framework – presents the kit of parts to create the vision and meet the community goal and objectives. The Planning Framework includes policies, design principles and concepts, the land use descriptions, and the Land Use Plan, along with the necessary infrastructure needed to support the plan.

Chapter 3: Implementation – presents the policies and strategies that will need to be established in order to realize the plan vision.

Chapter 4: Existing Conditions - describes existing physical and market conditions; it also identifies key opportunities, as well as issues and concerns related to development and redevelopment in the study area.

Chapter 5: Appendices - provides additional information about the planning process and supporting data.

CONCLUSION

The concepts and ideas developed in the Plan, through public input and debate, are described in greater detail in the document. Each concept is meant to be a tool to guide development as it occurs and prioritize capital improvements to fulfill the vision of the area. Implementation of the plan will take place over time and will involve additional input from the community as development occurs and improvements are constructed.



1

Introduction

Chapter 1 - Introduction - Chapter Summary

The I-25 Corridor Sub-area Plan provides the vision for future development within the project study area. The Plan is the result of a series of community meetings and workshops, the guidance of citizen groups, business and property owners, input from elected and appointed officials, as well as expertise from staff and planning consultants.

This chapter provides the background for the Plan, introduces the reader to the study area, outlines the community participation that occurred during the development of the plan, describes how the document is organized and outlines the use of the Plan.

Chapter 1 Table of Contents:

Introduction

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3. Plan intention - page 15
4. Factors to consider - page 15
5. Community participation - page 15
6. Planning context - page 16
7. How to use the plan - page 17

WHY PLAN?

Because it is one of the few areas where Centennial will see new development occur over the next 10 to 20 years, the study area provides a great opportunity for the City to encourage unique and exciting development within Centennial. The purpose of the I-25 Corridor Sub-area Plan is to establish a framework to ensure that the study area can remain vital and competitive in the developing south I-25 corridor and allow for signature developments to occur.

The Denver Metro area is expected to continue to grow in the near future, including areas along the south I-25 corridor, which is one of the prime draws for development and redevelopment in the Denver metro area. In particular, the south Interstate corridor has experienced tremendous growth in the past decade and continues to be a magnet for significant growth, partly due to the existence of the light rail system.

Despite the promising level of expected growth, the City of Centennial recognizes that significant competition for the expected growth exists in the corridor. Now is the opportunity to show what the City would like to see happen in the corridor and promote efforts to realize the vision.

The plan reflects visionary ideas intended to suggest how the area might evolve over the long term; however, this plan is a living document and will continue to evolve as development unfolds, market conditions change, and further community dialogue and collaboration occurs. With regard to all the recommendations of this plan, changes in existing land uses will be pursued with full communication, willingness, and cooperation, of property owners and adjacent neighbors.

Plan Purpose

Establish a framework to ensure that the study area can remain vital and competitive in the developing south I-25 corridor.

I-25 Corridor Subarea Plan Study Area



Figure 1-1: The I-25 Corridor Sub-area Plan study area is shown in pink.

STUDY AREA

The I-25 Corridor Sub-area Plan applies to portions of the City of Centennial and unincorporated Arapahoe County adjacent to Interstate 25. The sub-area context map (Figure 1-1) shows the location of the study area.

The entire sub-area contains approximately 580 acres of land. On the west side of the Interstate, the study area spans from the northern terminus of South Alton Way to East County Line Road and from I-25 to South Yosemite Street. East of the Interstate, the study area spans from East Costilla Avenue to East Dry Creek Road with East Fulton Street as the east boundary.

PLAN INTENTION

This planning effort provides clear direction in order to attract growth based on the community's desire and expectations. This plan promotes predictability for both the community and developers, provides guidance to City staff, elected and appointed officials.

FACTORS TO CONSIDER

The Plan is based on the future market demand within the study area, its impacts, and the potential development that may occur in the study area; as well as the amount and type of growth the City can, and is willing to, accommodate.

It is important to note that much of the study area is developed and performing well. These areas are considered stable due to profitable and/or recent development and therefore are not likely to redevelop in the next 20 years. In other areas, certain properties are likely to develop in the short term – within the next ten years - while others are not likely to redevelop/develop until land values increase to

a point where redevelopment becomes attractive compared to the income that the current uses generate or are influenced by other market factors.

Limiting factors to redevelopment include the infrastructure and transportation system capacity, and market conditions.

The tolerance of the community toward the type and scale of development must be understood in order to avoid controversial development reviews.

COMMUNITY PARTICIPATION

The preparation of the I-25 Corridor Sub-area Plan included a public outreach process to ensure that the plan reflects the values of the community. The outreach included:

- Stakeholder meetings,
- A public meeting to identify community issues and opportunities with regard to the study area,
- A design work shop to test ideas and concepts,
- A number of meetings with the Citizens and Business Advisory Committee, a group of community members who helped steer the direction of the plan,
- Several meetings with the Planning Work Group which consisted of members of the Planning and Zoning Commission and City Council, and
- 2 community open houses to present the draft plan direction.

The plan is a result of the community outreach process and many of the design principles and concepts come directly from the ideas of the participants. For more information on this topic, please see Appendix 1 in Chapter 5.

PLANNING CONTEXT

The I-25 Corridor Sub-area Plan builds on other existing City of Centennial planning efforts. The following studies were taken into consideration in the creation of this plan due to their focus and/or proximity of the planning study area.

The Central Centennial Boundary Plan. The I-25 Corridor Sub-area Plan is a complement to the Central Centennial Boundary Plan (CCBP). However, for areas where the I-25 Corridor Sub-area Plan study area geography overlaps the CCBP, this Plan is meant to govern land development. The CCBP was created in 2008 to guide future annexation and land use decisions of unincorporated property located adjacent to city limits and within Arapahoe County's Urban Service Area. The Plan includes direction for the unincorporated land within the I-25 Corridor Sub-area. These properties are located east and west of I-25 along Dry Creek Road. The Plan also includes the Centennial Promenade that has since been annexed into the City.

For the properties within 1/3 of a mile of the light rail station, the CCBP promotes a mix of uses and transit-oriented development with activity centers to support the area's employment emphasis.

Last Half Mile Connectivity Study. Adopted in 2012, the Southeast Public Improvement Metropolitan District (SPIMD), in conjunction with the South I-25 Urban Corridor Transportation Management Association, developed the Last Half Mile Connectivity Study to provide analysis on connectivity issues to existing light rail stations within the SPIMD service area (generally I-25/225 south through Lone Tree). The Study identifies a list of improvements that may be undertaken in the short term to improve connectivity to the light

rail stations as well as programmatic solutions that are to be implemented. The I-25 Corridor Sub-area Plan is meant to supplement the connectivity ideas expressed in this document.

Arapahoe Urban Center Sub-Area Plan. The 2007 Arapahoe Urban Center Sub-Area Plan (AUC) focuses on development around the Arapahoe Road/I-25 Interchange and Light Rail Station. The plan presents land use recommendations and development typologies within four distinct sub-area districts. District 4 of the AUC, located at the southeast corner of Yosemite Street and Arapahoe Road, is also included in the I-25 Corridor Sub-area Plan in order to coordinate connectivity issues. In addition, as a result of the AUC, the City developed the Urban Center ("UC") zone district, which is a form-based zoning meant to support a mix of uses and promote pedestrian/street-oriented development.

This Plan relies on the zoning and land use designation of the Arapahoe Urban Center Sub-Area Plan. The UC zone district is used as an implementation tool for this planning effort.

Centennial Transportation Master Plan. The Transportation Master Plan provides a vision for the future transportation network for the entire City. The transportation network is a system of planned and improved vehicular, transit, bicycle, and pedestrian facilities that will assure citizens and businesses high-quality access for all travel needs. The plan assists citizens, staff, and elected officials in making decisions about future land use, transportation infrastructure, accommodation of additional modes of transportation, and recommendations for a trails system, together with funding sources and prioritization of future improvements.

The Centennial Transportation Master Plan provides baseline background data to help identify

transportation impacts of the sub-area's Future Land Use Plan, target needed improvements, and coordinate priorities required to allow the Plan to be realized.

HOW TO USE THE PLAN

Any projects proposed for the study area, including public infrastructure improvements, new development, redevelopment, and additions to existing development, should respect and reflect the planning concepts and principles outlined in I-25 Corridor Sub-area Plan's Planning Framework.

Public agencies, private entities, interested community members and City staff should review **Chapter 2 - Planning Framework** and apply the concepts and principles presented in any development / redevelopment proposals intended in the study area. City staff should then review the development proposals to determine conformance with the planning framework.

City staff should follow the guidance presented in **Chapter 3 - Implementation** to ensure that the Plan is realized and identified issues are addressed and make appropriate recommendations to City Council and Planning and Zoning Commission.

All interested parties should review **Chapter 4 - Existing Conditions on which the Plan Was Built** for an understanding of the background leading to the community's vision and goals for the area and ultimately the planning framework concepts and principles. Additional background information can be found in **Chapter 5 - Appendices**.

Figures 1-2, 1-3, and 1-4 show existing examples of development within the study area.



Figure 1-2: The Promenade Shopping Center



Figure 1-3: An existing office building in the study area



Figure 1-4: An example of a flex building found on the east side of the study area



2

Planning Framework

Chapter 2 - Planning Framework - Introduction and Summary

This chapter - Planning Framework - includes the plan goals and policies, the future land use plan, land use designations, design principles and key concepts, and the identified infrastructure impacts of the plan.

The I-25 Corridor Sub-area Plan puts forth a vision and framework for the future of the study area. Characterized by a mix of uses, well-established office park areas, the Dry Creek Light Rail Station, and immediate proximity to I-25, the study area has many assets that support its transformation over time. In addition, there are significant opportunities to strengthen connectivity into and throughout the area, improve the pedestrian experience, leverage the Dry Creek Light Rail Station, provide community amenities, and refine the built environment through urban design in an attempt to create a unique, attractive, and inviting place within the City of Centennial.

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I-25 Corridor Sub-area Planning Vision

The I-25 Corridor Sub-area should be a vibrant, competitive, and economically healthy hub along the Interstate that has a sense of place, attracts businesses and employers, and takes advantage of the light rail station while maintaining an efficient and safe multi-modal transportation system.

PLAN VISION & GOAL

Plan Vision

The planning framework is intended to provide the overall community vision, as stated in the text box above, of the study area as well as summarize the community's goals, policies, and strategies to achieve the vision. The City and community will need to be committed to a sustained effort in applying the plan principles and concepts in order to achieve a vibrant, competitive, and economically healthy hub along the I-25 Corridor.

The Plan's policies, design principles and concepts, and the Future Land Use Plan all work together to realize the goals and objectives of the plan in order to realize the vision for the subarea. Therefore, all elements should be considered when development or redevelopment is proposed in the study area (see Figure 2-2 Design Principles and Concept Matrix).

Goal

■ **Create a place for the community that is unique, attractive and inviting.**

The City of Centennial was incorporated in 2001 from a portion of western unincorporated Arapahoe County. It is largely a mature residentially based city with relatively little undeveloped vacant land. Due to this history, the City lacks a true downtown that is the focus and core of the community. The opportunity exists through development and redevelopment to create areas that function as a unique destination that attracts vitality, thus providing a location where the community can gather and interact, and begins to define an image for the City of Centennial.

DEVELOPMENT OBJECTIVES

■ **Accommodate infill development and redevelopment to maximize land potential in order to provide additional employment.**

The south I-25 corridor contains the largest concentration of employment and commercial uses within the City of Centennial. With limited alternatives for expanding the City's commercial base due to limited land for the City to grow into, the continued vitality and growth of the I-25

Corridor within the City of Centennial is key to the City's economic development and fiscal health. The area's development future will be focused on the development of strategic infill parcels as well as the redevelopment of older, under utilized, or outmoded retail and flex space at the end of its useful life.

■ Leverage the Dry Creek Light Rail Station to take advantage of the unique opportunities presented by light rail stations, such as special employment, a mix of uses, and walkable places.

Nearly 40 percent of the employment growth in the metro area is estimated to occur within three-quarters of a mile of the transit corridors and this trend is expected to continue. The Dry Creek Light Rail Station lies within the study area and there is an opportunity to attract development to the study area. The City may shape the character and form of this new development to promote an attractive destination with a unique special employment area, mix of uses, and walkable spaces while also generating additional revenue.

■ Increase connectivity to and throughout the study area, particularly to the light rail station.

Safe connections - particularly for pedestrians and bicyclists - should exist between residential areas and transit, commercial areas, and other key destinations within the study area. This will allow for more convenient use of the transit system and potential reduction of automobile use in the area. It also adds to the attractiveness of adjacent neighborhoods as a place where one has multiple modes of getting around the region - particularly to employment and commercial areas.

■ Balance the pursuit for new commercial development with the desire for a safe and efficient street system.

Though the City would benefit from the additional revenue associated with new commercial development, the potential traffic levels and traffic congestion are seen to counter a safe, convenient, and functional community. As new development is realized, attention should also be paid to ensure that the transportation system is not overly burdened.

■ Increase infrastructure capacity to the study area through coordination and planning with service districts and authorities.

One limiting factor on realizing the Plan vision is the infrastructure capacity issues identified during the development of this plan. The City recognizes that adequate infrastructure is vital in attracting development to the study area. The City intends to work adamantly with the service districts to ensure the infrastructure exists to support the Plan vision.

DEVELOPMENT POLICIES

■ The City will encourage development that is designed to promote a well-scaled, pedestrian-friendly environment that harmoniously integrates with its surroundings.

■ The City will encourage the application of the concepts and principles of the plan through a combination of new development/redevelopment, district projects, and capital improvement projects.

■ The City will require the installation of needed street and pedestrian improvements at the time of development or redevelopment.

- The City will require that development proposals demonstrate adequate infrastructure and transportation system capacity prior to approval.
- The City will continue to work with utility and infrastructure special districts to ensure adequate sewer, water, and electrical capacity for new development within the study area.
- The City will monitor traffic projections due to new development within the study area. Traffic projections due to new development are not anticipated to exceed the capacity of the street network. However, development that may cause the traffic counts to exceed this level will need to provide methods to reduce trip generation. Travel Demand Management strategies may include a circulator bus system, additional connections to the light rail station, the creation of pedestrian routes, bike facilities (bike lanes, bike racks, showers at employment), and Eco pass distribution.
- The City is business-friendly and will encourage the new ideas and concepts to create a unique location in Centennial.

THE DESIGN PRINCIPLES & CONCEPTS MATRIX

The design principles and concepts work together to create a place that meets the goal and objectives of the plan. These principles and concepts are a kit of parts that, when applied together, build on each other to realize the intended vision. Many of the concepts and principles contribute to the goal and to a number of objectives. For example, street grid improvements not only contribute to a safe and efficient street system, the improvements increase connectivity (see Figure 2-1), add to the creation of a unique and attractive place and promote commercial revenue by breaking up lots so that more land may be commercially developed. The table in Figure 2-2 displays the design concepts and principles as well as the goal and objectives of the plan. A square in the common line indicates to which goal that the concept or principle contributes.



Figure 2-1: Sidewalks and pathways, like the one at Centennial Promenade, create connectivity in the study area

Design	Goal & Objectives					
	special destination	commercial revenue	leverage light rail station	increase connectivity	safe efficient street system	improve infrastructure
Connectivity	■		■	■	■	
Yosemite sidewalks	■		■	■	■	
Infill pedestrian and bicycle paths	■		■	■	■	
Pedestrian and bicycle bridge	■		■	■	■	
Multi-use path				■	■	
Intersection - crossing improvements	■		■	■	■	
Street grid improvements	■	■	■	■	■	■
Leveraging light rail station	■	■	■		■	
Land use designations	■	■	■			
Connection to north and south			■	■		■
Building form and massing	■	■				
Transition of building heights	■	■				
Consistency in building base	■					
Building orientation	■					
Continuous facades	■					
Building relationship to adjacent properties	■					
Building spacing	■					
Parking and parking structures	■					
Commercial infill	■	■				
Community amenities & quality public realm	■					■
Softening Yosemite Street	■			■	■	■
Medians	■			■	■	
Roundabouts					■	■
Alton re-alignment			■	■	■	■

Figure 2-2 The design concepts and principles of the plan contribute to realizing a variety of the plan goals.

DESIGN PRINCIPLES & CONCEPTS

The design principles and concepts create a framework - a kit of parts - for development. The principles and concepts include connectivity, leveraging the light rail station, building form and massing, community amenities and the public realm, and the softening of Yosemite Street. By applying the principles and concepts to new development and redevelopment, the community will be able to meet the goal and objectives of the plan, and therefore, realization of the vision for the subarea. The concepts are meant to be applied throughout the study area, with the exception of Consistency in Building Base, Building Orientation, and Continuous Facades, which are meant to be applied in the transit-oriented use areas only.

Connectivity

Increasing connectivity throughout the study area allows for a more organized and functioning transportation system and balances possibilities for automobiles, transit, pedestrians, and bicyclists. It also allows more people in the area without generating more traffic by shifting the focus to other modes of transportation. Connectivity can be created with a variety of safe routes. The following outlines the approach to improving connectivity in the study area. The overall connectivity concept map, Figure 2-9, is also located on page 26.

Along Yosemite

Existing sidewalks are currently only located for stretches along the west side of S. Yosemite Street. The addition of sidewalks along the eastern side of the roadway would improve connectivity in the area (see Figure 2-3). The new sidewalk extension would extend between the two intersections of Yosemite Street and Alton Way.

Infill Pedestrian Paths

Infill pedestrian and bicycle paths (see Figure 2-4) at key places throughout the study area would provide better



Figure 2-3: Example of the potential infill of sidewalks along Yosemite



Figure 2-4: Example of pedestrian and bike paths



Figure 2-5: Example of a pedestrian and bike bridge to the north portion of the study area

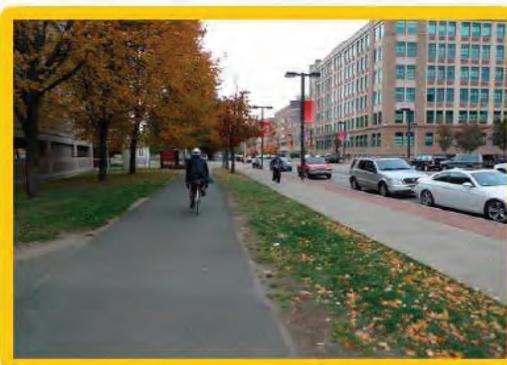


Figure 2-6: Example of a multi-use path

connectivity to employment and businesses from adjacent residential neighborhoods and the light rail station without introducing new streets.

A new connection from the southern terminus of the Dry Creek Light Rail Station to Dayton Street would significantly enhance access to the station. The southern terminus is currently at the same grade as the surrounding property, which assists connection efforts.

Dry Creek Pedestrian/Bicycle Bridge

A pedestrian and bicycle bridge (see Figure 2-5) over Dry Creek Road adjacent to the light rail bridge would allow better access to the station from the north part of the study area. The grades at the top of the RTD parking deck and those north of the Drury Inn property are close to the same level, which helps support this alignment.

County Line Road Multi-use Path

A 10-foot wide multi-use path (see Figure 2-6) along the north side of East County Line Road could accommodate different modes of travel to the area - particularly walking and bicycling. The north side of the road may be improved by widening the sidewalk and detaching it from the roadway to provide a safe buffer from high speed traffic. The path combined with intersection improvements may facilitate local employee access to the County Line Road Light Rail Station and also connect regional trails in the vicinity.

Intersection and Crossing Improvements

Accessibility to the study area and the safety of crossing of S. Yosemite Street, E. County Line Road and E. Arapahoe Road can be improved with the installation of pedestrian refuge areas and high-occupancy crossing signals at intersections (see Figure 2-7).

Another improvement is the reconfiguring of the intersection at Alton Way and Alton Court. The new configuration would provide better internal circulation within the study area by providing a more direct route between the office area north and south of Dry Creek.

Street Grid Improvements

An extension of the street grid (see Figure 2-8) is encouraged when the vacant properties develop. Extending the street system allows for the increased dispersion of traffic by allowing multiple routes to reach their destination. It also provides more direct routes for pedestrians and bicycles. Road connections on the east side also reduce block size that, in turn, open up land to new development.

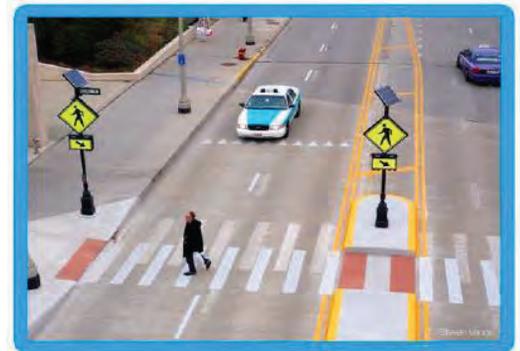


Figure 2-7: Example of pedestrian crossing improvements



Figure 2-8: Diagram showing the potential extension of the street grid pattern

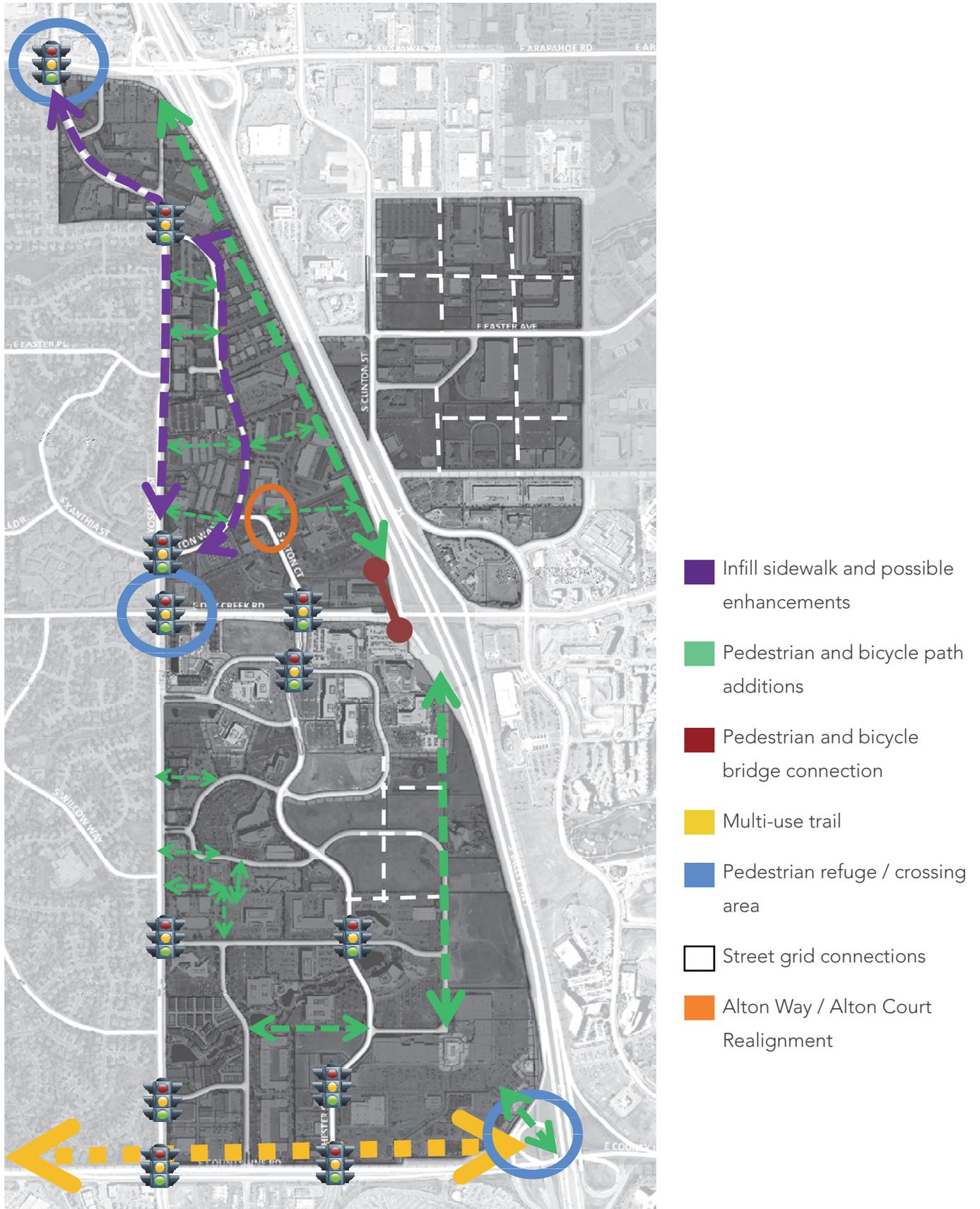


Figure 2-9: Connectivity Map - this maps conveys the various projects to increase connectivity in the area

Leveraging the Light Rail Station

The Dry Creek Light Rail Station is an asset to the City of Centennial. Current market trends indicate that the majority of the I-25 corridor development is occurring, and will continue to occur, along the metro area light rail lines. The light rail station allows Centennial to better compete for more commercial opportunity.

Currently, the light rail station is under utilized. Reasons for this include poor access for automobiles, pedestrians, and bicyclists, lack of public parking, lack of connections to the station from the surrounding area, and limited adjacent development.

This plan outlines several concepts to better leverage the Dry Creek Station and allow it to be a destination for employees and people coming to Centennial.

Land Use Designations

The first concept to help leverage the light rail station is the application of land use designations that support a mix of uses and a more intense level of development to properties in close proximity of the station. The Transit-oriented Multi-use and the Transit-oriented Office land use designations encourage development to make connections to the light rail station as well as provide a pedestrian friendly, walkable place that promotes light rail station ridership. Figure 2-10 shows an example of how the Transit-oriented Office land use might develop.



Figure 2-10: Transit-oriented Office land use concepts and design principles - shown on the now vacant property to the south of the Dry Creek Light Rail Station

Light Rail Station Connections to the North and South

Pedestrian corridors should be created in an effort to increase access to the light rail station from the south and north ends of the study area.

To increase pedestrian connectivity to the station from properties to the north of Dry Creek Road, a pedestrian bridge is proposed parallel to the light rail bridge over the road. The topography makes it possible to span from the third floor parking deck adjacent to the station over Dry Creek Road to the property just north of the Drury Inn site.

A second pedestrian corridor is envisioned that spans from the south end of the station and connects to an

extended Dayton Street that would be constructed when the vacant areas seen today develop. This connection would increase accessibility from IKEA and the Centennial Promenade. A pedestrian / street oriented development pattern could extend south along Dayton Street to unite the developments that are constructed on the vacant parcels and those on the south end of the study area. This would include the infill of parking lots along the corridor with buildings that have active first floors and that are flush with the right-of-way.

Figure 2-11 and Figure 2-12 show an example of how physical connections can be made between the light rail station and developments in the vicinity.



Figure 2- 11: Light rail station concept design for a more accessible station

Building Form and Massing

Transition of Building Heights

A range of building heights is prescribed for the properties that develop or redevelop within the west side of the study area in order to respect the impacts to the neighborhoods while allowing for highway commercial visibility. In general, the design concept is to have building heights transition from taller buildings along the Interstate to two to three story structures along Yosemite Street (see Figure 2-13).

The tallest buildings likely would be found on the vacant parcels south of Dry Creek Road on the west side of I-25. In this area, buildings would be allowed to heights up to 12 stories along I-25. Areas along Chester Street would be limited to buildings of up to 5 stories. Any redevelopment of parcels along Yosemite Street south of Dry Creek Road would be limited to 50 feet in height.

Redevelopment on the west side of the study area north of Dry Creek would have similar standards although at a smaller scale. Redevelopment of parcels along I-25 may be up to 5 or 6 stories or 75 feet in height. For properties between Alton Way and Yosemite Street, new buildings along Yosemite would be capped at 3 stories, though 2 stories are encouraged. New buildings west of Alton Way may be up to 75 feet in height.



Figure 2-12: Installation or widening of pedestrian/bike pathways between existing buildings can provide more direct routes to the Dry Creek Light Rail Station

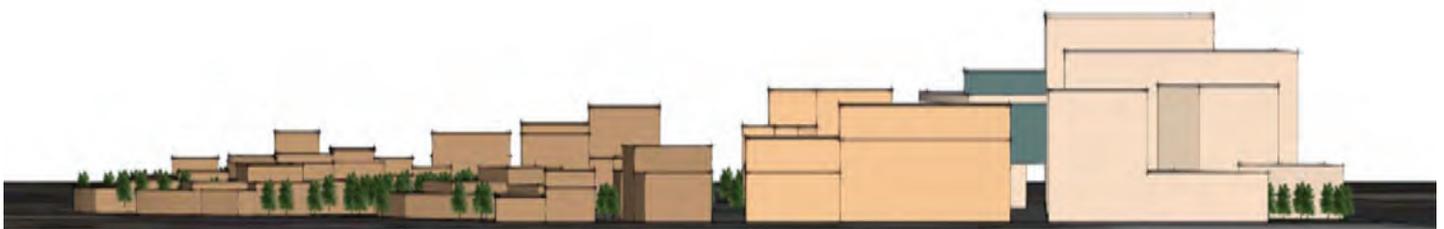


Figure 2-13: Taller buildings could locate along the highway; internal buildings would taper down to match existing building heights

Consistency in Building Base

For the purpose of this plan, the building base is the lower portion of the building that relates to the street and pedestrian experience and sets the scale of the structure. A consistency in building base creates a unifying feature for buildings of varying heights. The consistent expression of the building base assures that adjacent buildings will maintain continuous facade lines and scale while allowing for some variation in overall height and architecture. This definition of the spatial character of the area provides a cohesiveness among buildings (see Figure 2-14).

The building base for the study area should be a 3-story frame with a unified level for the first story. The base of the building should be articulated with high quality architecture and materials. As building heights increase, the additional stories are to be set back to camouflage the variation.

Building Orientation

Buildings are to be oriented to the street and to the pedestrian. To do this, the building should be placed without a setback from the right-of-way so that the entrance is directly on the street. The first story should foster pedestrian activity and interaction with active uses and include design elements with the use of windows, arcades, and street furniture. (See Figure 2-15).



Figure 2-14: Example of consistency of building base concept - buildings at Wynkoop and 16th Street, Denver



Figure 2-15: First floors should have active uses like coffee shops, retail shops, and service providers.

Building Base

For the purpose of this plan, the building base is the lower portion of the building structure that relates to the street and the pedestrian experience. Typically, the base is 1 to 4 stories in height.



Figure 2-16: Continuous facades help carry the feel of the street and create a frame for the street.



Figure 2-17: Buildings should not turn their backs to neighboring buildings.

Continuous Facades

New development should create a continuous facade along the street frontage to the extent possible. For new development on the vacant parcels on the interior of the study area south of Dry Creek Road, certain streets should be targeted for having a complete street of facades. This includes the extension of Dayton Street through the property toward the light rail station, the extension of East Panorama Circle to the south, and the new east-to-west streets. (See Figure 2-16).

Building Relationship to Adjacent Properties

Building design should consider and respect adjacent properties and not “turn its back on neighbors” (see Figure 2-17). All sides of the building that are exposed should have architectural detail and active edges and not be blank, windowless walls.

Building Spacing

The views of the mountains are valued by the community. New development along the west side of I-25 should respect mountain views from the Interstate and from properties east of the highway. To do this, buildings should be planned to allow for view corridors between structures and avoid creating a solid wall that spans across multiple properties or buildings and therefore eliminating views to the west. Developments on individual properties should also be designed to take advantage of mountain views.

Parking and Parking Structures

Parking should be efficient and not be a dominant use of any site and should also be designed to fit into the established street grid. Parking should also be located behind buildings in the center of block or in parking structures. Internal connections between lots and cross parking would allow users to access more establishments without moving a vehicle.

Parking structures should be designed with the same consideration to neighboring properties as expected by other buildings. To avoid turning its back to neighboring properties, parking structures should have active edges (see Figure 2-18) such as being wrapped with commercial uses. They should also fit into the existing street grid or be designed to mimic the block structure and adjacent buildings through architectural articulation and treatments.



Figure 2-18: Example of a parking structure that has an active edge.

As much as possible, parking areas overall should be reduced. To support the reduction in parking, the City should encourage shared parking among uses and give credit for adjacent on-street parking. Businesses could also reduce parking needs by participating in regional transit programs and providing bicycle parking areas and facilities. The City's zoning ordinance is the guide for parking policies and strategies. Developers should consider suggestions and options for how to accommodate and design parking areas.

Commercial Infill Areas

The area along Dayton Street north of the Centennial Promenade has been designated as a commercial infill area. This designation indicates the encouragement of commercial and retail development to infill existing parking lots to create a connective corridor between the Centennial Promenade and development south of the light rail station. Infill development here should attempt to tie together adjacent areas both through design and presenting a direct route. The sidewalk along Dayton Street could be enhanced to encourage movement along the corridor.

What is the Public Realm?

The public realm is the collection of the publicly owned streets, pathways, rights-of-way, parks and buildings. It can also include some privately-owned areas that are dedicated to public use such as plazas and green spaces. For the study area, the streets, pathways, light rail station, and outdoor gathering areas make up the public realm.

Community Amenities & a Quality Public Realm - Elements of Unique Destination

Due to its unique history of incorporation after much of the community was already developed as suburban residential area, the City lacks a traditional downtown and public gathering places for residents and visitors. To address this, an opportunity exists to create community gathering spaces within new development in the study area. An example public space might be a plaza or park area where people can gather for special events or spend time in a park-like setting.

This concept should be incorporated in any development plan - particularly for the vacant parcels within the study area. For the vacant parcels adjacent to Chester Street, community spaces should be located near or adjacent to Chester Street so that it can be easily seen and accessed by the community.

The streets themselves are an important part of the public realm. Streets should be designed with the goal of safe access for users of all abilities and ages including pedestrians, bicyclists, motorists, and transit riders. All streets should accommodate a variety of modes and include sidewalks, bike lanes or routes, transit stops, crossing opportunities, and other aspects that allow all modes to coexist.

The streetscape should be a high-quality, engaging area that allows for the ability to walk to destinations and for interaction with others. Sidewalks should be at least 6 feet wide and not have obstacles that impede circulation. Outdoor seating and landscaping are encouraged along building frontages.

To better blend the existing development and new development near the light rail station, existing streetscapes - particularly those within a third of a mile of the station - could be retrofitted with design elements (street lights, paving, signage, etc) that will tie in such elements within the new developed areas. Over time and as funding allows, more existing streetscapes within the study area could be retrofitted with similar treatments.

Figure 2-19 and the images in Figure 2-20 on the following page show examples of unique and exciting design options that may be considered both in the streetscape and within developed areas. The combination of concepts help create a unique and attractive destination.



Figure 2-19: An example of a community space - community spaces should be incorporated in new developments

Great design provides spaces for people to interact.



01

Balance business with pleasure, work and play.

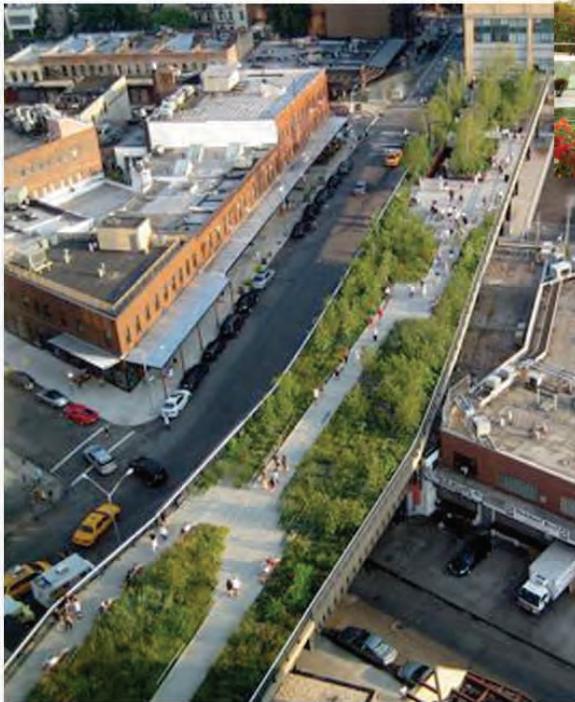


02



03

Urban Design and Architecture is not about buildings, aesthetics or art. It is about creating spaces that enliven us, inspire and engage.



04

Great buildings, great spaces, move us.



05

Figure 2-20: Examples and ideas for a unique community destination (image sources are listed in the Appendix 5)



06

Opportunity lies in the interplay of the indoors and the outdoors.

Denver's weather is world-class. There is opportunity in the action of daylight and the comfort of the breeze.



07

There is great beauty in the dichotomy of old and new, a natural part of us that can enhance our buildings and spaces.



08



09

Inspiration can be found where glass, concrete and brick, meet trees, plants, sun and sky.



10

Figure 2-20: Examples and ideas for a unique community destination - continued

Financial opportunities are enhanced when people are inspired and happy.



12

Never underestimate the dynamics of color.



13



15



11

Public art, private art, all art inspires.



14

Day and night the spaces and buildings can be alive. We work, we want to play too.

Figure 2-20: Examples and ideas for a unique community destination - continued

What is tomorrow will be yesterday, we must focus on core goals of inspiring people, creating identity for our city, promoting and inspiring life.

16



17

Rooftops, especially in Colorado, are full of opportunity.

18



Health and vibrancy are not passing fads.



20



19

Buildings and spaces must be smart, not digitally, but with people and energy.

Figure 2-20: Examples and ideas for a unique community destination - continued

Softening of Yosemite Street

S. Yosemite Street has been seen as both a barrier to accessing the study area for residents of neighborhoods to the west and as a source for general traffic noise and congestion. There is an opportunity to address issues related to Yosemite Street through both future development in the area as well as direct City and Special District action.

Yosemite Medians and Pedestrian Refuges

The benefits of installing medians and crossings along Yosemite Street include traffic calming, noise reduction, improvements of aesthetic value, and an increase in pedestrian safety by creating pedestrian refuges and defined crossing areas at intersections. (See Figure 2-21.)

However, constraints of installing medians include construction cost, maintenance, and coordination of multiple entities. These constraints need to be considered prior to the installation of any medians.



Figure 2-21: Medians on Yosemite (examples seen in the 3 images above) can help soften the corridor and provide refuge areas for pedestrians crossing the street.

Roundabouts

Another design solution that should be considered for Yosemite Street is the installation of roundabouts at appropriate intersections at the time that intersection improvements are warranted. Roundabouts can provide traffic calming at the same time as facilitating traffic flow.

Figure 2-22 shows the potential locations of roundabouts along Yosemite Street. All locations are expected to function well as roundabouts based on the traffic volumes contained in the Transportation Master Plan. The tables in Figure 5-10 and Figure 5-11 in Chapter 5 frames the advantages and disadvantages of roundabouts as compared to other conventional signalized intersections. This information should be used when considering the use of a roundabout when intersection improvements are necessary.

Alton Way / Chester Street as an Alternative Route to Yosemite Street (realignment of Alton Way and Alton Court)

Because Alton Way / Alton Court and Chester Street provide access to the interior of the commercial area, with some improvements, they may be able to act as an alternative route to Yosemite street for traffic associated with the office parks. The corner between Alton Way and Alton Court may be reconfigured to better connect the internal street system and allow better traffic flow. Signage can also be used to encourage the commercial / office traffic to use internal streets. Alton Way / Chester is also a good bike link since the traffic volume would be less than Yosemite.



Figure 2-22: The locations of potential roundabouts along Yosemite Street

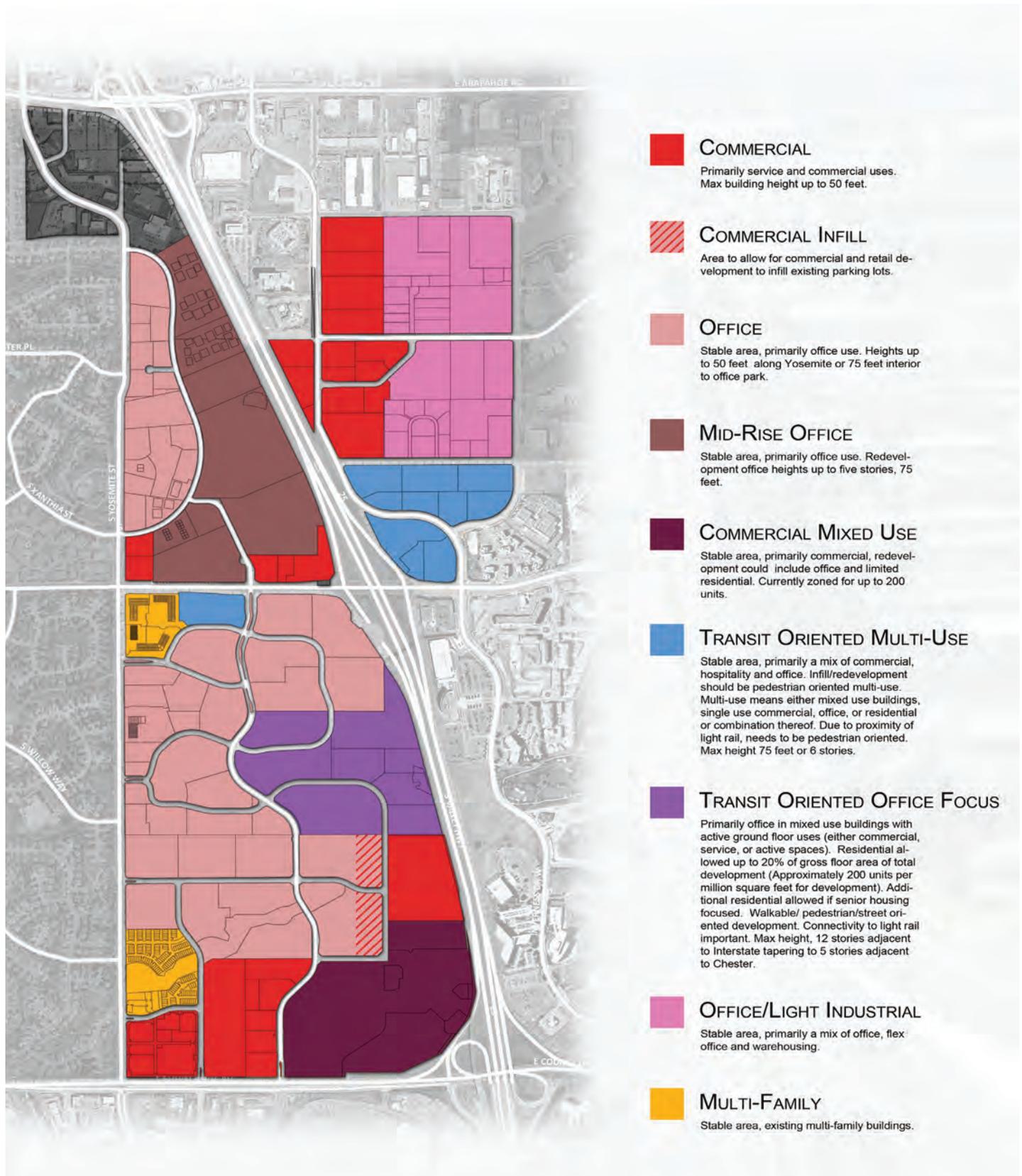


Figure 2-23: The Future Land Use Plan for the I-25 Corridor Sub-area

FUTURE LAND USE PLAN

The I-25 Corridor Future Land Use Plan map (Figure 2-23) identifies the appropriate land uses designated in the study area. It also describes the scale expected in each area. The plan reflects: (1) existing developed areas that are not foreseen to change over the horizon of the plan, (2) areas that are likely to develop within the short-term (next 10 years, and (3) areas that may redevelop in the long-term (next 25 years). The Future Land Use designations are applied to achieve the goal, objectives and plan vision. The land use designations are described on the following pages.

Redevelopment/ Development Potential

The majority of the parcels in the study area are already developed and are considered stable properties. Only a few parcels are identified that might redevelop in the long-term (within the next 25 years). For redevelopment to occur, market conditions, and property values would have to change in order to make redevelopment attractive as compared to the income that the existing uses are currently producing. It likely will be at least 10 years from the date of this plan before such changes would begin to occur in the market. It is expected that the vacant parcels within the study area will develop within the next 10 years and these are the areas where most of the land use modifications are applied in order to meet the goals of the Plan. Chapter 4 - Exiting Conditions includes additional information on redevelopment potential.

Commercial designation

Designation Intent

- To allow continued commercial uses that provide employment. The parcels within this land use designation are considered already developed and unlikely to redevelop (stable).

Applicable Uses

- Primarily service and commercial uses.

Character

- Conventional commercial development with a maximum building height up to 50 feet.
- An example of the Commercial land use is found in Figure 2-24.



Figure 2-24: The Drury Inn at Dry Creek Rd. and I-25 is an example of an existing commercial land use within the study area.

Office designation

Designation Intent

- To allow continued commercial uses that provide employment. The parcels with this land use designation are considered stable and unlikely to redevelop.

Applicable Uses

- Primarily office uses with some service uses.

Character

- Office park layout similar to what exists today with building heights up to 50 feet along Yosemite Street or 75 feet for properties in the interior of the office park south of Dry Creek Road.
- An example of the Office land use is found in Figure 2-25.



Figure 2-25: An example office building found in the study area

Office / Light Industrial designation

Designation Intent

- To allow continuance of stable (unlikely to redevelop) and existing light industrial and office uses that provide employment and contribute revenue to the City.

Applicable Uses

- Primarily a mix of office, flex office, and warehousing.

Character

- Office park / light industrial park style development.
- An example of the Office / Light Industrial land use is found in Figure 2-26.



Figure 2-26: Much of the east side of the study area consists of light industrial and commercial uses.

Multi-family Residential designation

Designation Intent

- To allow continued use of multi-family developments within the study area; these properties are considered stable and unlikely to redevelop.

Applicable Uses

- Attached residential units.

Character

- Development should be walkable and pedestrian / street oriented.
- An example of the Office / Light Industrial land use is found in Figure 2-27.



Figure 2-27: Two recently built multi-family developments are located along the east side of Yosemite Street.

Mid-rise Office designation

Designation Intent

- To allow the intensification of office uses on parcels along the I-25 corridor.
- These properties are considered stable in the near term but may redevelop in the long term if market conditions change.

Applicable Uses

- Primarily office uses with some service uses.

Character

- Redevelopment of office park style buildings with building heights up to 5 stories (or 75 feet) and structured parking.
- An example of the Mid-rise Office land use is found in Figure 2-28.



Figure 2-28: Opportunity may exist to increase the intensity of commercial uses along I-25

Commercial Mixed Use designation

Intent

- To allow future redevelopment of this now stable area to be a more intense retail and commercial center that provides a mix of uses.

Uses

- Primarily commercial uses including retail and services; office uses may occur.
- Redevelopment could include limited residential of up to 200 units (this is based on current zoning allowances).

Character

- Redevelopment should be pedestrian-oriented and provide connections and land use transitions to areas north of the center.
- An example of the Commercial Mixed Use land use is found in Figure 2-29.



Figure 2-29: A mix of uses can promote vitality in the study area.

Transit-oriented Multi-use designation

Intent

- To encourage a mix of uses - including offices, employment, retail and residential - to locate near the transit station.

Uses

- Primarily a mix of commercial, hospitality and office; multi-use refers to either mixed use buildings, single use commercial, office, or residential, or combination thereof.

Character

- Development should be pedestrian-oriented and provide connections to the light rail station to the extent possible. Building heights may be up to 5 to 6 stories (or 75 feet).
- An example of the Transit-oriented Multi-use land use is found in Figure 2-30.



Figure 2-30: Transit-oriented multi-use can be residential, office commercial or a mix of these uses.

Transit-oriented Office Focus designation

Intent

- To encourage development that primarily provides office and employment uses and other service uses that support employment.

Uses

- Primarily office in mixed use buildings with active ground floor uses (either commercial, service, or active spaces).
- Residential uses are allowed up to 20% of gross floor area of total development (approximately 200 units per million square feet of development). Additional residential allowed if senior-oriented housing is focus.

Character

- Development that is oriented to pedestrians and the street. Walkable and bikeable connections to the light rail station and increasing internal road connectivity by extending the grid system are important. Maximum height of 12 stories adjacent to the Interstate tapering to 5 stories adjacent to Chester Street.
- An example of the Transit-oriented Office / Focus land use is found in Figure 2-31.

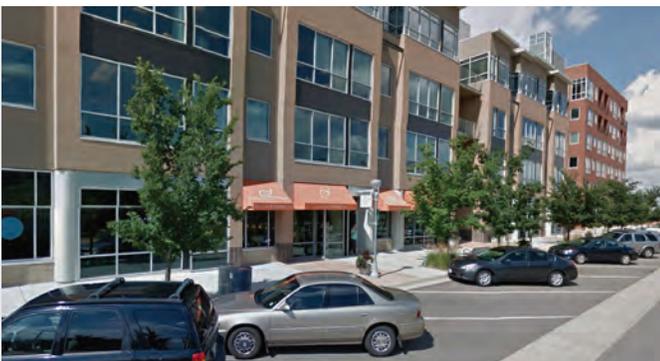


Figure 2-31: Transit-oriented Office focus land use example

Commercial Infill designation

Intent

- To allow for commercial and retail development to infill existing parking lots and create a connection between developed and redeveloped areas.

Uses

- Primarily office and commercial uses with some retail.

Character

- Pedestrian / street oriented development similar to the character of Transit-oriented Office Focus designation with building heights up to 3 stories.
- An example of the Commercial Infill land use is found in Figure 2-32.



Figure 2-32: Commercial Infill areas are encouraged to develop on lesser used areas of the site including parking lots

CHARACTER OF THE LAND USE PLAN

This section is a narrative of the overall character of the subarea per subsection (see Figure 2-33) based on the land uses presented in the Future Land Use Map (Figure 2-23). The character of the subsections contribute to realizing the goal and objectives of the plan by describing the vision and the design components. The subsections are: (1) the west side of I-25 south of Dry Creek Road, (2) the west side of I-25 north of Dry Creek Road, and (3) the area east of I-25.

Subsection 1: West Side of I-25 South of Dry Creek Road

This area currently is primarily executive office and regional retail. There is approximately 3.9 million square feet of leasable commercial space. Most buildings were constructed in the 1990's and 2000's.

The most potential for change in the area is on the west side of I-25 south of Dry Creek Road. This area contains several large vacant lots and has better potential for light rail access than the other areas.

The area is envisioned to develop as predominately office oriented mixed use with the potential for limited residential. For all properties in this area, connection to the light rail station is important as well as a physical design that is walkable and pedestrian/street oriented.

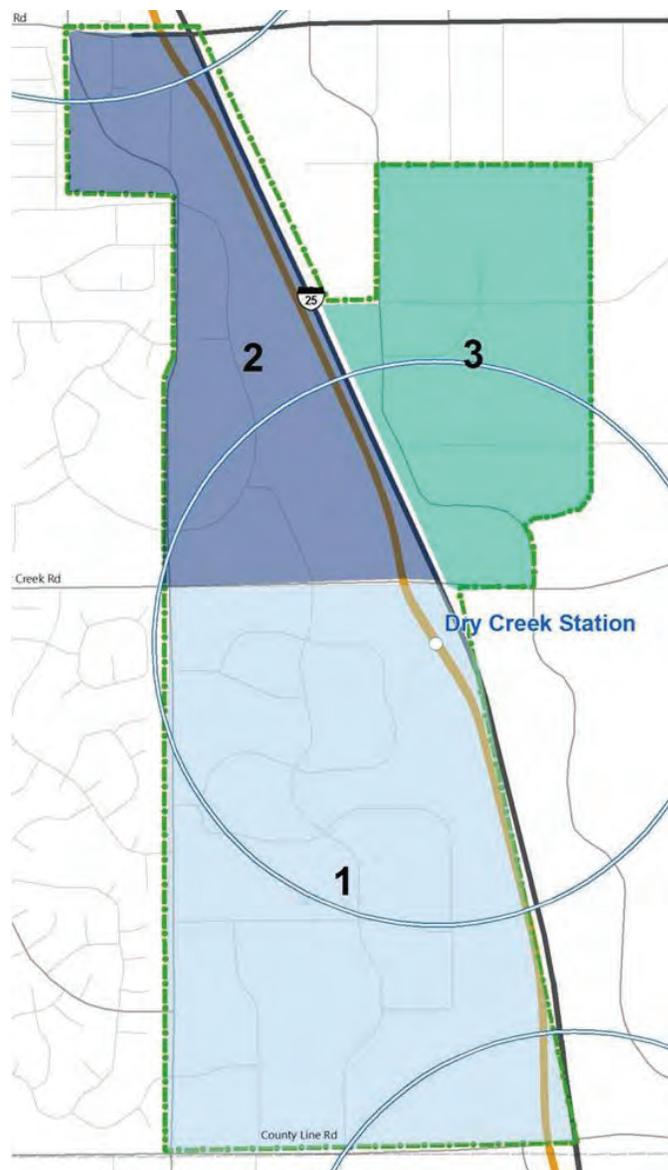


Figure 2-33: The study area sub-sections: west side south of Dry Creek Road (1), west side north of Dry Creek Road (2), and east side of I-25 (3); the circles in the diagram indicate areas within a half mile of a station



Figure 2-34: The Dry Creek Light Rail Station should be a focal point of the study area



Figure 2-35: A large area of vacant land is located in this sub-section and the majority of it is under one ownership. Above is an example of the Transit-oriented Office land use encouraged for the site.

The properties toward the center of the study area are designated as Transit-oriented Office Focus. The area is envisioned to develop primarily as office in mixed use buildings with active ground floor uses – either commercial, service, or active spaces. Residential units are allowed up to 20 percent of the total gross floor area of the total development. This equates to approximately 200 units per million square feet of development. Additional residential units are allowed if the residential component is for senior housing and amenities.

Buildings may be up to 12 stories along the Interstate but are to taper down to 5 stories adjacent to Chester Street. Street connections to create a better grid system of roads are essential for any new development in the vacant area. New development should also incorporate the design principles and concepts presented in this Plan.

One property along Dry Creek is designated as Transit Oriented Multi-Use where either mixed use buildings, single use commercial, office, or residential or a combination thereof can occur. Because of the proximity to light rail, the development is to be pedestrian-oriented and provide connections to the light rail station. Buildings can be up to 5 or 6 stories or 75 feet tall. Adjacent properties are 3 to 4 stories.

This area also has large existing developments that are considered stable and will not likely redevelop within the next 25 years or so. These include two multi-family developments along Yosemite, a large number of office buildings, and large retail centers along County Line Road. Future land use reflects the current land uses found today.

Though seen as stable today, there may be a potential for redevelopment at the current Centennial Promenade retail center. If development does occur, it is envisioned as a retail-oriented mixed use center that could include retail, services, office and limited residential (up to 200 units). New buildings, including big-boxes, should frame the street - both internal streets and County Line Road.

North of the Centennial Promenade along Dayton Street there are many large parking areas associated with office buildings. In effort to better connect the Promenade to future development on the vacant parcels in the center of the study area on route to the light rail station, commercial and retail infill development will be allowed in this area's existing parking lots. Infill development should be street oriented and continue the design elements applied to the area to its north.



Figure 2-36: If the Centennial Promenade redeveloped, big box structures could be arranged to frame the streetscape; a multi-use trail along County Line Road would increase access to the site



Figure 2-37: Street-oriented buildings could be built on existing parking lots in the Commercial Infill area to create a more connected area between the Promenade and the properties to its north.

Subsection 2: West Side of I-25 North of Dry Creek Road

The area north of Dry Creek to the west of I-25 is primarily office and flex space with approximately 1.8 million square feet of leasable commercial space. The buildings were primarily constructed in the 1970s and 1980s.

The future land uses for the area are primarily office uses, which is reflective of the existing land uses in this area. This area is considered a stable area for the near term. Changes in the market and land values would need to occur before redevelopment would be expected in the long term (over 10 years from the creation of the plan or after 2023).

The future land use designations support more intensity if redevelopment does occur. The development levels supported by the plan are maximum for the area; however, it is likely that any proposed development would be less than the levels shown.

For properties west of Alton Way, limited redevelopment might occur with office uses up to 3 stories with a 10 percent increase over the current development levels. This would allow a modest increase in floor area ratio (FAR) from 0.33 to 0.37.

For parcels east of Alton Way and adjacent to I-25 (see Figure 2-38), redevelopment would be office uses in buildings up to 5 or 6 stories or 75 feet in height. For buildings to reach the maximum floor area, parking would need to be in a structure so that there is adequate room on the parcel for both the building and the required parking. This land use allows redevelopment to occur at an FAR of approximately 1.32 instead of the existing FAR of 0.26.

Floor Area Ratio

Floor area ratio (FAR) is the ratio of the total building area to the land area. It is a measure of development intensity. Typical suburban FARs tend to be around 0.35 meaning a one story building occupies approximately 35% of the lot or a two story building occupies about 17% of the lot. Typical mixed-use and transit oriented developments have FARs ranging from 0.5 and up, indicating a more intense amount of development – taller buildings or more of the site developed.



Figure 2-38: Some of the commercial properties north of Dry Creek Road may be able to redevelop at more intense levels due to their location adjacent to the interstate.

Subsection 3: East Side of I-25

The study area on the east side of I-25 primarily has a mix of office, flex office, and warehousing. There are commercial services and uses along Clinton Street and on the south end of the study area near Dry Creek Road. The buildings were primarily built in the 1990s and there is approximately 800,000 square feet of leasable commercial / industrial space.

This area is considered a stable area and its current character and uses are expected to continue as is. Light industrial uses are supported in the northeast portion and commercial along Clinton. Though the uses are encouraged to continue over time, the area has the potential to intensify its uses and provide more developable land. This area would likely benefit by reducing lot size and increasing access to land internal to the existing blocks. As redevelopment occurs or through a collaborative effort between the City and property owners, a grid street system (see Figure 2-38) can be constructed along existing north-south lot lines as well as a few east-west alignments.

The south end of the area is designated as Transit-oriented Multi-use due to its proximity to the Dry Creek Light Rail Station (see Figure 2-40). Much of the land in this designation is built out with a mix of commercial, hospitality, and office. The remaining vacant parcels are to develop with uses - such as residential, office, or a mixed use building - that would benefit from the light rail station. Development is to be walkable, pedestrian oriented, and have a connection to the light rail station. Buildings can be up to 75 feet tall (5 or 6 stories).



Figure 2-39: More development potential may be created on the east side of the study area by breaking up the large block sizes with a grid of streets that builds on the existing street pattern.



Figure 2-40: The south end of the east side may be developed as a transit-oriented area that also relates to the existing Vallaggio development that is located across Dry Creek Road.

East Side Redevelopment

Wholesale change is not expected for the area east of I-25 and is unlikely without investment by the City or another major catalyst. One such catalyst could be an additional light rail station approximately 2,000 feet north of the Dry Creek Station with a bridge over I-25 to connect the area to the station.

TRANSPORTATION AND INFRASTRUCTURE TO SUPPORT THE PLAN

In order to support the land use designations (see Figure 2-23) for the I-25 Corridor Sub-area, cost-efficient infrastructure systems must be provided without compromising the character of the area. These improvements are necessary to support the plan’s overall development vision and meet the goal and objectives of the plan.

Transportation System

The traffic generation - based on full build out of the Future Land Use Plan - was projected to assess impacts to the transportation system and identify needed improvements. It should be emphasized that the transportation system improvements are based on the maximum build-out of the Future Land Use Plan. However, it is not anticipated that the Future Land Use will develop to that maximum potential despite allowing more intense uses to occur in many areas. The maximum land use potential was used in order to obtain a conservative level of improvements needed so that the City staff may be prepared prior to any development proposal.

While the Plan does not go into great detail about on-street bike lanes, they can be a tool to increase connectivity to and through the study area, particularly to the Dry Creek Light Rail Station. Additional study needs to occur to see where bike lanes can best be implemented within the street network.

Transportation Master Plan

The City’s Transportation Master Plan identifies a number of planned improvements within the study area including the widening of County Line Road from 4 lanes to 6 lanes west of Yosemite Street (the County Line Rd. widening is a long range project that may be postponed if C470 improvements occur first); the installation of traffic signals on Yosemite at Mineral Drive / Mineral Avenue (included in the Short Term Transportation Plan); and the construction of intersection improvements at Yosemite Street and County Line Road. In addition to these planned improvements, a number of other improvements will need to be constructed to accommodate the Future Land Use Plan and address projected impacts on the surrounding roadway network.

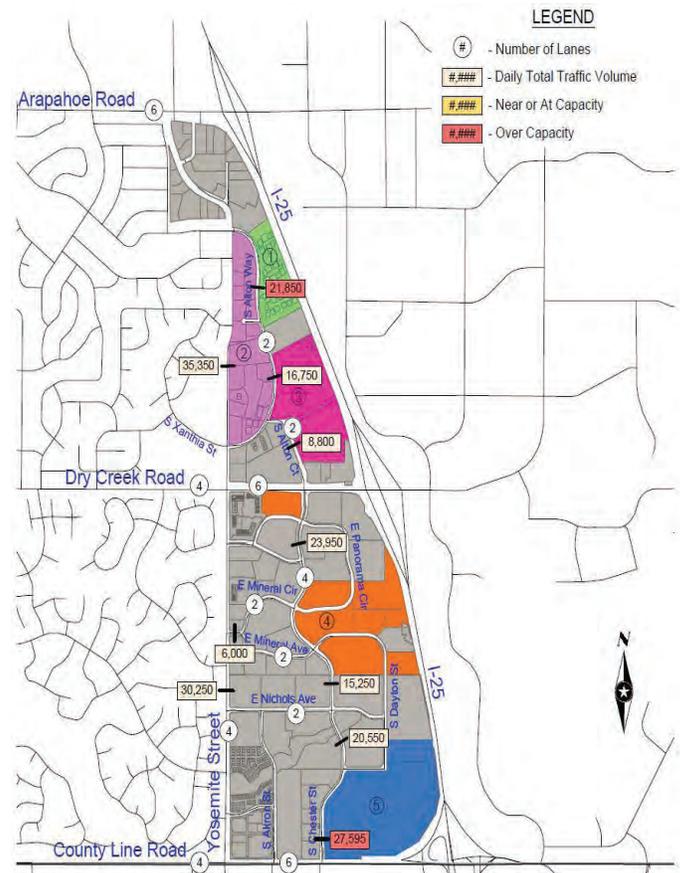


Figure 2-41: Year 2035 daily total traffic volumes with preferred land use plan

Plan Related Transportation System Improvements

Based on the Future Land Use Plan and estimated redevelopment potential, daily traffic volumes on Yosemite St. by the year 2035 are estimated to be between 30,250 and 35,350 vehicles per day (see Figure 2-41). This volume is near to, but within the threshold limits for, the capacity of the 4 lane roadway. It is expected that Yosemite St. will be able to accommodate the potential development plan without the need for widening to 6 lanes.

It is expected that Alton Court will accommodate the additional traffic volumes projected and would remain as a 2-lane roadway. However, as a 2-lane roadway, the north section of Alton Way would be operating above capacity and the south section of Alton Way would be operating near capacity . If redevelopment occurred at the maximum potential, it is likely that Alton Way will need to be widened to 4 lanes in the long-term to accommodate the Future Land Use Plan (see Figure 2-42) .



Figure 2-42: Alton Way likely will need to be widened if development happens to its full potential indicated by the Future Land Use Plan. Sidewalks would also be an improvement to the corridor.

A number of intersection improvements (see Figure 2-41) will need to occur as the study area develops / redevelops. Based on the trips generated between Arapahoe Road and County Line Road, it is expected that intersection improvements will be needed at the following signalized intersections on Yosemite Street:

- Nichols Avenue
- Alton Way (South)
- Dry Creek
- Mineral Avenue
- Alton Way (North)

In addition, based on the trips generated on Chester Street, it is expected that intersection improvements will be needed at the signalized intersections with Alton Court and with County Line Road. However, the extension of the grid to allow more routes for vehicles along with providing alternative means of moving around the area (by foot, transit, and bicycle), are intended to help reduce the impacts.

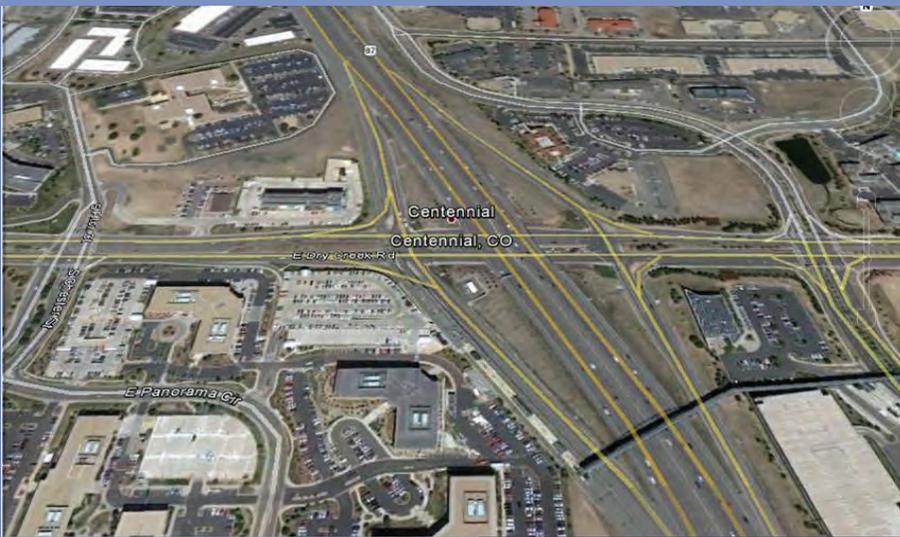
In addition, more intense redevelopment of the Centennial Promenade may trigger problems at the intersection of Chester Street and County Line Road. The intersection has recently been improved and functions adequately for the current uses. However, this stretch of roadway is commonly congested. With more intense redevelopment in this vicinity, Chester Street is expected to experience further congestion and likely induced traffic diversion to other roadways in the network.

Havana lift station. Castlewood Water and Sanitation District will continue to monitor development in the district to determine when improvements are required and plan for upgrades.

According to Southgate Water and Sanitation Districts, there are constraints on the amount of development its sewer system can accommodate at this time. Due to the age of the system and amount of development in the district, trunk lines have limited access capacity. Southgate is undergoing studies to determine actual capacity and to identify pinch points. Upgrades to the system may be a combination of Southgate funds and developer contributions. The City of Centennial is working with Southgate Water and Sanitation Districts to create a plan to address upgrades and improvements that impact development within the city limits.

Stormwater Drainage

The Southeast Metro Stormwater Authority (SEMSWA) has indicated that there is a lack of water quality capacity and detention capacity within the study area. New development will need to address stormwater management through underground detention if it cannot meet the standards for treating stormwater on the surface. SEMSWA has master plans to which new development must comply and is also planning on ways to increase capacity on a regional level.



3

Implementation

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Chapter 3 - Implementation - Introduction and Summary

The Implementation Chapter outlines the “how to” steps for directing future investment in the study area and identifies short-term and long-term improvements and projects identified in the planning framework.

To implement the plan, the City must undertake a strategic approach that involves prioritized improvements, matching priorities to funding mechanisms, and defining procedures to administer the plan. The implementation strategy puts forth an efficient and economical approach for creating a vital, thriving development area. The strategy as well as the design concepts and principles will enhance and highlight the light rail station amenity.

INCENTIVIZING DEVELOPMENT

The market / economic study completed for this subarea plan indicated that there is abundant demand for office and residential uses within the study area and south I-25 corridor. Areas within a ½ mile of light rail stations have captured the majority of office and residential development

along I-25 since 2006. However, comparing planned developments to estimated demand demonstrates that there are numerous competitive locations along I-25 that can accommodate the estimated demand. Therefore competition for development in the next five to ten years will be high with sites having the best location, lowest cost, and most amenities likely to be first to attract development. Many of the competitive development sites in the corridor already have development plans, major infrastructure improvements, and identified public financing and incentive policies to attract development and have an advantage over sites that are not as ready for development.

In order for the study area to be competitive in capturing development, the existing study area assets (Dry Creek Light Rail Station, I-25 frontage and

Opportunity Sites

The study area has five opportunity sites that have the greatest potential to capture new development. The opportunity sites include the 48 acres designated as the Transit Oriented Office on the Future Land Use Plan and shown in green with a number 1 in Figure 3-1. The area is currently vacant with the exception of the existing Jones International headquarters building. The other opportunity sites are located on the east side of I-25 north of Dry Creek Road and one large site north of Dry Creek on the west side of I-25. Three of the opportunity sites require assemblage of parcels and the relocation of existing uses to become viable for development.

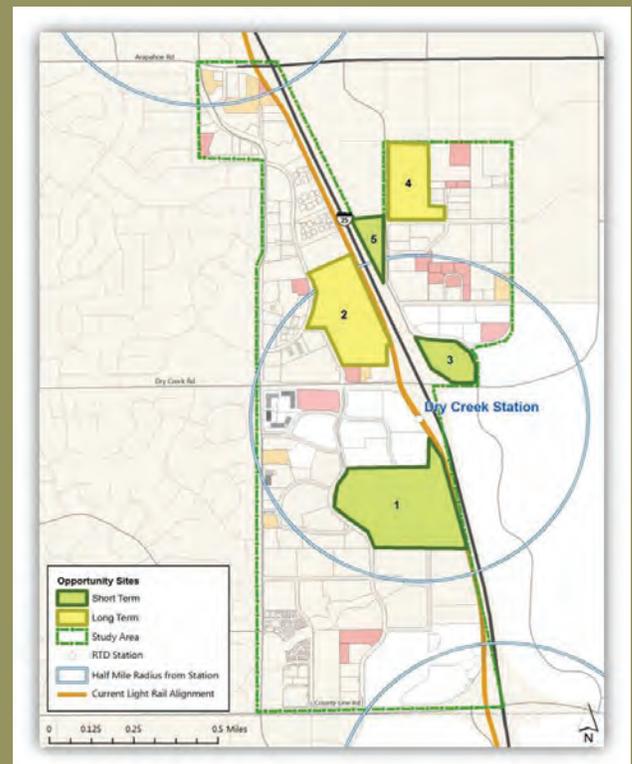


Figure 3-1: Study area potential opportunity sites

access) must be leveraged, barriers to development removed, and needed public infrastructure provided or planned to increase attractiveness and reduce development costs.

Some of the needed improvements in the study area, including upgrades to water and sewer systems, are administered by special districts and are not the responsibility or within the authority of the City. Therefore, the City must not only be concerned with the public improvements they can provide, but also provide guidance and tools to help improvements be made by other public agencies and property owners.

The improvements identified in this plan are aimed at increasing the functionality and attractiveness of the area, as well as, connect development sites to the amenities in and around the study area. Beyond these improvements, the City must work with the special districts to ensure the infrastructure capacity is present when development interest occurs.

Monitoring System

To create an area where development proposed for properties within the area could be expedited, the City should consider the further refinement of the transportation analysis to determine more precise floor area ratios and associated traffic impacts for each property. This information could be used to monitor development impacts over time and allow development proposals that fit into the parameters to be processed administratively. If a developer met the intentions of the plan, an expedited process may be applied to project proposals. The model could also include parameters for sewer, water, and stormwater impacts.

PHASING STRATEGY

The market analysis indicates that the phasing of new development and redevelopment is already somewhat established based on market conditions alone.

The majority of the study area is already developed and, therefore, seen to be stable and not likely to see redevelopment occur. Near term development is expected for the vacant lots within the study area. Redevelopment of properties is not expected until the demand for land in the area increases and the value of the improvements on the properties decrease in value.

The biggest impact to reaching the vision is ensuring that development on the vacant land in the center of the study area south of Dry Creek Road (the area designated as Transit Oriented Office on the Future Land Use Map and consisting of the Jones International Building and adjacent vacant properties) follows the design concepts and principles of this plan. Due to its size and being under one ownership, it is likely to develop sooner than other opportunity sites in the study area. Its location adjacent to the light rail station makes it an important property to set the vision of the area into place.

KEY PUBLIC PROJECTS & COSTS

A number of key public projects are identified by the sub-area plan. This section presents the cost estimates (in 2013 dollars) for each of those projects. As shown in Figure 3-3, the total infrastructure costs to support the sub-area plan vision are estimated at \$12,190,883 with \$1,852,870 of the total for short term projects.

Project	Priority	Cost - Short Term	Cost - Long Term	Total	Responsibility
Yosemite medians	short term	\$506,940		\$506,940	District or City
Sidewalk improvements					
Yosemite	short term	\$221,735		\$221,735	District or City
Dayton	short term	\$211,815		\$211,815	District or City
Alton Way / Alton Court	long term		\$479,130	\$479,130	Developer, District or City
Pedestrian and bike bridges					
Dry Creek bridge	long term		\$2,684,100	\$2,684,100	Developer, District, or City
Pedestrian refuges					
Arapahoe and Yosemite	short term	\$10,800		\$10,800	District or City
Yosemite at Dry Creek	short term	\$10,800		\$10,800	District or City
I-25 and County Line	short term	\$10,800		\$10,800	District or City
County Line multi-use path	long term		\$238,300	\$238,000	District or City
Internal ped and bike paths					
North of Dry Creek	long term		\$505,975	\$505,975	Developer, District or City
Mineral / Nichols area	long term		\$114,135	\$114,135	District or City
County Line / I-25	short term	\$28,690		\$28,690	District or City
Chester / Akron	long term		\$50,555	\$50,555	District or City
Streetscape - stable areas near light rail station					
Within 1/3 mile of station	short term	\$145,800			District or City
Pedestrian lighting within a 1/3 mile of station	long term		\$1,400,000	\$1,400,000	District or City
East side grid improvements	long term		\$3,037,758	\$3,037,758	Developer, District or City
Intersection improvements					
Yosemite at Nichols	long term		\$50,440	\$50,440	Developer
Yosemite at Dry Creek	long term		\$50,440	\$50,440	Developer
Yosemite at Alton (south)	long term		\$50,440	\$50,440	Developer
Yosemite at Alton (north)	long term		\$50,440	\$50,440	Developer
Dry Creek at Alton / Chester	short term	\$50,440		\$50,440	Developer
Chester at County Line	long term		\$50,440	\$50,440	Developer
Yosemite at E. Mineral	short term	\$655,050		\$655,050	Developer or City
Alton widening	long term		\$1,052,870	\$1,052,870	Developer
Alton re-alignment	long term		\$522,990	\$522,990	Developer or City
TOTALS		\$1,852,870	\$10,338,013	\$12,190,883	

Figure 3-1: Study area key public project time frame, cost estimates, and priority level; all estimates are in 2013 dollars

It should be noted that the cost estimates do not include land acquisition or easement acquisition costs and may need to be adjusted if the project needs additional analysis due to terrain. Costs are also in 2013 dollars.

Yosemite Medians

Medians are proposed within the existing street section between the north intersection with Alton Way south to the intersection with Phillips Place. The medians will need to be a series of islands in order to allow for proper spacing for turning lanes at intersections and access points along Yosemite.

The envisioned medians are raised islands with low maintenance ground treatment and trees. This design was used due to the existing crown on the roadway's center line. Alternative design may be considered - particularly a depressed median that may be used for stormwater management - but additional research would need to be done to determine how to modify the crown of the road to allow for drainage into the center median.

Allowing for spacing for turn movements at intersections and access points, the total length of medians are estimated at 3,830 feet (0.73 miles), which results in an estimated cost of approximately \$506,940. The cost estimate includes the removal of asphalt, the installation of curb, gutter and median material, design fees, and a construction contingency fee.

Sidewalk Improvements

Sidewalk improvements are proposed in three areas: Yosemite between Dry Creek Road and the north intersection with Alton Way; Dayton Street; and Alton Way.

Yosemite Sidewalks

The Yosemite improvements would occur to infill missing sidewalk segments on the east side of the street south of S. Yosemite Court to the intersection with Dry Creek Road. The estimated length of improvements is 2,940 feet (~0.5 miles) and the resulting cost is \$221,735 for a six-foot sidewalk.

Dayton Street

To better connect the Promenade area to new development immediately south of the light rail station, sidewalks improvements are proposed along Dayton Street. Improvements include widening the sidewalks to 6 feet on both sides of the streets between the Promenade to the vacant parcels north of IKEA and adding a direct pedestrian connection between Dayton and the Promenade parcel. Sidewalk improvements along Dayton are estimated at \$211,815.

Alton Way and Alton Court

Alton Way also has many stretches that have no sidewalk or sidewalk only on one side of the street. The estimated length of sidewalk needed to fill the gaps on both sides is 4,900 feet (~0.93 mile) - 1,750 feet on the west side and 3,150 feet on the east side of the street. To match up with existing sidewalks, the cost estimate is \$383,240.

The west side of Alton Court also has segments without sidewalks. Sidewalks, approximately 1200 linear feet, for Alton Court area estimated at \$95,890.

Pedestrian / Bicycle Bridge

A pedestrian / bicycle bridge is proposed over Dry Creek Road connecting the light rail station to the property north of the Drury Inn property. It is estimated that the bridge over Dry Creek Road would need to be at least 950 feet long (though actual length will need to be determined with a more in depth topography analysis and location identification of support beams. This length results in a very expensive bridge estimated at \$2,684,100.

Pedestrian Refuges

Pedestrian refuges are proposed at various intersections including the Yosemite and Arapahoe intersection, the Yosemite and Dry Creek intersection, and the intersection of County Line Road and I-25. A general raised area is proposed for these refuges. The refuges would be located in areas of the road in between marked traffic lanes.

It appears that there is adequate room to install the refuges at the Yosemite / Dry Creek intersection and also at the intersection of County Line Road and I-25. This cost could be included in the cost of the medians proposed along the route or built as a stand alone feature. However, the current configuration of Arapahoe Road does not have an area that is not marked as a travel lane for traffic. Installing pedestrian refuges at the intersection would require a redesign of the road system that may mean widening the road to accommodate both refuges and the required travel lanes based on traffic levels.

The estimated cost per refuge is approximately \$10,800 and includes a signal. All three sets total \$32,400 though this does not include additional road design at the Yosemite and Arapahoe intersection.

County Line Road Multi-use Path

The 10-foot wide multi-use path proposed on the north side of County Line Road appears to be able to fit within the existing right-of-way if the path was attached to the road and not separated with a landscape strip or other buffer area. The proposed multi-use path would run from the intersection of County Line Road and I-25 west to where it can connect with the trail system that runs southward just west of the study area. The estimated length of the trail is 4300 feet. The cost estimate to build the trail is approximately \$238,000.

Internal Pedestrian & Bicycle Paths

A number of internal pathways are identified throughout the study area to accommodate pedestrians and bicyclists. The paths are proposed as 6 feet wide and concrete. The cost estimation includes clearing and grading, excavation, sod, concrete sidewalk, design fees, and contingency fees.

The five paths south of Dry Creek Road (three in the Mineral Road and Yosemite vicinity, one spanning between Chester and Akron, and one connecting the intersection of I-25 and County Line Road to the Promenade) total approximately 3,245 feet. These paths are to be developed in stable areas so it is likely City assistance may be needed to secure easements and install the paths. All alignments appear to be reasonable grades and through current landscape areas (though irrigation systems and other site improvements will need to be considered in the cost of installing the paths). The estimated cost for all segments is \$193,380.

The internal paths proposed for north of Dry Creek include four connections between Yosemite and



Figure 3-2: Streetscape concepts: example street furniture, pavers at intersections, way-finding signage

Alton Way, a path that runs parallel to I-25, and two connections between Alton Way and the path running parallel to I-25. The construction of any of these trail segments may be at the time of redevelopment of adjacent parcels though sections may need to be funded and built by the City and/or Special Districts.

Due to the terrain change between the Alton Way and Yosemite Street, path design in this area will need additional analysis, particularly if ADA parameters are applied. The cost estimations for this plan is based on the direct length of path and then that cost is inflated due to terrain considerations.

The paths in this area are estimated at a total of 8,525 feet (~1.6 miles) and could cost approximately upwards of \$505,975. Total costs of paths is estimated at \$699,355.

Streetscape Improvements

To provide a more design-oriented transition between new development around the Dry Creek Light Rail Station, improvements to existing streetscape in stable areas are proposed.

All sidewalks within 1/3 mile of the light rail station should be retrofitted with way-finding signage at key intersections. In addition, intersections can be modified to better accommodate pedestrians. Simple improvements include adding pavers along side the existing sidewalk to increase areas where pedestrians wait to cross the street. In addition to the pavers, benches and trash receptacles could be installed at these key intersections (see Figure 3-2).

Signage would cost approximately \$5,000 to \$7,000 per sign depending on the size and design. The



Figure 3-3: Potential locations for streetscape improvements within 1/3 of a mile of the light rail station

intersections improvements for 3.5 intersections (see Figure 3-3) (3 south of the Dry Creek Road and Chester intersection and just the south two corners at Dry Creek Road and Chester) for pavers, benches and trash receptacles total approximately \$96,800.

One feature that can bring identity and cohesion to the area is a pedestrian scale street light system. The true costs of such a system will need further research to determine adequate pole spacing and light coverage as well as what existing electrical systems can be used to support the new fixtures. For a baseline for the costs, this results in 7,000 feet (~1.33 miles) of sidewalks (both sides) with 140 new lights spaced at 50 foot intervals. The estimated costs for the retrofit is \$1,400,000.

East Side Grid Improvements

The extension of the grid system on the east side of the study area would break up blocks to allow more development potential in the area. Land acquisition and / or easement acquisition aside, the cost of new road segments include clearing, excavation, and new curb, gutter, sidewalks, streets, stormwater infrastructure as well as contingency and design fees for the total proposed road lengths is approximately 7,980 linear feet (~1.5 miles) resulting in a total cost of \$3,037,758.

Intersection Improvements

A number of intersection improvements will be necessary to accommodate traffic levels generated if the full build-out of the plan is realized. It should be noted that full build-out of the future land use plan is not anticipated but allows for the amount of development that may occur in the study area.

These intersection improvements are in addition to the already planned intersection improvements (at Yosemite and County Line, Yosemite at S. Willow Way, and Yosemite at Mineral) identified by the Transportation Master Plan.

With full build-out at the maximum level, the following intersections would need some level of improvements.

- Yosemite Street and Nichols Avenue, Yosemite Street and E. Dry Creek Road, Yosemite Street and Alton Way (south), Yosemite Street and Alton Way (north), Chester/Alton Court and Dry Creek Road, Chester and County Line Road

Intersection improvements are similar for these 6 intersections and would include the installation of turn lanes and right-turn auxiliary lanes. The cost also includes clearing and grubbing, removal of existing infrastructure, resurfacing, design fees, and construction contingency fees.

The cost estimate is \$50,440 each for a total of \$302,640 for the 6 intersections.

- Yosemite Street and E. Mineral Avenue
Improvements would include the signalization of the intersection along with paving, design fees, and construction contingency fees. The estimated cost of this intersection is \$655,050.

Roundabouts may be an alternative design for select intersections, especially those along Yosemite.

Advantages and disadvantages of roundabouts and criteria for selecting the design area listed in Chapter Five - Appendices.

Widening of Alton Way

If redevelopment occurred at the upper level of what is allowed the Future Land Use Plan, there may be a need for the widening of Alton Way from 2 lanes to 4 lanes to accommodate the traffic increases. The cost to widen the road to 4 lanes (not including cost of land acquisition) is estimated at \$1,052,870.

Alton Way / Alton Court Re-alignment

One concept to entice office park traffic off of Yosemite is to make Alton Way / Alton Court a more direct route to Chester Street (see figure 3-4). Two costs were estimated, one for the realignment of the existing roads and the second is the realignment and also widening of Alton Court. The cost estimation for just the realignment is \$176,365. For both realignment and widening of Alton Court, the cost increases to approximately \$522,990.

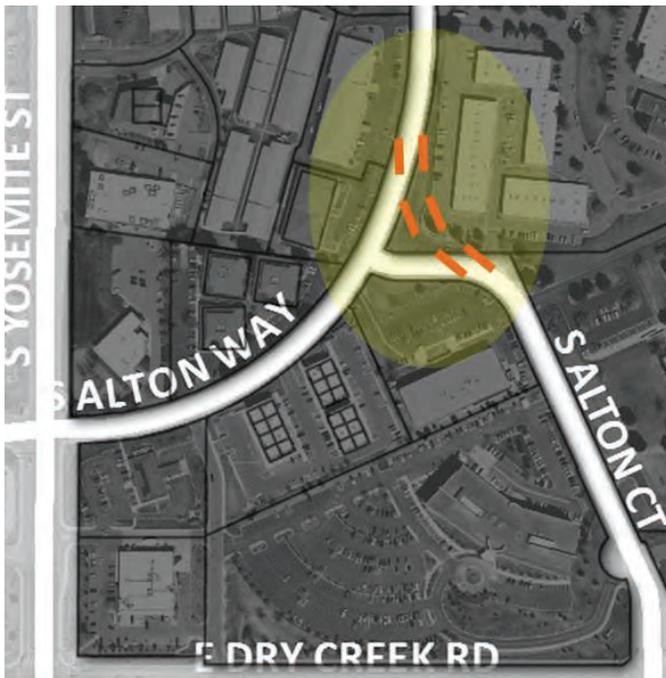


Figure 3-4: The re-alignment of the intersection of Alton Way and Alton Court may make the route more convenient for traffic.

PROJECT PRIORITIZATION

In order to realize the planning vision in an efficient and cost-effective manner, a prioritization level was applied to the key public projects. The prioritization level identifies which projects should get focus in the short-term (before 2025) versus the long-term (build-out). However, the City Council may consider which projects get funded at which time at the time of City budget review and capital improvement planning.

Short-Term - within 1 - 10 Years

Streetscape Improvements within 1/3 mile of the Dry Creek Light Rail Station

The City's first priority for public improvements should be improving pedestrian connections around the light rail station to the areas south of the station. This would include streetscape improvements to already developed areas within 1/3 mile of the light rail station.

Yosemite Medians

Planted medians will benefit the image of the study area and improve the aesthetics of Yosemite Street. They also may provide a calming effect on traffic speeds and dampen traffic noise. The feasibility of medians should be determined within the first 3 years after plan adoption. If found feasible, installation should occur within 7 years of the determination.

Yosemite Sidewalks

Sidewalks are missing on the east side of Yosemite for the majority of the length between the two intersections of Alton Way. Sidewalk improvements would allow more access to the study area and provide safer pedestrian travels along the roadway. Because properties in this area are not expected to

redevelop in the near term, the City, perhaps with a partnership with Southgate Water and Sanitation Districts, will need to address the need.

Intersection Improvements

The intersection improvements that will need to occur within 10 years may include those identified along Yosemite Street by the Transportation Master Plan. These include the widening of County Line Road from 4 lanes to 6 lanes west of Yosemite Street; the installation of traffic signals on Yosemite at Mineral Drive / Mineral Avenue; and the construction of intersection improvements at Yosemite Street and County Line Road.

These intersections are already seen to be in need of improvement in the coming years and will likely be impacted by development expected in the near-term (mostly vacant properties south of Dry Creek and west of I-25). Development of these properties will need to ensure needed improvements occur if development is proposed. Additional internal improvements to the transportation system have also been identified by the Jones Properties, LLC Traffic Impact Analysis submitted for potential development on the vacant properties. These improvements include:

- Signalization at the intersections of S. Chester Street with both E. Panorama Circle and E. Mineral Avenue when they are projected to be warranted by site specific development plans. The intersection of E. Otero Avenue with S. Chester Street may also meet traffic signal warrants.
- Adding a 200-foot long right-turn lane southbound to westbound traffic at the E. County Line Road/S. Yosemite Street intersection similar to the one recently constructed at the E. County Line Road/S. Chester Street intersection.

- Lengthening the westbound to southbound dual left-turn lane storage at the intersection of E. Dry Creek Road/S. Chester Street.

Pedestrian refuges

The three sets of proposed pedestrian refuges are considered short-term projects. There appears to be adequate space on existing medians or space outside travel lanes in the center of the street to install pedestrian refuges relatively easily at the intersection of County Line Road and I-25. Refuges could be raised areas or painted concrete that have additional signage calling out extra caution in the case of the presence of pedestrians.

The refuges at the intersection of Yosemite and Dry Creek could be a raised platforms within the existing at grade center space. Crosswalk striping and additional signage could also be used to bring attention that potential pedestrians may be crossing. When medians are installed, the pedestrian refuge in this area can be incorporated into the median design though crosswalk striping and signage is still essential.

The CDOT I-25 Arapahoe Road project could be a means of implementing pedestrian refuges at Yosemite St. and Arapahoe Rd. The improvements to Yosemite St. and Arapahoe Rd. are scheduled to occur in the short-term. With the current road design and striping of Arapahoe, there is very little space to build pedestrian refuges at this intersection. Coordination with the design should occur so that this is not precluded if it is not constructed with the project.

Internal Pedestrian and Bicycle Paths

The internal pedestrian and bicycle paths are located in areas that are either considered stable or where

redevelopment might happen in the long-term. The majority of the internal pedestrian paths are also located on private property so these projects will need land or easement negotiations with property owners. The one exception is the proposed path link from the intersection of I-25 and County Line Road. This path would be located in right-of-way. Because of the distance of these paths to the light rail station (over a mile), these paths fall lower on the list of priorities. However the path at County Line Road and I-25 should be considered in the near term due to the social path that has already formed in the area indicating the path would be well-used and would increase the safety and convenience of those users.

Long-Term - within 10 - 20 Years

The remaining key public projects are targeted as long-term efforts. Some of the projects may become the responsibility of development if and when properties redevelop. Others will need to be addressed outside of new development for many of the properties are not likely to redevelop by the horizon of the plan. These projects include:

- Dayton sidewalk improvements
- Dry Creek Pedestrian Bridge
- Pedestrian refuges at Yosemite and Arapahoe
- County Line Road multi-use path
- Internal pedestrian paths
- Streetscape improvements within a mile of the Dry Creek Light Rail Station
- East side grid
- Alton sidewalks
- Widening of Alton Way (if widening of Alton Way is triggered by development, then the widening may include sidewalks)

- Realignment of Alton Way and Alton Court
- Intersection improvements: Yosemite and both Alton intersections; County Line Road and Chester.

DEVELOPER OBLIGATIONS

It is a policy of the City of Centennial that development will pay its own way and fund required infrastructure improvements, required streetscape design, and on-site amenities. Many of the identified public improvements may occur when development or redevelopment of properties adjacent to the identified improvements occurs.

FUNDING OF KEY PUBLIC PROJECTS

Funding for the improvements presented in this plan will be a combination of sources. The City, itself, has limited resources under its own control to provide funding for the sub-area public improvements. This section identifies funding sources that the City may explore to fund projects in these areas.

Some key public projects will not happen when development occurs. This includes many of the projects identified in the stable areas and those identified in the areas that are not likely to redevelop within the next 10 years.

There is approximately \$1,852,870 in short-term public improvements identified in this plan. The identified improvements are intended to create an attractive environment in the study area specifically around the Dry Creek Light Rail Station. This section includes potential strategies to fund the short-term improvements and other long-term improvements.

City Capital Improvement Funds

The City's expenditures on capital improvements have ranged from \$3 million to \$6 million annually. The City does not have a dedicated budget for capital improvements and funds projects on a project by project and year by year basis, largely based on the growth of sales tax revenues.

The City will only fund projects that are public improvements, not the responsibility of or direct benefit of property owners, and illustrate a direct public need and benefit. Most of the short-term improvements including the Yosemite Street medians, sidewalk improvements along Yosemite Street and Dayton Street, or the pedestrian refuges could be capital improvement projects that the City could potentially fund within a future budget year or over a five-year time period with a portion of the available capital funds dedicated to these improvements.

Improvement Districts

General Improvement District

A general improvement district (GID) is created to finance identified public improvements in specific areas that benefit that area directly. Formation of a GID is initiated by a petition from a majority of impacted property owners and then designated and authorized by the City.

The district levies and collects ad valorem taxes on residential and/or commercial property to pay for improvements. The district can also impose tolls, fees, or charges for any revenue producing services or facility within the district and issue general obligation and revenue bonds.

Special Improvement District

A special improvement district (SID) is created to finance improvements that enhance the designated area (i.e., street lighting or roadway improvements). An SID is initiated by the City or a petition from a majority of the impacted property owners and is designated and authorized by the City.

The district imposes a special assessment to pay for improvements based on an allocation of the total project costs. A variety of formulas can be used to determine the appropriate assessment rate (i.e., per linear foot or per square foot of improvement). The district can issue special assessment bonds to pay for improvements.

Metropolitan Districts

Metropolitan districts (metro districts) are commonly used in Colorado to finance the construction of new infrastructure and to finance specific improvements in older established areas. Metro districts must include two or more improvement projects or services and are, typically initiated by developers to fund infrastructure projects, and then pass the cost to the end user/property owners.

The metro district must be authorized by the City and supported by a majority vote of the impacted property owners. The metro district is required to create and submit a service plan and is operated by a district board of directors consisting of property owners in the district. The metro district can levy and collect ad valorem taxes on residential and commercial property. Mill levy is allocated separately for capital construction and operations. The metro district can also impose tolls, fees, penalties, or charges for services and issue general obligation and revenue bonds.

It is likely that large redevelopment projects in the study area will utilize a metro district to help finance public infrastructure within their project. The City should require the districts to pay for the identified public improvements in this plan that are associated with the development.

Urban Renewal Area

Three of the identified opportunity sites within the study area have existing uses and may therefore have additional costs associated with redevelopment or the assemblage of multiple parcels to create a redevelopment site. The City could consider evaluating the properties north of Dry Creek for an urban renewal area (URA) to use as a tool to facilitate redevelopment within these areas.

Creation of an Urban Renewal Area would require the identification of blight within the area and the creation of a development plan. The URA designation allows the City's urban renewal authority to sell or lease property, issue general obligation and special obligation bonds, utilize tax increment financing (both sales and property tax increments) and use the power of eminent domain.

To facilitate larger redevelopment efforts in the study area and potentially pay for major improvements such as the proposed pedestrian bridge connection over Dry Creek, the City could consider the use of urban renewal. The tax incremental financing (TIF) clock within a URA should not be started until a major redevelopment project is identified and is market ready. An urban renewal area will likely only be needed for the long term redevelopment opportunities and improvements identified in the plan.

Transit Zone Improvement District

The identified streetscape improvements within the 1/3 radius of the Dry Creek transit station could be funded through a transit zone improvement district. The City should consider working with property owners within the 1/3 mile area around the transit station to create a transit zone improvement district that would use either a GID or SID as a funding source for capital improvements. The City could participate in the district by paying for a portion of the improvements in the district using CIP funds.

The City and property owners could create a uniform mill levy for all property owners or create an assessment based on another cost allocation such as the length of streetscape needed for each property. A Business Improvement District (BID) could also be formed and used to maintain streetscape improvements.

New development within the transit zone would be required, as a condition of approval, to create streetscape improvements consistent with the rest of the district and to join the BID.

The creation of this district could be used by the City and property owners as a way to make the area around the Dry Creek transit station more attractive to potential developers and businesses interested in the area. Most of the transit station areas within the south I-25 corridor have some sort of improvement or public financing district created around the station areas to create public improvements, incentive development and make their station areas more attractive to potential developers and businesses.

REGIONAL COORDINATION

Many of the projects will need the cooperation and dedication of multiple regional agencies. These efforts should start immediately if they have not begun by the adoption of this plan.

1. Continue to work with Southgate Water and Sanitation Districts on their study to understand capacity of the sewer and water systems.
 - Establish a meeting schedule with Southgate
 - Identify and inform other entities in the Southgate that might participate.
 - Inform potential development applicants of known limitations and procedures on obtaining Southgate approval for projects.
 - Retain Southgate as a development review referral agency.
 - Assist Southgate with critical project funding.
2. Work with RTD to facilitate the physical connection of a pedestrian route on the south end of the light rail station.
 - Set a meeting with RTD to discuss the idea and what it would take to get it permitted by RTD.
 - Set a meeting between developers of the area designated as Transit Oriented Office to the south of the station, to discuss concepts, schedule, roles and responsibilities.
3. Work with property owners on the east side of the study area to plan street connections between E. Costilla Avenue and E. Geddes Avenue and between S. Clinton Street and S. Fulton Street.
 - Gather contact information.
 - Schedule an initial meeting.
 - Prepare meeting materials - maps, images, cost of road construction, benefit summary.
 - Conduct the meeting(s).
 - Add additional meetings as necessary.

DESIGN GUIDANCE

To guide development to adhere with the design concepts and principles of the plan, the City should take the following steps.

1. Design a streetscape that will be the template for new development, redevelopment, and improvements in stable areas.
2. Design a menu of streetscape amenities - street furniture, landscaping, lighting, paving - that can be accessed by developers and property owners.
3. Set up a sidewalk improvement support program such as fund matching and include special districts in the program.
4. Encourage properties owners within the Commercial Infill Designation to add new development to their parcel that reflects the concepts and principles of this plan.
6. Create a funding mechanism for streetscape improvements in the stable areas of the study area.
7. Develop a commercial development concierge service to assist developers, property owners, and business owners through the process of redevelopment and redesign.

REGULATION MODIFICATIONS

There are modifications that should be made to the existing City Municipal Code to allow the preferred land use and development format to occur. These modifications should be made within 5 years of plan adoption.

1. Expand ways to allow for the reduction of parking requirements to encourage more intense development on commercial sites.
2. Apply the appropriate zoning district, such as the Urban Center Zone, according to the future land use designations.
3. Develop and adopt an urban multi-family typology to support the concept of transit-oriented residential areas.

APPLYING PRINCIPLES AT THE TIME OF DEVELOPMENT REVIEW

New development, redevelopment, and expansion of existing development will be required to follow the policies, concepts, principles, and guidelines set forth in the I-25 Corridor Sub-area Plan.

At any initial inquiry or pre-application meeting in regard to development within the study area, City staff will convey the goals and design principles/concepts of the plan. Staff is to discuss infrastructure system limitations on development within the study area and requirement for approval by applicable special districts prior to application submittal.

Staff will meet with the applicant at a pre-submittal meeting to review the proposal and address how the submittal meets the intention of the sub-area plan or how the plan could be modified to meet the plan.

When the development proposal is submitted, staff will forward a copy of the proposal to proper referral agencies - particularly special districts to determine if the applicant abided by district direction.

Staff will then review the applicant's narrative on how the proposed development meets the intentions of the sub-area plan. Staff will use Chapter Two of this plan as a check list to determine if the proposal meets the intention of the plan such as connectivity, design concepts and principles.

If the proposal does not appear to meet the intention of the plan, staff will work with the applicant to modify proposal.

If development is proposed beyond the floor area described in the land use designations or generates traffic beyond estimated by the transportation analysis, then the City will work with the developer to reduce floor area or reduce trip generation. Trip generation could be reduced by participating in regional transportation programs, providing bicycle facilities, modifying work day hours to off peak times, providing a mix of uses that support each other, and other concepts recognized by the International Transportation Engineer Standards.

ADMINISTRATION OF THE I-25 CORRIDOR SUB-AREA PLAN

The City of Centennial is responsible for the administration and enforcement of the I-25 Corridor Sub-area Plan.

Over time, various sections of the plan may need to be revised as market and economic conditions or City needs dictate. Amendments to this plan may be initiated by a developer, any individual property owner or by the City.

Proposals to amend the plan must be accompanied by detailed information to document the need for the change requested. The applicant or City must also provide an analysis of the amendment's transportation and infrastructure system impacts. Any consideration of a proposed amendment should include the determination of the following findings:

- Changes that have occurred in the community since the approval of the plan.
- The proposed amendment is consistent with the City of Centennial Comprehensive Plan.
- The proposed amendment will result in a benefit to the study area.
- The proposed amendment will not result in any unmitigated impact to adjacent properties.
- The proposed amendment will enable the delivery of services, infrastructure, and public facilities to the study area.

Both the Planning Commission and City Council must hold public hearings on any sub-area plan amendments according to the City of Centennial Municipal Code parameters.



4

Existing Conditions on which the Plan Was Built

Chapter 4 Table of Contents:

Existing Conditions

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7. Transportation - page 82
8. Infrastructure - page 83
9. Natural systems and open space - page 84
10. Community issues and opportunities - page 84

Chapter 4 - Existing Conditions on which the Plan was Built - Introduction and Summary

This chapter describes the existing conditions on which the plan was built. These conditions include existing land use and the built form, market trends and projections, transportation system condition and capacity, infrastructure capacity, and issues and opportunities that were identified through the community outreach conducted during the plan process.

The study area has both strengths and constraints that need to be addressed in this plan. Future planning should build upon the area's existing assets while working to counter challenges.

LAND USES

The study area is largely a commercial area for the City. The west side of the highway houses mainly office and flex uses. The east side of the highway houses mainly office and light industrial uses.

The sub-area west of I-25 can be further divided by East Dry Creek Road. To the north of East Dry Creek Road, the area is generally a mix of existing flex office and light industrial. There is an area of retail at the northeast corner of East Dry Creek Road and South Yosemite Street.

The area south of East Dry Creek Road mainly consists of Class A mid-rise office buildings, flex office space, and significant retail, primarily along East County Line Road. There is also limited multi-family residential located primarily along South Yosemite Road. It should be noted that a portion of this area immediately west of the Dry Creek light rail station, is located within unincorporated Arapahoe County.

To the east of I-25, the land uses consist of restaurants and hotels along I-25 and a mix of office and light industrial internal to the study area.

A secondary area is located at Arapahoe Road and the I-25 interchange. The area is an aging retail node. The land use recommendations formed with the 2008 Arapahoe Urban Center Area Plan (AUC) apply to this secondary area. However, the area is included in this sub-area plan to ensure it is part of the pedestrian connectivity and transportation solutions developed as part of the balance of the study area.

The existing land uses can be found on the map on the opposite page (Figure 4-3).

BUILT FORM

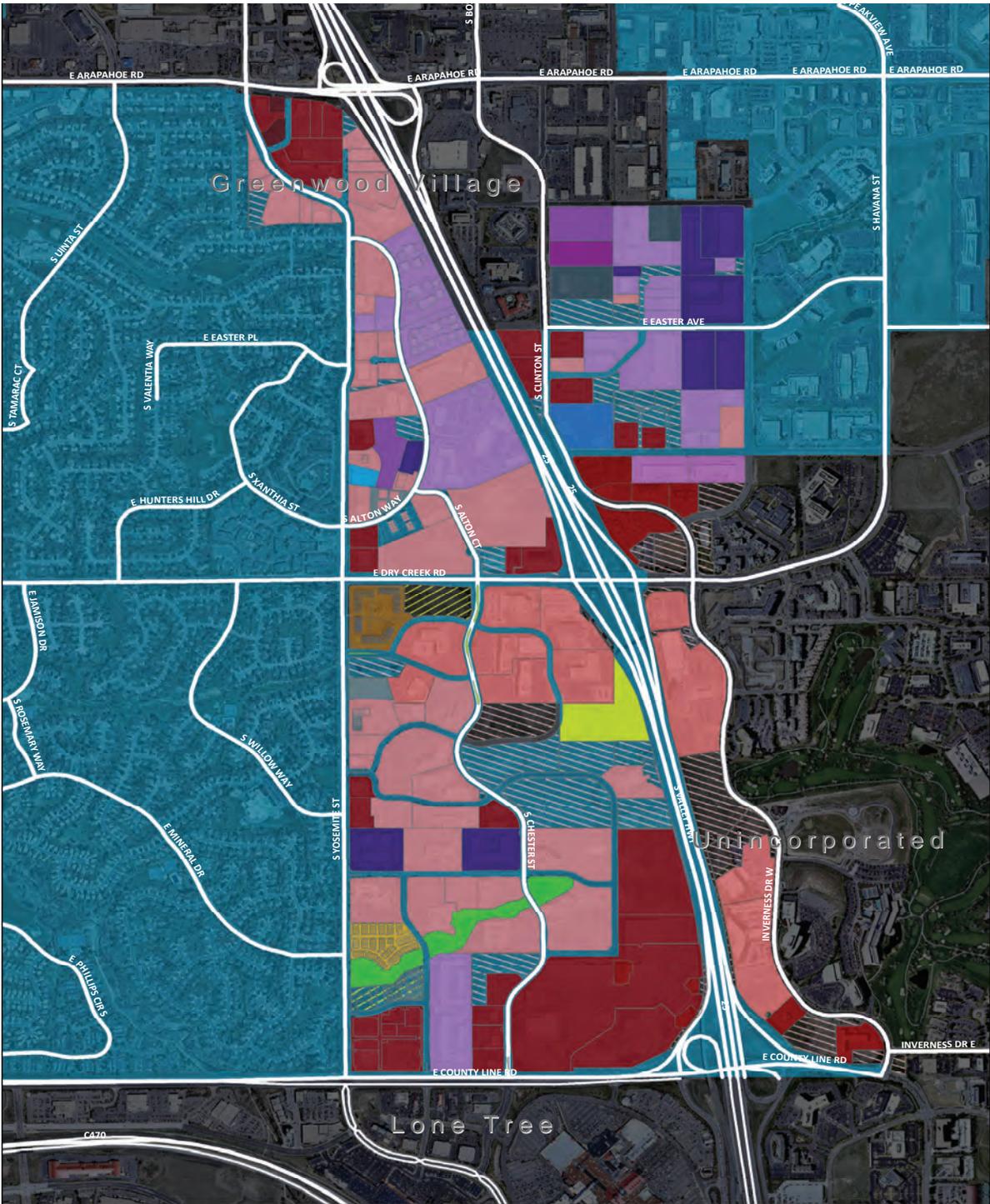
The current development pattern is reflective of mid-twentieth century auto-oriented patterns seen in many office parks around the country. The majority of the study area consists of unattached one to three story commercial structures surrounded by surface parking lots on their individual parcels. The pattern in the retail and industrial areas are also reflective of this auto-oriented style of development where large retail structures are surrounded by vast parking areas. Along Yosemite, there are two pockets of recently built residential complexes – one a four to five story condominium style structure and the other a townhouse format.



Figure 4-1: Existing office building



Figure 4-2: Existing commercial center - Centennial Promenade



**I-25 Corridor Sub-Area Plan
Existing Land Use**



Land Use Classification	<ul style="list-style-type: none"> COMMERCIAL MINI/SELF STORAGE COMMERCIAL LUMBER DEALER COMMERCIAL GENERAL WAREHOUSING COMMERCIAL MULTIPLE UNIT WAREHOUSE PARKING COMMUNICATIONS TELEPHONE NON-CONFORMING RESIDENCE-SINGLE FAMILY 	<ul style="list-style-type: none"> ATTACHED TOWNHOUSE MID-RISE CONDOMINIUM SUC=J P C OPERATING PROPERTY VACANT RESIDENTIAL VACANT COMMERCIAL OPEN AREA/GREENBLT/COMMON AREA(PRIVATELY OWNED)PU COMMERCIAL LAND(GREENBELT/COMMON AREA PRIV OWNED) CENTENNIAL CITY LIMITS
<ul style="list-style-type: none"> OFFICE Commercial COMMERCIAL AUTO REPAIR CHURCH COMMERCIAL OFFICE WAREHOUSE 		

Figure 4-3: Existing Land Use Map

MARKET / ECONOMICS

A market analysis was performed to determine existing conditions within the I-25 corridor (see Figure 4-4) on a regional level, project anticipated growth within the corridor, and then to determine the potential development and redevelopment future for the study area.

Regional Context

Growth is expected to continue in the Denver Metro area. Employment growth in the region will continue to bring people into the State. The State is also expected to continue to attract retirees and sole proprietors that view Colorado as having future opportunities.

The continued vitality and growth of the I-25 corridor within the City of Centennial is key to the City's economic development and fiscal health. The south I-25 corridor is defined as land within $\frac{3}{4}$ mile of I-25 from I-225 on the north to Lincoln Ave on the south. The south I-25 corridor contains the largest concentration of employment and retail uses within the City.

Over the past decade the south I-25 corridor has been a magnet for significant growth seen in the metro area. Over 20 percent of all Denver office area, 1.2 square feet of retail and 5,300 residential units have located in this section of the corridor.

Light rail has had an impact on the recent growth patterns. The transit corridors in the Denver metro area have captured a significant amount of the regional growth over the past decade. The areas along the transit corridors in the Denver metro area captured 16 percent of the new households in the Denver metro area between 2000 and 2010.

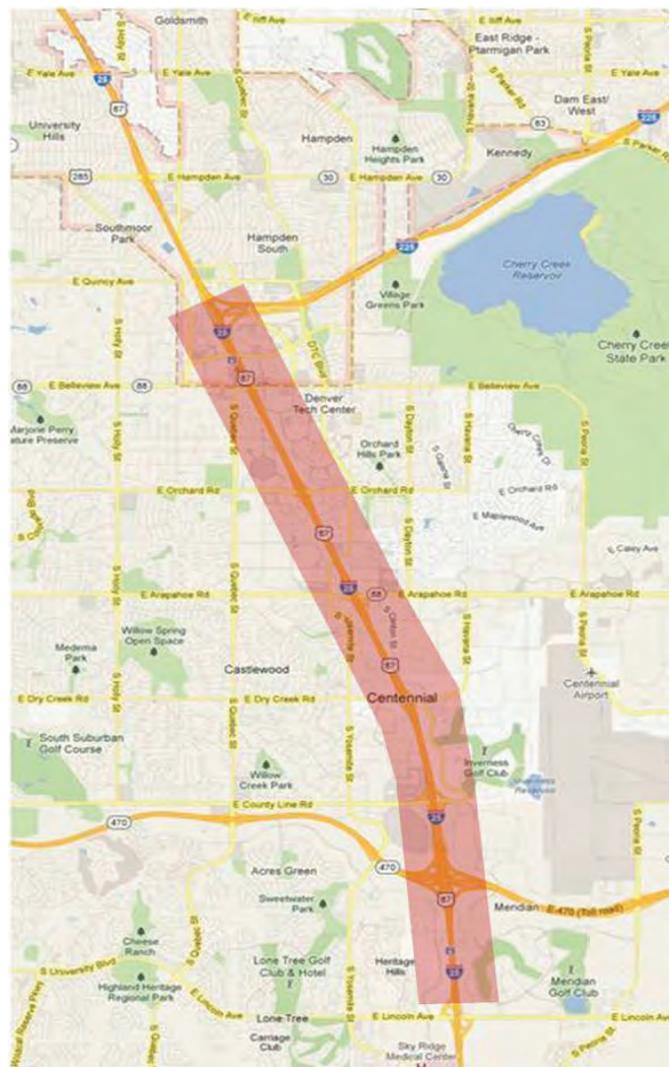


Figure 4-4: The south I-25 corridor - shown in red shading

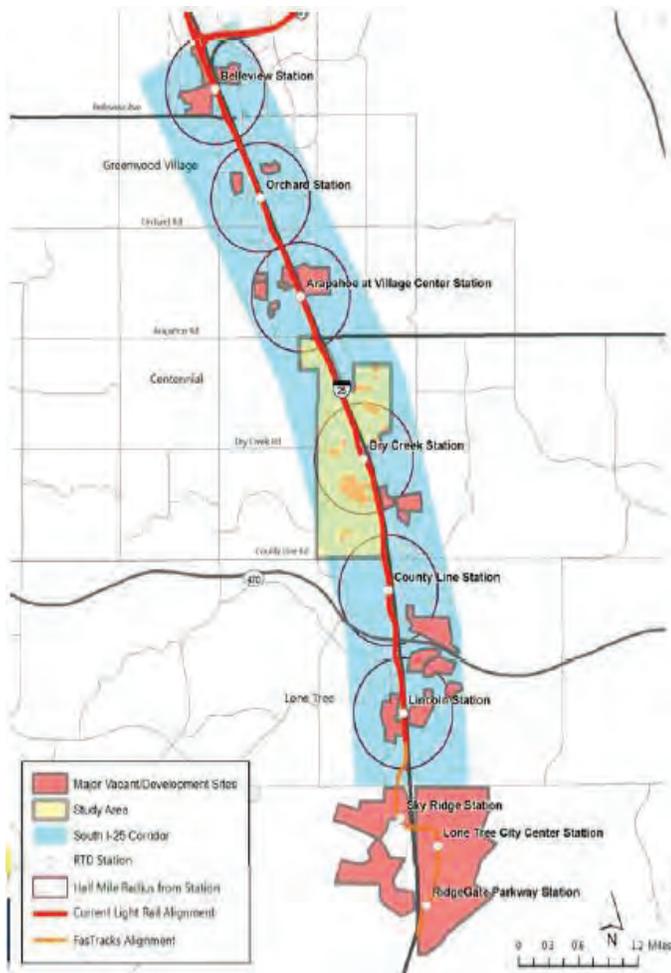


Figure 4-5: Competition sites in the corridor

Commercial development capture was also high along the transit corridors as 26 percent of office development and 13 percent of retail development in the past decade occurred within three-quarters of a mile of the current and future transit corridors.

Post 2005 (when the light rail was built), 1.5 million square feet of office was built within a half mile of a light rail station. Only 110,000 square feet of office was built elsewhere in the corridor.

Projected Growth

The growth trend in the region is expected to continue as the corridor builds out. The transit corridors in the Denver metro area are expected to capture a greater share of household and employment growth over the next 25 years. Based on the Denver Regional Council of Governments' (DRCOG) forecasts, the areas along the transit corridors in the Denver metro area are expected to attract 26 percent of the new households to the region over the next 25 years. Nearly 40 percent of the employment growth in the metro area is estimated to occur within 3/4 mile of the transit corridors.

The south I-25 corridor is estimated to continue to have strong employment growth over the next 25 years, with an estimated demand for 11 million square feet of office space consistent with the historical development capture over the last 10 years. The south I-25 corridor is estimated to increase in employment by nearly 58,000 jobs. The increase in employment will create demand for an additional 11.6 million square feet of office space in the corridor over the next 25 years, or an average of 460,000 square feet per year. Office development has shown a preference for locations near transit stations since the

completion of the light rail system and development is expected to continue for the foreseeable future. Additionally, the south corridor is expected to experience continued strong residential development with an estimated demand for 13,500 housing units over the next 25 years, which equates to 540 units per year.

Growth Expected within the Study Area

The south I-25 corridor has a substantial inventory of vacant land planned for 5 million square feet of office and 3,300 residential units. The majority of the large, vacant sites along the corridor have master land use plans and their owners are currently trying to attract development to these sites. The amount of planned development in the corridor is enough to capture the estimated demand for office and residential units in the corridor over the next 10 years. Development sites will need to be positioned using either site amenities and/or development incentives to be competitive in attracting development.

The study area has five opportunity sites that have the greatest potential to capture new development, the most significant of which is the Jones Properties located south of the light rail station and north of IKEA. The opportunity sites include the 48 acre site designated as Transit Oriented Office on the Future Land Use Plan and consists of the Jones International Building and adjacent vacant land immediately south of the Dry Creek Light Rail Station. The other opportunity sites are along the east side of I-25 north of Dry Creek Road and one large site north of Dry Creek on the west side of I-25. Three of the opportunity sites require assemblage of parcels and the relocation of existing uses to become viable for development.

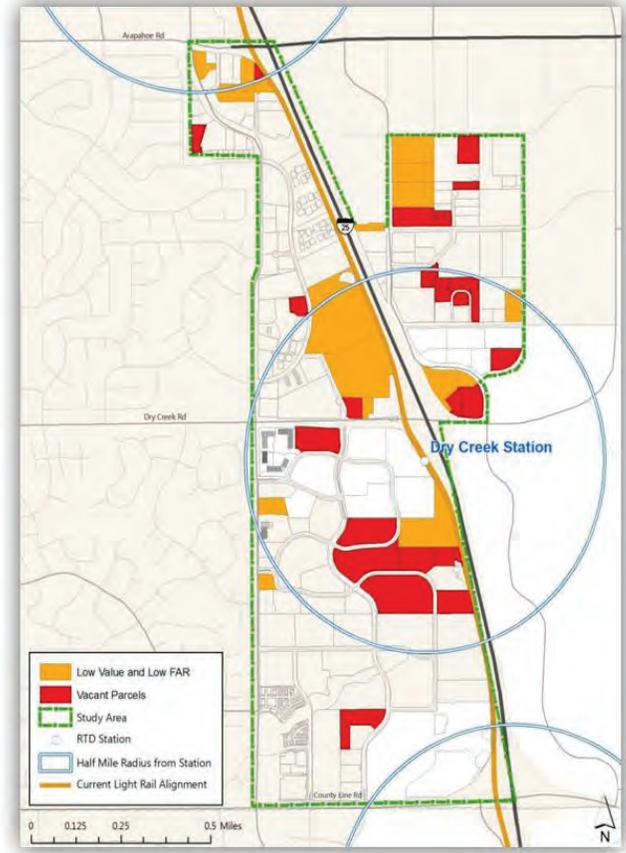


Figure 4-6: Vacant properties within the study area

The study area has the potential to capture up to 2.4 million square feet of office space and 800 residential units. Retail demand is limited only to service and entertainment oriented retail. The study area could attract a full service hotel with conference space. The development sites within the study area are well situated to capture a significant portion of the development expected in the south I-25 corridor, especially near the Dry Creek light rail station. The study area can capture 20 percent of new office space

competition for this use will likely be high and attracting a hotel will likely require City incentives.

The Take-away for Centennial?

Due to the amount of recent large developments in Long Tree (Park Meadows Mall), there is little to no demand for regional retail in the study area or the immediate region. There is modest demand for office, residential, and for neighborhood retail supporting new residential.

Obstacles for development and redevelopment in the study area include competition from other areas in corridor like Lone Tree, and the significant vacant land and development capacity in the I-25 corridor. Other areas in south corridor may have substantial advantages to attract development through incentives and undeveloped land.

In summary, there is adequate capacity for 10 year development forecasts within the study area. The properties with the greatest development potential in the short term include the area designated as Transit Oriented Office on the Future Land Use Map and the Panorama Business Park vacant parcels. The remaining study area is likely to only see incremental change. However, development incentives likely to be needed for unique attractions such as a major hotel/convention center or a regional retail/entertainment attraction. For redevelopment to occur, property values will need to increase before some areas see that potential.

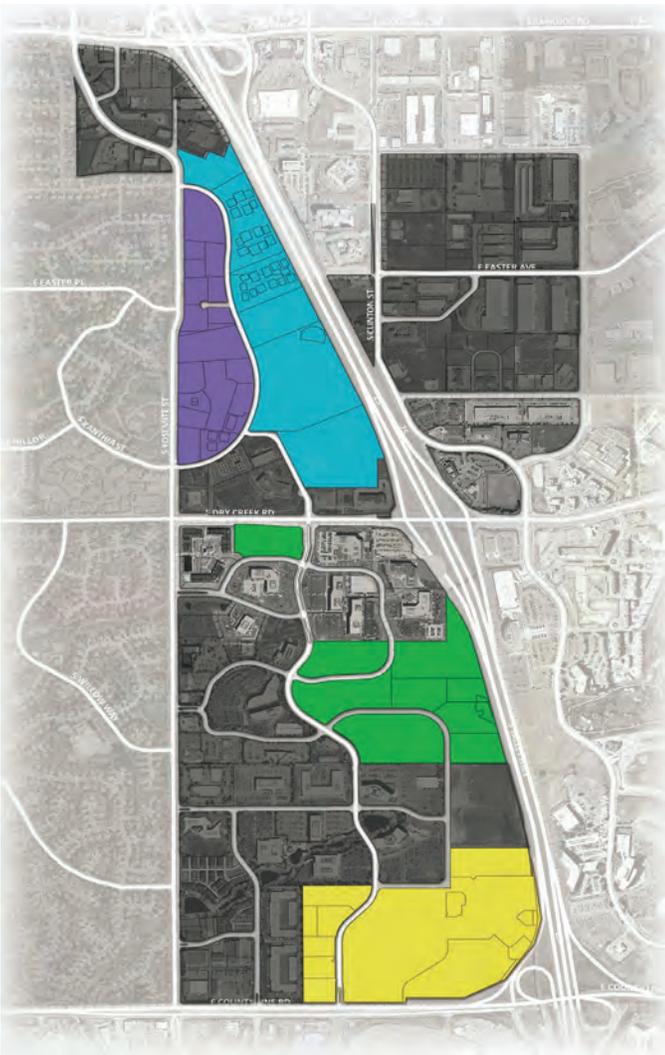


Figure 4-7: Redevelopment potential within study area west of I-25

in the south I-25 corridor, which would be an increase from Centennial's capture in the previous decade. Demand for multifamily housing, especially for-rent apartments, will continue to be strong and have a preference of being located near retail amenities and light rail stations. There is likely demand for a new upscale, full service hotel in the corridor, which could be a targeted use for the study area to catalyze a development or redevelopment site. However,

AREAS OF STABILITY

The actual amount of redevelopment in the study area is limited and it is highly unlikely that the City will see a large amount of redevelopment occur. There are many areas that are already developed in the study area that will likely remain as is over the next twenty to thirty years and not redevelop. The areas of stability, or stable areas, for the study area are shown in red on the Areas of Stability Map shown in Figure 4-10.

Areas of stability are generally sites that are currently developed and have a high building value compared to the value of the land and a moderately high floor area ratio (see Figure 4-8) meaning that the majority of the site has been used either by the building itself or the required landscaping and parking required for the construction. These two factors denote stable and appropriate land uses for the market. If redevelopment does take place, it will likely take the form of building remodels and reinvestment. Some redevelopment may occur in the long term but it is not expected to be significant.

Building to Land Value Ratio

When determining if a parcel has the potential to develop or redevelop, one can compare the value to the land to the value of the infrastructure and building on the property. When the land is more valuable than the infrastructure and building(s), and therefore a low building to land ratio (see Figure 4-9), there is a higher potential for the property to redevelop in order better utilize the land and to increase the overall revenue obtained from that land.

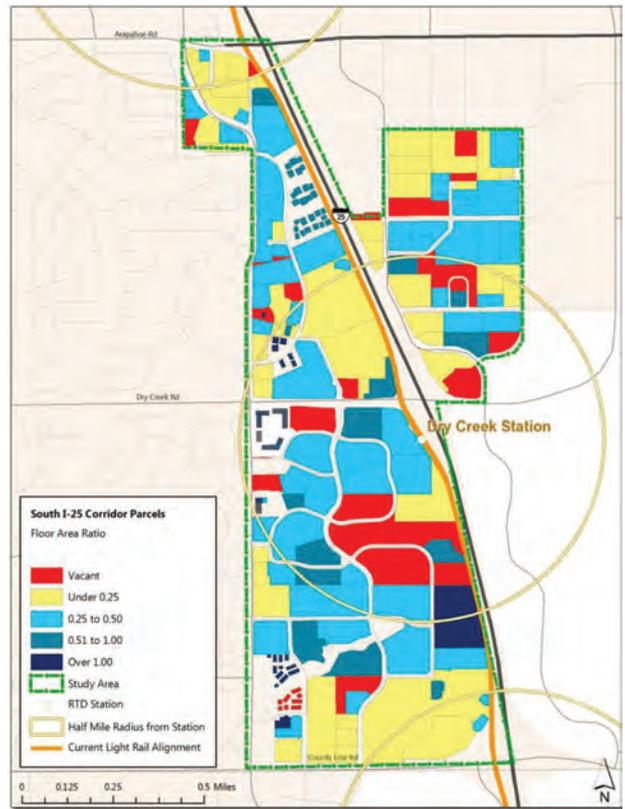


Figure 4-8: Floor area ratio of properties

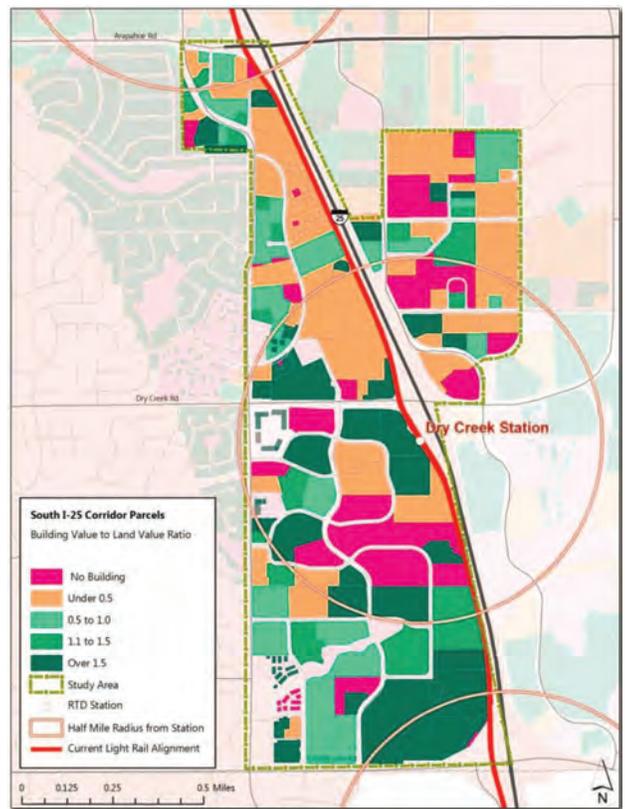


Figure 4-9: Building to land value

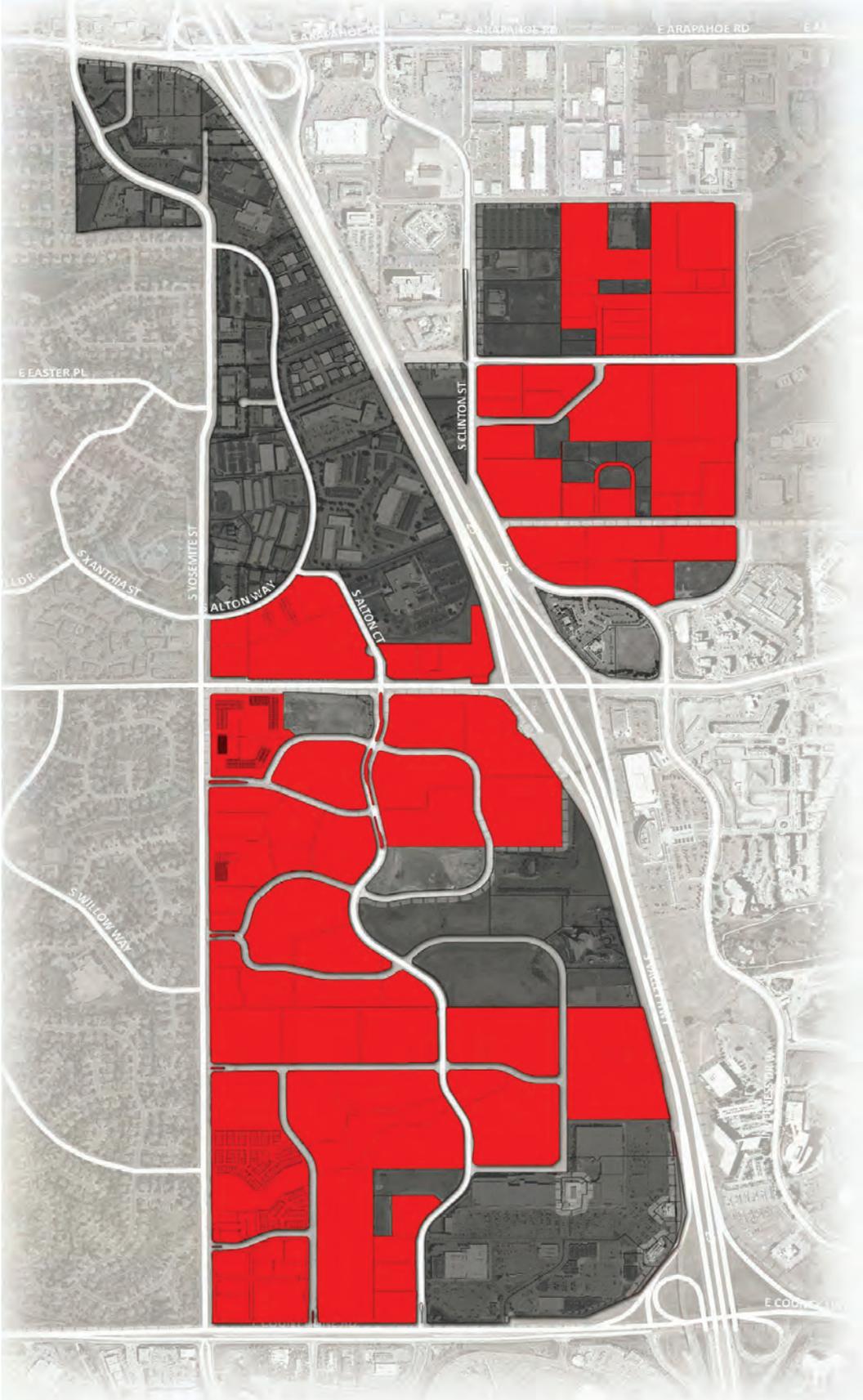


Figure 4-10: Areas of Stability Map. Parcels that area considered unlikely to develop or redevelop over the next 25 years are identified as stable and shown in red on the map above.

NEAR TERM DEVELOPMENT POTENTIAL

Figure 4-11 identifies the parcels that are likely to develop within the next 10 years or so. These are the vacant parcels within the study area. Of these vacant parcels, the three areas that are most likely to develop due to their size and proximity to the light rail station and an I-25 interchange.

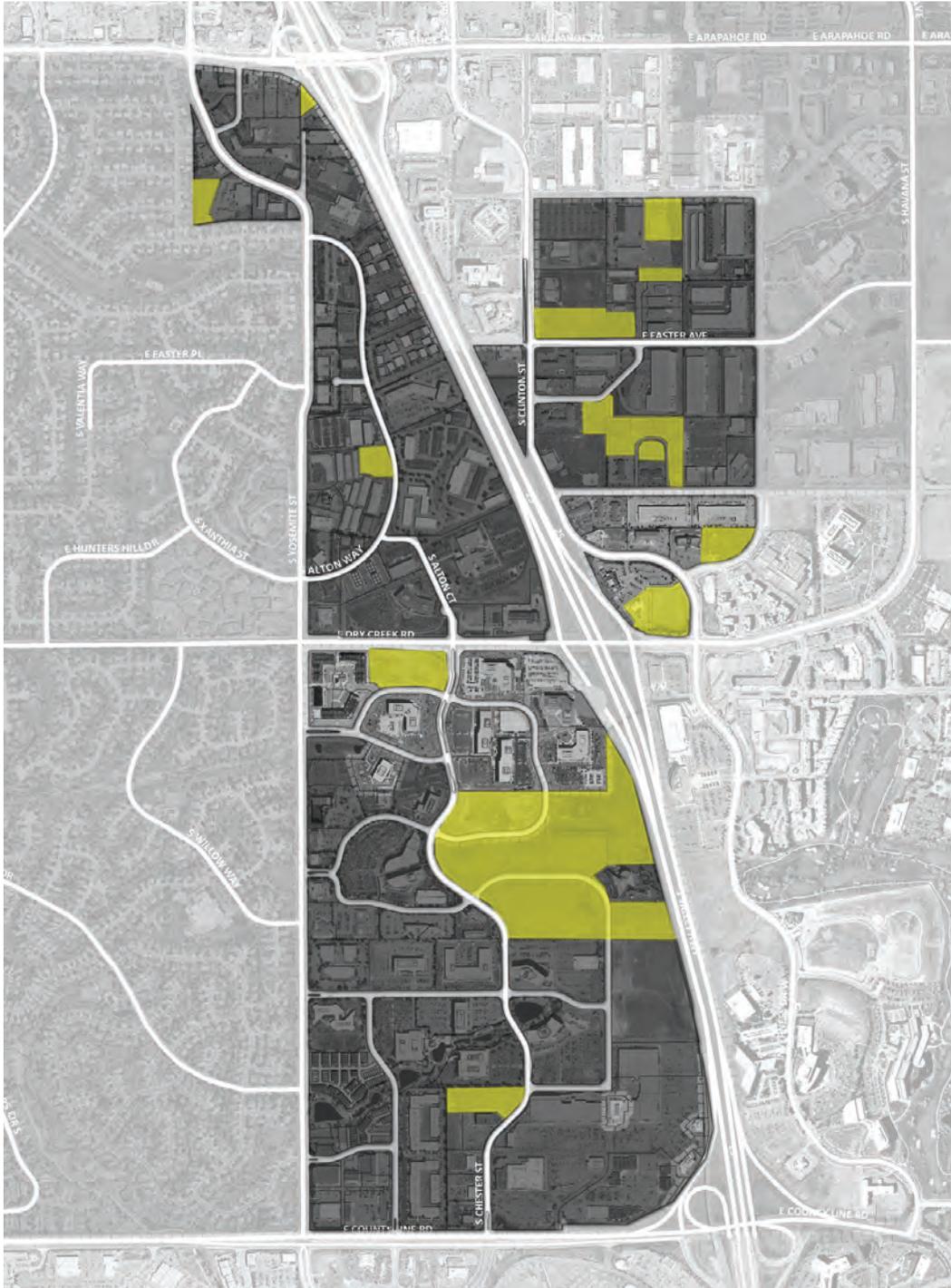


Figure 4-11: Properties that are likely to be developed within the next 10 years (short term)

LONG TERM REDEVELOPMENT POTENTIAL

Areas of redevelopment are areas that have both building values less than 50% of the land value and have low floor area ratios. However, market changes and increased land values would need to occur before redevelopment is expected. Likely, these factors will not change in the near term (within the next 10 years). Regardless, these areas are included in the plan so that the community vision is conveyed prior to changes in the market.

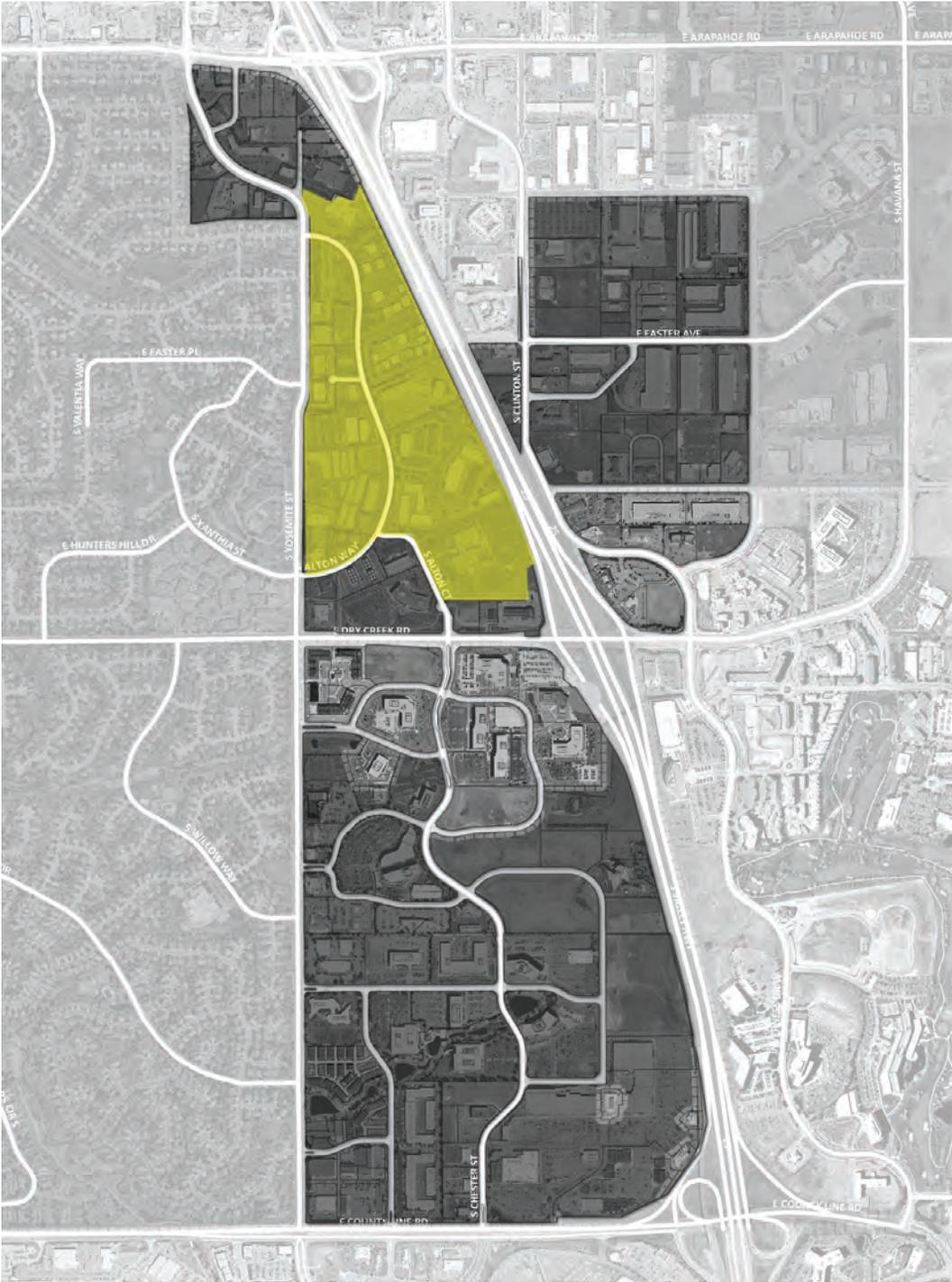


Figure 4-12: Properties that may redevelop if land values increase in time

TRANSPORTATION

The circulation network for the study area includes a hierarchy of streets in a suburban style of meandering roads. Currently, the system is mainly auto-oriented though sidewalks exist along most streets and some private paths can be found along the drainage ways. Three main corridors serve the majority of the study area west of I-25: Yosemite Street between Arapahoe Road and County Line Road, Alton Way north of Dry Creek Road, and Chester Street south of Dry Creek Road. East Easter Avenue, and South Clinton Street and East Fulton Street are the main arterials east of I-25.

Traffic congestion at the interchanges and also along Arapahoe Road, County Line Road and Yosemite Street were identified as issues that the plan should consider. As new development occurs in the area, there will be a need to make intersection improvements to accommodate the additional traffic.

Centennial is fortunate to have a light rail station within its limits. Light rail provides an alternative to using an automobile to move around the metro area. Increased use of this mode of transportation can reduce the use of automobiles as well as offer residents and those employed near the station a way to avoid the increasing traffic congestion on I-25 and the other major roads in the area.

At this time, the Dry Creek Station has the following challenges for those who would like to use it: (1) there are limited pedestrian routes to the station, (2)

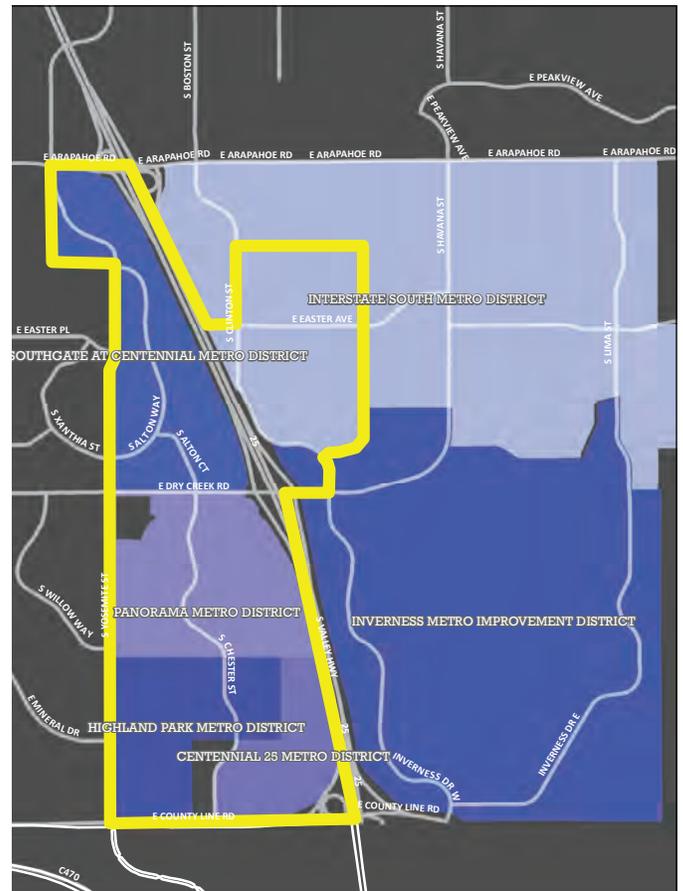


Figure 4-13: Area special districts

the parking area is limited in capacity and not easily accessible off of Dry Creek Road, and (3) the major roads of Dry Creek and Yosemite make it difficult for pedestrians to safely cross these arterials.

The City of Centennial Transportation Master Plan (adoption anticipated in the summer of 2013) includes current and projected traffic levels around the study area and current and projected system improvements that need to be considered with the I-25 Corridor Sub-area Plan.

INFRASTRUCTURE

The City of Centennial does not provide infrastructure to the area besides the transportation system. Water, sanitary sewer, storm drainage, gas, electricity, and other utilities are provided by special districts.

Infrastructure provision must be addressed as development occurs. The majority of the infrastructure concerns occur in the subarea west of I-25.

Stormwater

The Southeast Metro Stormwater Authority (SEMSWA) provides stormwater management services to the properties within the study area.

According to SEMSWA, stormwater issues exist for the study area west of I-25. This area is at the top of basin. Water quality capacity and detention capacity is insufficient for areas - particularly those north of Dry Creek Road in the Dry Creek Basin. Many properties would need underground detention, vaults, culverts, and other infrastructure to accommodate stormwater flows.

SEMSWA has master stormwater drainage plans for the area. New development must comply with these plans to ensure that the long-term viability of surface infrastructure. SEMSWA also indicates that it intends to continue to work with its members for a regional solution to any capacity issues.

Sewer and Water

Southgate Water and Sanitation Districts (Southgate) provide water and sanitary sewer to the study area west of I-25. Southgate has indicated that although treatment capacity exists, there currently is little excess trunk capacity in the system, especially north of Dry Creek Road. However, Southgate does not have the information needed to clearly identify areas of concern or when certain capacity levels are reached. The water supply appears to be adequate to support additional development but booster pumps may be needed to meet standard pressure levels.

The Southgate Water and Sanitation Districts are undergoing necessary studies to determine actual capacity, identify pinch points, and plan for upgrades to the overall system. The City of Centennial, along with other area entities, is working with Southgate to identify the needs and create a plan to address improvements over time.

Castlewood Water and Sanitation District (Castlewood) serves the east side of the study area although the south end near Dry Creek Road is serviced by the Inverness Metro Improvement District. Castlewood does not foresee issues in terms of water, stormwater, or ground water infiltration. Depending on the level of new development east of I-25, there may be a need to upgrade the sewer trunk lines and pumps around Arapahoe Road and the Havana lift station. There also may be water pressure issues if high rise buildings are constructed.

NATURAL SYSTEMS / OPEN SPACE

The study area is largely developed although there are a few drainage corridors that run through the study. One main drainage corridor is located on the east side of I-25. This drainage runs diagonally from the southwest to the northeast. Stretches of the drainage corridor are flanked by a path and some greenways though some sections are piped.

The other main drainage way also runs from the southwest corner of the study area toward the northeast. Sections to the southwest have greenways running along the corridor although much of the drainage is piped.

COMMUNITY ISSUES & OPPORTUNITIES

Issues

During the plan process, it was important to identify issues and concerns with regard to future development in the study area so that these concerns may be addressed in the creation of the plan. Even though many participants recognized the need for improving how the study area functions, the concerns in regard to the scale and type of development along with traffic impacts associated with new development were aspects that needed to be addressed.

One of the most discussed issues was traffic related. The two main areas of concern were: (1) increased traffic on Yosemite Street, and (2) increased congestion at interchanges (Arapahoe Road, Dry Creek Road, and County Line Road) (see Figure 4-14). The level of traffic and the associated difficulty in walking and driving in the area was also identified as a deterrent for using the light rail station. The traffic on Yosemite Street is seen as a barrier to residents who may want to cross at other areas along the street.

The amount of traffic related noise was a second area of concern. The noise from both arterial roads (particularly Yosemite Street) and from I-25 was expected to increase with the additional vehicles associated with additional development. Traffic noise had already been an issue for the neighborhoods west of Yosemite, additional traffic noise was not welcomed.

The type of new development was another prime concern voiced. Many community members did not want to see the replacement of residential uses in the



Figure 4-14: Traffic congestion was a major issue identified during the public outreach conducted for the I-25 Corridor Sub-area Plan:

current commercial areas. Residential uses making up the majority of the city land and a limited supply of the remaining land is available for current and future commercial use. In general, commercial uses generate revenue through taxes while residential uses require revenue expenditures to provide services and maintenance of infrastructure. For the already residentially-based city, losing land that could bring in the revenue to pay for services may not be financially wise.

The scale of new development was also identified as an issue. Mountain views are valued in the region and there was concern that new development would result in massive buildings creating a wall along the highway and thus blocking the mountain views. In addition, there were concerns that tall buildings would develop along Yosemite Street and would then tower over the smaller houses located in the residential neighborhoods to the west of the study area.

Opportunities

A number of opportunities specific to the study area were identified during the planning process. Opportunities include leveraging the light rail station; creating a unique, attractive and inviting place that is different from other places in the city; increasing tax revenue, and remedying identified issues and constraints.

One of the prominent opportunities was to leverage the Dry Creek Light Rail Station. The light rail station basically serves the office uses immediately in the vicinity of the station. The lack of direct sidewalk connections between the neighborhoods and the

station and also other properties within the study area limit the potential ridership of the train. In addition, the parking for the station is limited and access to that parking area has a poor configuration near the Dry Creek Road interchange. Through redevelopment and other strategies, the station could become more accessible for the community particularly areas north of Dry Creek Road.

A second prominent opportunity is to create a unique, attractive and inviting place that is different from other places in the city. The city does not have a center that serves as a “downtown” and it lacks in areas that function as a gathering place with activities and amenities for the community. The creation of a “downtown” or unique area attraction could be a target element in future development in the area.

The desire for additional tax revenues through jobs and people in the area is another opportunity. The development of additional office buildings and supporting uses would bring new or expanding businesses to the City. The employees might then spend money within the city during the work day that would add to tax revenue that is used to provide services to the community and maintain infrastructure.

In addition to the opportunities mentioned, there is the opportunity to remedy the identified issues and concerns related to new development in the study area. The opportunity exists to increase pedestrian movement around the study area, improve the look and feel of Yosemite Street, address infrastructure capacity, and create a more functional built environment.



5

Appendices

The Appendices include additional background information that was applied during the creation of this plan. The following pages include:

The **Plan Development Process** including the plan approach, public outreach, and the project committees.

The **Transportation Analysis** that tested the ability for the transportation system to accommodate the preferred future land use plan.

Criteria to apply when considering the installment of **Roundabouts**, particularly along Yosemite Street.

The **Cost Estimate Rationale and the sources for the images in Figure 2-19.**

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4. Cost estimate rationale - page 107
5. Image sources - page 125

APPENDIX 1 - PLAN DEVELOPMENT PROCESS

Plan Approach and Outreach

The Centennial community displayed an enthusiastic level of participation throughout the sub-area planning process. During the fall of 2012 and into the spring of 2013, residents, business owners, property owners, and planners worked together in a series of community meetings to create a plan that reflected the desires of the community and addressed issues that might arise as a result of future development in the area.

The plan process was designed to involve the community in order to identify issues, opportunities, and the appropriateness of future development. Participants evaluated alternative development / redevelopment scenarios and selected a preferred alternative for the area.

The process was divided into five discrete steps.

Step 1 – Contextual Regional Economic Analysis.

Step 1 involved answering the questions about “why growth can be expected to occur over the next 20 years,” “what is driving that growth,” and “what will growth look like (in other words, the anticipated retail, office, employment, and housing). This analysis was performed in a regional context with the rest of the Denver metropolitan area and provided a regional growth picture that was then translated to the study area.

Step 2 – Initial Community Outreach/Visioning.

Step 2 introduced the public to the planning process, provided information on why the City is preparing a plan (from step 1), and began to engage the community on opportunities and issues associated

with growth and connectivity within the study area. It also included determination of what type of development is desired and acceptable through the development of a vision for the planning area.

Step 2 involved stakeholder meetings where representatives of community groups, public agencies, businesses, property owners, and the development community were interviewed to help form an understanding of the area’s issues.

A community visioning meeting was then conducted to identify issues and concerns about development in the study area as well as to gather ideas and desires for the future of the area.

Step 3 – Specific Study Area Economic Analysis.

While Step 1 focused on a regional top down approach to growth, Step 3 involved taking a very detailed ground up approach to determining growth that can be expected in the study area. It analyzed such variables as land capacity and market segmentation. This step also detailed opportunities and barriers to development within the study area from a market perspective.

Step 4 – Community Outreach – Land Use

Planning, Urban Design, and Transportation. The purpose of Step 4 was to develop development and connectivity scenarios for the study area using hands on, interactive public outreach. Based upon the complete market analysis, the community discussed connectivity issues to the light rail stations, and developed various scenarios on where growth and redevelopment should be focused and how much growth the City should reasonably accommodate. Through public outreach, the preferred development scenario was developed.

The step included a two-day design workshop to develop alternative scenarios for the study area (see Figure 5-1). The community provided ideas and preferences for the alternative scenarios and then viewed 3D visualizations of what development might look like in different areas of the study area. The ideas from the design workshop led to the formation of a preferred alternative for the plan. Once the preferred alternative was refined, a community open house was held to present the plan concepts and proposed future land use plan.

Step 5 – Implementation and Preliminary

Cost Estimates. Step 5 analyzed the preferred development scenario and develop an implementation strategy which included both a list of capital improvement projects required to increase connectivity to light rail stations and accommodate future growth, and financial tools the City can deploy to assist with implementation of the plan.

The process was overseen by two key committees: the Citizen and Business Advisory Committee and the Planning Workgroup. The Citizen and Business Advisory Committee consisted of resident representatives from the adjacent neighborhoods, property and business owners, affected special district representatives, and local real estate experts. The Planning Workgroup consisted of the entire Planning and Zoning Commission and interested City Council members who wished to participate in the planning process.

Plan Committees

The following workgroup/steering committee structure was developed with input from the City of Centennial Land Use Committee. It was intended to accommodate the need for highly interactive

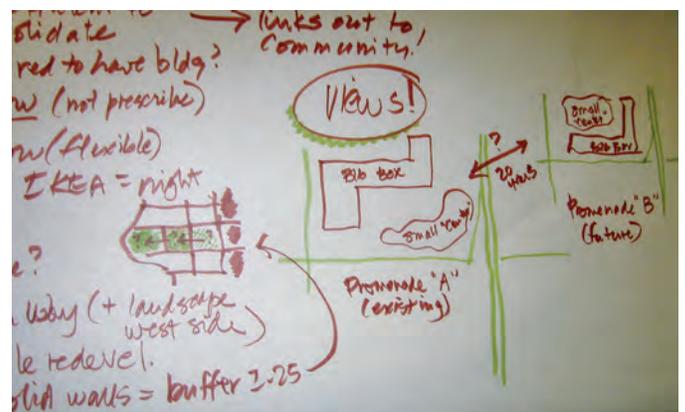
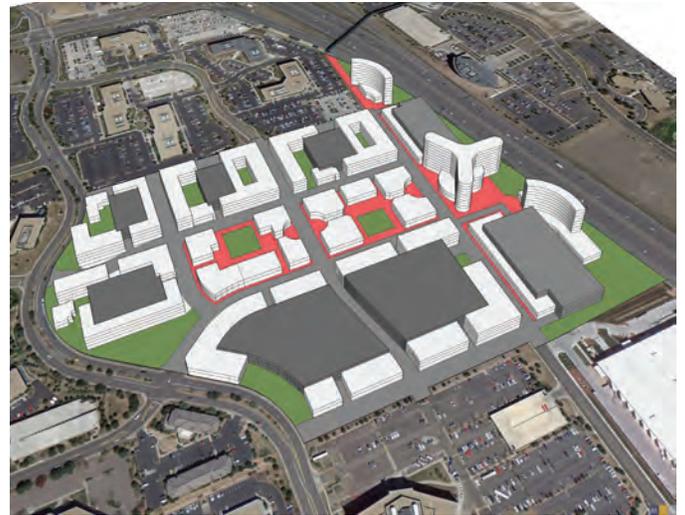


Figure 5-1: Images from the design workshop

work sessions with the steering committee and obtain focused input from community residents, study area property and business owners, and community experts. The following is a summary of the workgroup/steering committee structure:

Staff Technical Team. The Staff Technical Team assisted the consultants in facilitating the planning process and provided technical input and logistical support. The team consisted of participants from the City Departments of Planning, Economic Development, Public Works/Engineering, and Communications.

Citizen and Business Advisory Workgroup. This workgroup consisted entirely of resident representatives from the adjacent neighborhoods, property and business owners, affected special district representatives, and local real estate experts. The group participated in interactive work sessions and provided direct input and guidance from a stakeholder perspective.

Planning Workgroup (Steering Committee). The Planning Workgroup consisted of the entire Planning and Zoning Commission and interested City Council members who wished to participate in the planning process. Like the Citizen and Business Advisory Workgroup, this group provided input and guidance, but from an elected/appointed official's point of view.

City Council. The City Council provided input and consent on the process and project at important milestones throughout the plan creation.

Community Meeting #1 Key Pad Polling Results

The following are the results of the key pad polling questions asked at Community Meeting #1.

1.) Have you ever lied to your mother?	Responses	
Never! Honest...	1	2.17%
Once and I paid for it dearly	3	6.52%
Only a couple of times	3	6.52%
Yes but I was young and candy was involved	1	2.17%
I prefer to call it stretching the truth	7	15.22%
Only when it was in her best interest	13	28.26%
Yes but my sister / brother made me do it	1	2.17%
Too many times to count!	9	19.57%
No comment	7	15.22%
Other	1	2.17%
Totals	46	100%

2.) How old are you?	Responses	
0 – 17 years	0	0%
18 – 30 years	1	2.08%
31 – 40 years	4	8.33%
41 – 50 years	9	18.75%
51- 60 years	14	29.17%
61 – 70 years	9	18.75%
71 – 80 years	9	18.75%
Over 80 years	1	2.08%
No comment	1	2.08%
Totals	48	100%

3.) Where do you live?	Responses	
Within the study area	4	7.84%
On a property within 1 – 2 lots from Yosemite	9	17.65%
In a neighborhood adjacent to study area	24	47.06%
Within Centennial but not in or adjacent to study area	9	17.65%
I do not live in Centennial but within the metro area	3	5.88%
I do not live in the region	0	0%
I don't know; no comment	2	3.92%
Totals	51	100%

4.) Do you? (select all that apply)	Responses	
Own land/property in the study area	14	24.56%
Own / operate a business in the study area	4	7.02%
Work in the study area	1	1.75%
Neither	35	61.40%
I don't know; no comment	3	5.26%
Totals	57	100%

5.) Do you:?	Responses	
Own your property	46	92%
Rent your property	3	6%
I don't know; no comment	1	2%
Totals	50	100%

6.) How far is your home from your work?	Responses	
Within 3 miles	7	14.29%
3 – 5 miles	9	18.37%
5 – 10 miles	3	6.12%
10 – 15 miles	3	6.12%
15 – 20 miles	3	6.12%
20 – 25 miles	2	4.08%
25 – 30 miles	1	2.04%
Over 30 miles	4	8.16%
I work at home	5	10.20%
I do not work (retired, student, disabled, unemployed)	12	24.49%
Totals	49	100%

7.) How long have you lived in Centennial?	Responses	
Over 25 years	12	24%
21- 25 years	4	8%
16 – 20 years	10	20%
10 – 15 years	7	14%
5 - 9 years	8	16%
1 – 4 years	5	10%
Under 1 year	1	2%
I do not live in Centennial	2	4%
I don't know; no opinion	1	2%
Totals	50	100%

9.) Do you feel that it is a good idea to have a plan for the study area?	Responses	
Strongly support it	22	44.90%
Somewhat in favor it – but cautious	20	40.82%
Somewhat oppose	2	4.08%
Very much oppose – the current process is acceptable	2	4.08%
I don't know / no opinion	3	6.12%
Totals	49	100%

10.) In general, are you satisfied with how the study area functions today?	Responses	
Very satisfied; I like it the way it is	7	13.46%
Somewhat satisfied; some improvement needed	23	44.23%
Somewhat dissatisfied; improvement is needed	17	32.69%
Dissatisfied; it needs major improvement	2	3.85%
I don't know; no opinion	3	5.77%
Totals	52	100%

11.) When you think about the study area today, which of the following are your biggest concerns (select top 3)?	Responses	
Traffic congestion	34	26.56%
Crime potential	13	10.16%
Safety in general	10	7.81%
Scale of new development	16	12.50%
Type of new development	24	18.75%
Vacancies	5	3.91%
Infrastructure impacts	14	10.94%
Need for additional city revenue	12	9.38%
Other (tell us!)	0	0%
I don't know; no opinion	0	0%
Totals	128	100%

12.) On a scale of 1 (low) to 5 (high) please rate how passionate you are about the TOP answer (traffic)?	Responses	
low	1	2.08%
.	1	2.08%
.	9	18.75%
.	16	33.33%
high	21	43.75%
Totals	48	100%

13.) On a scale of 1 (low) to 5 (high) please rate how passionate you are about the SECOND top answer (type of development)?	Responses	
low	1	2.13%
.	3	6.38%
.	9	19.15%
.	11	23.40%
high	23	48.94%
Totals	47	100%

14.) On a scale of 1 (low) to 5 (high) please rate how passionate you are about the THIRD top answer (scale of new development)?	Responses	
low	5	11.11%
.	10	22.22%
.	8	17.78%
.	12	26.67%
high	10	22.22%
Totals	45	100%

15.) What do you see as the HIGHEST PRIORITY for the EAST portion of the study area over the next ten years? (3 choices)	Responses	
Development of community amenities -parks / trails	29	24.79%
Improve infrastructure (sewer, water, etc.)	24	20.51%
Improve roads	32	27.35%
Improve emergency services (law , fire)	1	0.85%
Schools	11	9.40%
Preservation of view corridors	8	6.84%
Other (tell us!)	6	5.13%
I don't know / no opinion	6	5.13%
Totals	117	100%

16.) What do you see as the HIGHEST PRIORITY for the WEST portion of the study area over the next ten years? (3 choices)	Responses	
Development of community amenities -parks / trails	29	25.22%
Improve infrastructure (sewer, water, etc.)	24	20.87%
Improve roads	35	30.43%
Improve emergency services (law , fire)	3	2.61%
Schools	9	7.83%
Preservation of view corridors	8	6.96%
Other (tell us!)	2	1.74%
I don't know / no opinion	5	4.35%
Totals	115	100%

17.) What are the major transportation problems facing the study area? (select 3)	Responses	
Congestion on major streets around the study area	24	18.18%
Congestion at interchanges (Arapahoe, County Line)	34	25.76%
Lack of internal road connection within the study area	6	4.55%
Cut-through traffic in area neighborhoods	17	12.88%
Poor vehicular access into study area	7	5.30%
Poor direction / way-finding in the study area	1	0.76%
Poor access to light rail station	12	9.09%
Lack of sidewalks in study area	14	10.61%
Traffic noise	17	12.88%
I don't know; no opinion	0	0%
Totals	132	100%

18.) Do you feel that the City should leverage the development potential of the light rail station?

	Responses	
Strongly yes	22	41.51%
Somewhat yes	9	16.98%
Somewhat no	3	5.66%
Strongly no	3	5.66%
I don't know / no opinion	16	30.19%
Totals	53	100%

19.) If the light rail was more accessible by car, foot, and/or bike, would you use it?

	Responses	
Definitely yes	20	40.82%
Yes, sometimes	10	20.41%
Not really, maybe once in a while	9	18.37%
No	5	10.20%
No opinion; I don't know	5	10.20%
Totals	49	100%

21.) On a scale from 1 – 5 where are you on the spectrum of wanting office park like today (1) or a special place (5)?

	Responses	
1	10	20.83%
2	2	4.17%
3	8	16.67%
4	10	20.83%
5	12	25%
I don't know; no opinion	6	12.50%
Totals	48	100%

22.) Special places tend to have a mix of uses – where in the study area do you think mixed-use is appropriate? (select all that apply)

	Responses	
1	34	30.63%
2	29	26.13%
3	18	16.22%
4	19	17.12%
5	8	7.21%
None of the above	0	0%
I don't know; no opinion	3	2.70%
Totals	111	100%

23.) If there is a place for residential, what types are acceptable? (select all that apply)

	Responses	
No residential is acceptable	12	14.81%
Stand alone residential like townhouses (1-2 stories)	15	18.52%
Stand alone residential in 3 – 4 story buildings	10	12.35%
Limited residential with commercial and office	22	27.16%
Ok in mixed-use areas	17	20.99%
Ok with any residential	2	2.47%
Other	1	1.23%
I don't know; no opinion	2	2.47%
Totals	81	100%

24.) What is your biggest concern about new residences in the study area (top 3)?

	Responses	
Lower property values	16	11.51%
Too much traffic to the area	31	22.30%
Attraction of younger, noisier people	5	3.60%
More crime	20	14.39%
Not attractive	2	1.44%
Change in character of the area	22	15.83%
Demand of services that the city cannot afford	20	14.39%
Replacement of land for commercial revenue	22	15.83%
Other (tell us what it is!)	0	0%
I don't know / I don't have an issue	1	0.72%
Totals	139	100%

26.) For areas EAST of I-25 where mixed-use is not appropriate, what uses are appropriate? (select all that apply)

	Responses	
Townhouses	16	11.27%
Mid-rise residential	20	14.08%
High-rise residential	8	5.63%
Light industrial	22	15.49%
Commercial / office	33	23.24%
Chain stores / parking	14	9.86%
Flexible use buildings	25	17.61%
Other	3	2.11%
I don't know; no opinion	1	0.70%
Totals	142	100%

27.) For areas WEST of I-25 & NORTH of Dry Creek Road where mixed-use is not appropriate, what uses are appropriate? (select all that apply)

	Responses	
Townhouses	11	13.58%
Mid-rise residential	9	11.11%
High-rise residential	3	3.70%
Light industrial	11	13.58%
Commercial / office	27	33.33%
Chain stores / parking	4	4.94%
Flexible use buildings	13	16.05%
Other	2	2.47%
I don't know; no opinion	1	1.23%
Totals	81	100%

28.) For areas WEST of I-25 & NORTH -4- of Dry Creek Road where mixed-use is not appropriate, what uses are appropriate? (select all that apply)

	Responses	
Townhouses	12	10.53%
Mid-rise residential	13	11.40%
High-rise residential	5	4.39%
Light industrial	22	19.30%
Commercial / office	34	29.82%
Chain stores / parking	6	5.26%
Flexible use buildings	20	17.54%
Other	0	0%
I don't know; no opinion	2	1.75%
Totals	114	100%

29.) For areas WEST of I-25 & NORTH -5- of Dry Creek Road where mixed-use is not appropriate, what uses are appropriate? (select all that apply)

	Responses	
Townhouses	16	15.09%
Mid-rise residential	11	10.38%
High-rise residential	3	2.83%
Light industrial	14	13.21%
Commercial / office	38	35.85%
Chain stores / parking	4	3.77%
Flexible use buildings	16	15.09%
Other	2	1.89%
I don't know; no opinion	2	1.89%
Totals	106	100%

30.) For areas WEST of I-25 & SOUTH of Dry Creek Road where mixed-use is not appropriate, what uses are appropriate? (select all that apply)

	Responses	
Townhouses	15	12.82%
Mid-rise residential	16	13.68%
High-rise residential	7	5.98%
Light industrial	12	10.26%
Commercial / office	34	29.06%
Chain stores / parking	12	10.26%
Flexible use buildings	15	12.82%
Other	3	2.56%
I don't know; no opinion	3	2.56%
Totals	117	100%

31.) Do you support the idea of having a transition of building height from along I-25 - up to 12 stories - to help buffer noise – down to 2 stories along Yosemite?

	Responses	
Strongly support	20	43.48%
Somewhat support	5	10.87%
Somewhat oppose	7	15.22%
Strongly oppose	10	21.74%
I don't know; no opinion	4	8.70%
Totals	46	100%

32.) Regarding decision-making about land use issues (e.g. approving developments), which of the following BEST represents your feelings?:

	Responses	
The City should have a plan and stick to it	10	21.74%
The City should have a plan, and depart from it only for public benefit	24	52.17%
The City should have a general plan, but be flexible	11	23.91%
A plan is not all that important, you can't plan the future	1	2.17%
I don't know; no opinion	0	0%
Totals	46	100%

33.) Do you feel that it is a good idea to have a plan for the study area?

	Responses	
Strongly support it	23	51.11%
Somewhat in favor it – but cautious	19	42.22%
Somewhat oppose	1	2.22%
Very much oppose – the current process is acceptable	2	4.44%
I don't know / no opinion	0	0%
Totals	45	100%

34.) How would you like to be informed about this city process in the future? (choose top 2)

	Responses	
Newspaper announcements	0	0%
Newspaper articles	6	6.98%
Email	37	43.02%
Website	12	13.95%
City newsletter	20	23.26%
Posters / flyers	10	11.63%
Other	1	1.16%
I don't know; no opinion	0	0%
Totals	86	100%

Stakeholder Meeting Notes

The following are the notes from the stakeholder meetings. Meetings were held with SEMSWA, Southgate Water and Sanitation, Arapahoe County, City of Centennial Public Works, Castlewood Water and Sanitation, SPIMED/TMA/Inverness Metro District, and HOA / Neighborhood Representatives.

Overall Issues:

Concerns

- Increased traffic on Yosemite
- Increased congestion at interchanges
- Increased traffic through neighborhoods
- Highway and arterial road traffic noise
- Noise in general
- Residential land uses replacing commercial land uses
- Low income residential rental units
- Buildings blocking views to mountains
- Tall buildings adjacent to single-family residential houses
- Sewer and storm water capacities are very limited for western study area

Opportunities / Vision

- Create a “special place”
- Gathering place with activities and amenities
- A “downtown” or unique area attraction
- Add residential to provide more vitality
- Leverage light rail station
- Gain additional tax revenues through jobs and people
- Develop additional office buildings
- Additional housing choices for all life stages

Southeast Metro Stormwater Authority (SEMSWA)

- Stormwater issue - west of I-25 is at top of basin
- Capacity concerns – particularly north of dry creek road in dry creek basin
- Lack of water quality capacity and detention capacity on west side
- Need underground detention, vaults, culverts – issues with this treatment
- West side older and decades of buildings pre-existing stormwater concerns
- Comply with master plans and strengthen long term viability of surface infrastructure

Southgate Water and Sanitation (western study area)

- Wastewater system – pipes – little excess capacity if any; especially north of Dry Creek
- Will likely have capacity constraints – trunk line capacity (treatment capacity is adequate)
- High density would lead to capacity issues
- There may be off site capacity improvements needed for some redevelopment
- Consider mix of land uses to alternate top time of use
- Water supply seems ok – may need pressure tests for boosters

Arapahoe County

- Traffic congestion and mobility at interchanges are issues
- Would like to see alternative modes of transportation; more walkability
- The “feel” along the corridor – beginning to see high end area – want to retain that feel
- Consider view sheds between Inverness (east side of highway) and the mountains; avoid blocking views

City of Centennial Public Works

- Address intersections like one at Schwabb
- Traffic congestion
- Very poor pedestrian connections
- Road connectivity of all roads is important; jump missing links within area
- Encourage what happens here has to be accessed off of Chester
- Pedestrian bridge north of station – open up north side
- Don't have a plan that substantially increases traffic on Yosemite; don't promise that Yosemite will get better with the plan – put townhomes and parking lane along Yosemite on west side; however there is a regional role for Yosemite; Chester needs to be good alternative to Yosemite
- Sprawl repair for Promenade – public spaces and connections are needed

Castlewood Water and Sanitation

- No real issues in terms of water
- South end services by Inverness system due to terrain; the area north of Clinton is served by Castlewood District
- Arapahoe and Havana lift station is sensitive stretch – may need to upgrade and upsize pumps
- There may be issues with high rise buildings
- Some areas might have to go across I-25 into Southgate system via lift station
- There may be possibilities to remove lift stations by interagency agreements to redirect flows
- Lines sized well – upsized to give leeway in future development
- Designed around industrial uses but shouldn't cause an issue
- Are not having issues with storm water or ground water infiltration

SPIMED/TMA/Inverness Metro District

- Traffic congestion and circulation are issues; a circulator bus would help make rail attractive
- To merit a bridge, there would need to be a transition of uses north of Dry Creek
- Some residential fear due to rent range and people possible – bring down property values; noise, partying, crime
- Dead-end streets put more pressure on Arapahoe, I-25
- Things to address: accessibility, identity, life-spans for buildings, uses

HOA / Neighborhood Representatives

- See pressure for multi-family development
- Some people do not want to not drive – they would have to drive or get transit to get to station; difficult to walk and/or bike to Arapahoe and Dry Creek stations
- Noise level in Willow Creek 2 is so bad that no addition should be added
- Traffic makes it difficult to cross Yosemite, Arapahoe
- Housing costs the City money; should not put residential where retail and commercial could go
- Concern that property values will go down
- Lack of services for new residential uses; schools are at full capacity
- Increased crime associated with more people
- Need development that is more sensitive to neighboring uses
- Need stricter standards for mixed-use developments; need place-making; community center
- Have a place where people want to go; destination with more than one purpose
- Consider transit and circulators

APPENDIX 2 - TRANSPORTATION ANALYSIS

Redevelopment and new development have the potential to increase traffic in and around the study area. A transportation analysis was conducted (by the plan consultant team) to determine if the transportation system - particularly Yosemite Street - can accommodate the traffic levels that are projected to be generated by the Future Land Use Plan. Yosemite Street was particularly of concern due to the amount of community input identifying traffic congestion on Yosemite as an issue that needs to be considered during the creation of this plan. The east side of the study area was not considered in this transportation analysis because low amounts of development or redevelopment were expected to occur there over time; the traffic generated by the development that does occur is not seen as directly impacting traffic on Yosemite Street.

Maximum development levels are used for this analysis to provide conservative guidance for long-term improvements and to gauge what the appropriate development levels should be. It is important to note that the maximum development levels used in the transportation analysis are not the likely outcome of the Future Land Use Plan and factors such as market demand, infrastructure constraints, and development cost significantly impact the viability of development.

Methodology

Using information in the Institute of Transportation Engineers (ITE) Trip Generation Manual (8th Edition, 2008), a baseline was established that estimated the trips that the existing land uses on the parcels expected to develop or redevelop could potentially generate. Similarly, the trip generation based

on the future land use plan was estimated. The trips generated by the existing land use were then subtracted from the trips generated by the proposed land use development plan to calculate the amount of additional trips that could be distributed along the surrounding roadway network.

For areas where mixed use is indicated, there are opportunities for internal trip capture and pass-by trips that would decrease the amount of 'new' trips to the roadway network. Internal capture trips are those vehicles that would travel from the office to the retail or between retail shops as a linked trip. These trips do not use the external roadway network and, therefore, do not increase the traffic volumes on the roadways. Pass-by trips are those made vehicles already in the existing traffic stream that divert from their destination of travel to enter retail land use, then exit in the original direction they were travelling. The ITE Trip Generation Manual provides guidance for acceptable trip reductions for internal trip capture as well as pass-by trips.

The difference in trip generation was augmented with the regional background traffic projected in the Transportation Master Plan and the parcel volume generation contributions to Yosemite Street that are in addition to the trips generated by new development or redevelopment of identified parcels. The 2013 Jones District Transportation Impact Analysis (TIA) was also used to determine existing and year 2035 daily traffic volumes.

Land Use Assumptions

The Preferred Land Use Plan is illustrated in Figure 5-2. The areas with the potential for redevelopment are shaded different colors for reference. The

following describes the potential land uses and sizes for each shaded region:

1 – Green Shaded Region. This region currently consists of a mix of office, retail and industrial land uses and is likely to see reinvestment in the existing properties with some redevelopment possible on a parcel by parcel basis. The proposed plan is to replace the existing use in this region with a higher density of office space. The existing is 543,000 square feet (Office/Retail/Industrial) and the proposed is 800,000 square feet (Office).

2 – Purple Shaded Region. This region currently consists of a mix of office, retail and industrial land uses and is likely to see reinvestment in the existing properties with some redevelopment possible on a parcel by parcel basis. The proposed plan is to replace the existing use in this is region with a higher density of office space. The existing floor area is 496,000 square feet (Office/Retail/Industrial) and the proposed is 545,000 square feet (Office).

3 – Pink Shaded Region. This region currently consists of an office land use, however, these parcels are determined to be under-utilized. There is opportunity in the future to make major redevelopment changes at this location that could change the character of the area. The proposed plan is to replace the existing use in this is region with higher density of office - from the existing 260,000 square feet (Office) to the proposed: 2,000,000 square feet (Office).

4 – Orange Shaded Region. The majority of this region is currently vacant and represents the largest and best opportunity for the City to create a unique and attractive development within the I-25 Corridor Plan area. A traffic impact analysis, the Jones District TIA, was performed in February 2013 regarding the proposed development plan for this region. However,

the Preferred Land Use Plan increases the density of the region from what is proposed in the TIA. Therefore, the proposed plan is to develop the parcel with a mix of office and retail land uses. The existing floor area is 85,500 square feet of office; the proposed mix of uses includes 3,000,000 square feet (Office) and 39,177 square feet of retail.

5 – Blue Shaded Region. This region represents the Centennial Promenade shopping center. There may be opportunity to reconfigure this location to make it a premier retail location. The proposed plan is to increase the shopping center density for this region and add an office land use. The existing floor area is 545,000 square feet (Retail). The proposed mix is for 457,000 square feet of office and 1,000,000 square feet of retail - shopping center use.

Study Area and Evaluation Parameters

The project study area includes numerous roadways and intersections that are potentially impacted by traffic from this development. The major roadways considered are shown on the Preferred Land Use Plan (shown in Figure 5-2) and include Arapahoe Road, Dry Creek Road, County Line Road, and Yosemite Street.

Additionally, the major roadways internal to the sub-area that directly serve the potentially redeveloped parcels include Alton Way/Alton Court, Chester Street, Mineral Avenue, and Nichols Avenue.

Daily traffic volumes were evaluated to develop potential planning level impacts to the surrounding roadway network. The scope of the transportation evaluation in this study is intended to be at a macroscopic level and does not consider detailed traffic operations analysis. Therefore, peak hour traffic volumes were not collected or reviewed as part of the scope of this study. The results of this

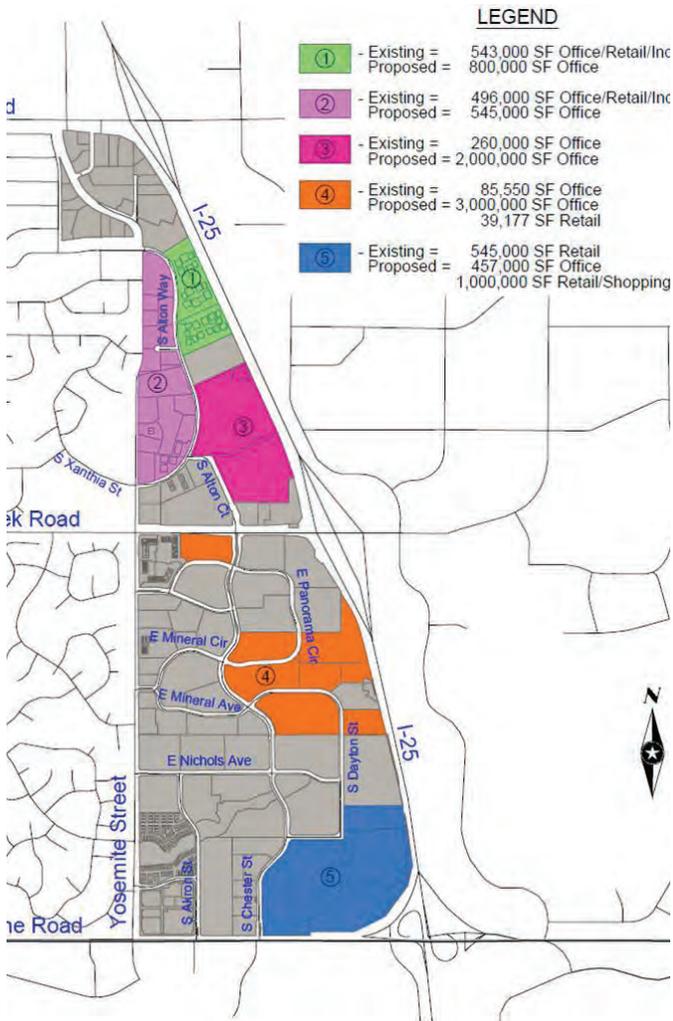


Figure 5-2: Preferred land use plan

study are intended to provide information regarding the roadways or intersections that could potentially exhibit congestion or capacity constraints as a result of the Preferred Land Use Plan. Therefore, impacts to the surrounding roadways and intersections were evaluated on a roadway capacity basis. Intersections were assumed to need capacity improvements if the study area roadways that intersect are expected to experience a significant increase in daily traffic volumes or exhibit volumes at or near capacity. The following criteria were used to determine the capacity constraints of the 2-lane and 4-lane roadways in the study area:

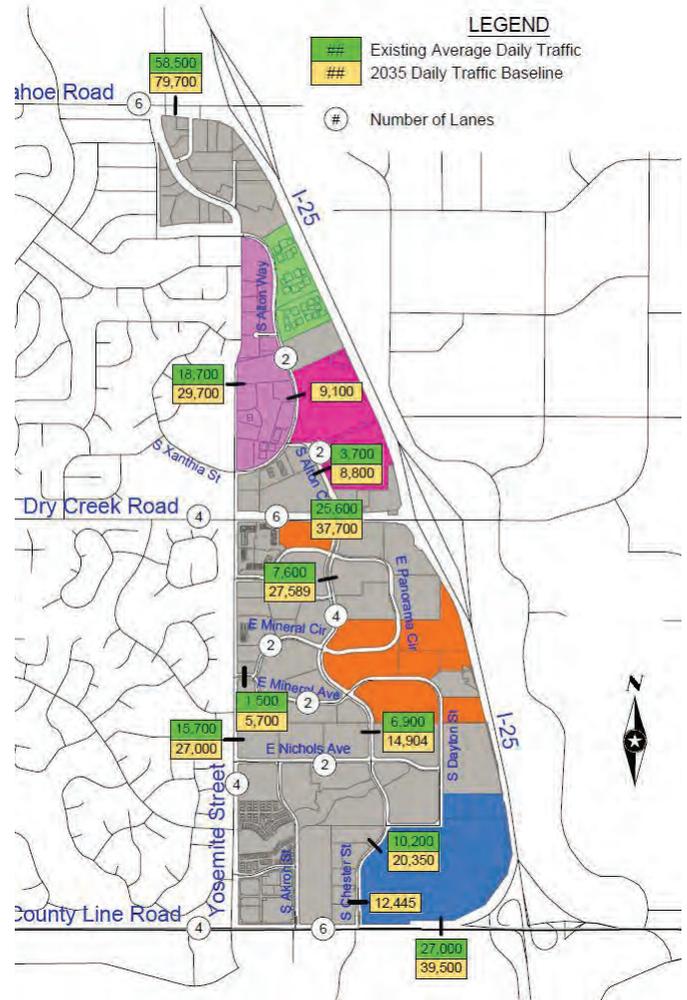


Figure 5-3: Existing traffic volumes (referenced from the 2012 Transportation Master Plan and the Jones District Transportation Impact Analysis) and year 2035 baseline forecast

- 2-lane roadway capacity = 15,000 to 18,000 vehicles per day
- 4-lane roadway capacity = 32,000 to 38,000 vehicles per day

Capacities of roadways are depicted as a range as they are dependent on the peak hour-to-daily volume ratios exhibited by each roadway.

Baseline Daily Traffic Volumes

Existing and Year 2035 baseline traffic volumes were referenced from the City of Centennial Transportation Master Plan (TMP, December 2012). Existing and Year

2035 baseline volumes are contained on Figure 5-3. These volumes were developed based on a regional transportation forecasting model that considered future development for the study area parcels as well as regional background growth. However, the levels of development proposed in the Preferred Land Use Plan are denser than those included in the traffic forecast model. Therefore, the traffic volumes in Figure 5-3 represent a baseline for which the additional daily traffic generated by the Preferred Land Use Plan will be added.

Based on the Year 2035 daily traffic volumes from the TMP, Arapahoe Road and County Line Road west of Yosemite are expected to carry volumes above the capacity of the roadway. Additionally, Yosemite Street and County Line Road east of Yosemite are expected to carry daily volumes near the capacity of the roadway. As a result, the City of Centennial TMP considers roadway improvements at the following locations within the study area:

- Widen County Line Road between Yosemite Street and Holly Street from 4 lanes to 6 lanes (although the C470 managed lane improvements may lessen the need for this)
- Construct intersection improvements at County Line Road and Yosemite Street
- Install a traffic signal at Yosemite Street and Mineral Drive
- Install a traffic signal at Yosemite Street and E. Mineral Circle/ E. Mineral Avenue.

Trip Generation and Distribution

Trip Generation

Using information in the Institute of Transportation Engineers (ITE) Trip Generation manual, the trips that the existing land uses within the color-shaded regions

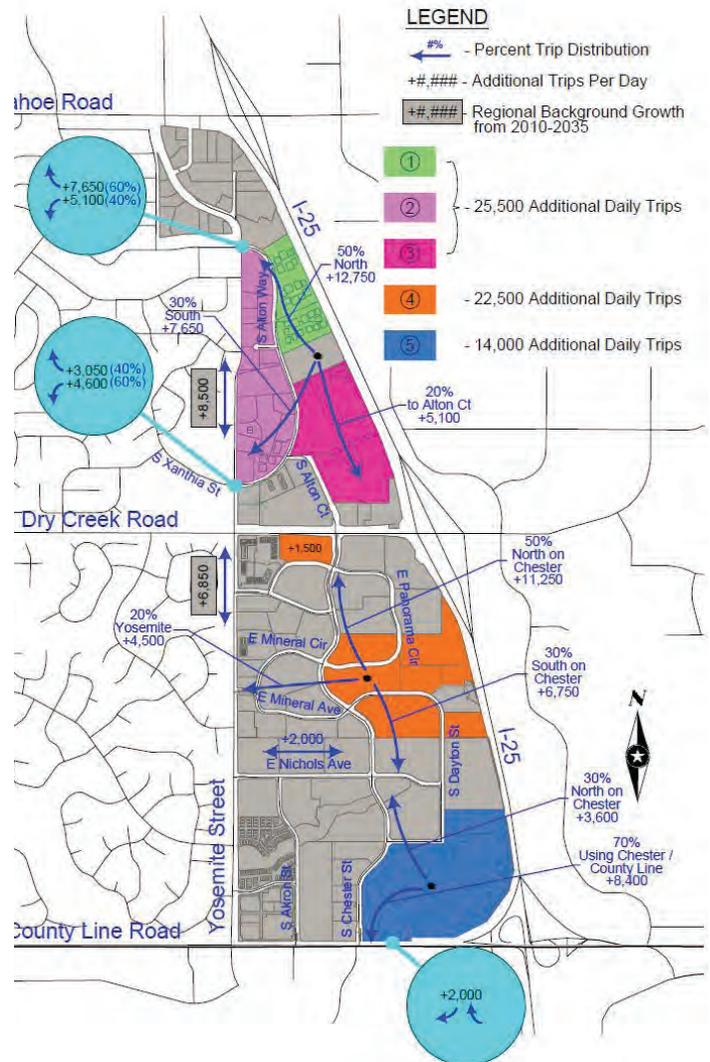


Figure 5-4: Trip generation and distribution

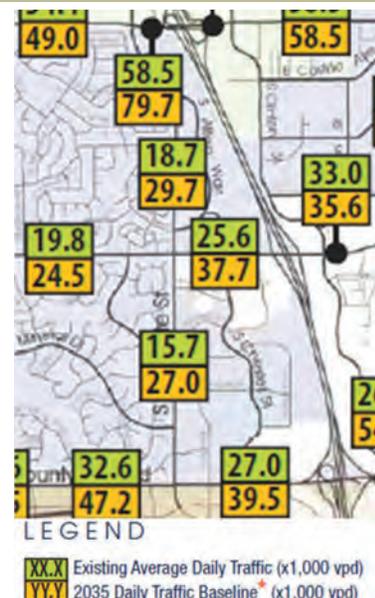


Figure 5-5: Existing and Baseline Total Daily Trips - Figure 8 of the City's Transportation Master Plan

could potentially generate were estimated to develop a baseline trip generation volume (see Figure 5-8). Likewise, the information from the preferred land use plan was used to estimate the trips generated by the future projected development. The trips generated by the existing land use were subtracted from the trips generated by the preferred land use plan to calculate the amount of additional trips that could be distributed along the surrounding roadway network. Figure 5-4 illustrates the trip generation from the existing and future land uses.

The orange-shaded region is currently 99% vacant, therefore, all the trips in this region are new trips to the network. Additionally, the density of the blue-region is expected to increase significantly for retail as well as office. With the nature of the blue area being mixed use, there are opportunities for internal trip capture and pass-by trips that would decrease the amount of 'new' trips to the roadway network. Internal capture trips are those vehicles that would travel from the office to the retail or between retail shops as a linked trip. These trips do not use the external roadway network and do not increase the traffic volumes on the roadways. Also, pass-by trips are those made by vehicles already in the existing traffic stream that divert from their destination of travel to enter retail land use, then exit in the original direction they were travelling. Again, this type of trip does not increase the traffic volume on the surrounding network. The ITE Trip Generation Manual provides guidance for acceptable trip reductions for internal trip capture as well as pass-by trips. Based on the land use in the blue region, 30% internal trip capture was assumed for the retail/office land use and a 35% pass-by trip was assumed for the retail/shopping center. Additionally, to estimate the trip reduction

factors for the orange region, the assumptions contained in the Jones District TIA were applied.

Trip Distribution

Additional daily trips generated by the preferred land use plan were distributed to the network based on the existing daily traffic volume patterns contained in Figure 8 of the Centennial Transportation Master Plan as well as the trip distribution assumptions contained in the Jones District TIA. The TIA shows very little volume ending up on Yosemite with the majority using Chester to head north to Dry Creek and approximately 30% heading south to County Line Road. For the purple, pink and green shaded regions between Arapahoe and Dry Creek, approximately 60% of the traffic will use Arapahoe with 40% heading to Dry Creek Road. However, for the blue-shaded region, it was assumed the majority of traffic (70%) will originate from County Line Road. Figure 5-4 illustrates the how the additional trips were distributed through the surrounding roadway network.

Year 2035 Total Daily Traffic Volumes

The existing daily traffic volumes were combined with the background regional growth estimates from the TMP as well as the additional daily traffic volumes generated by the preferred land use plan to generate the Year 2035 total future traffic volumes. The resulting Year 2035 total traffic volumes are presented in Figure 5-6.

Analysis and Findings

Based on the additional trips estimated by the Preferred Land Use Plan, the following analysis and findings were determined in regards to the impacts on the surrounding roadway network.

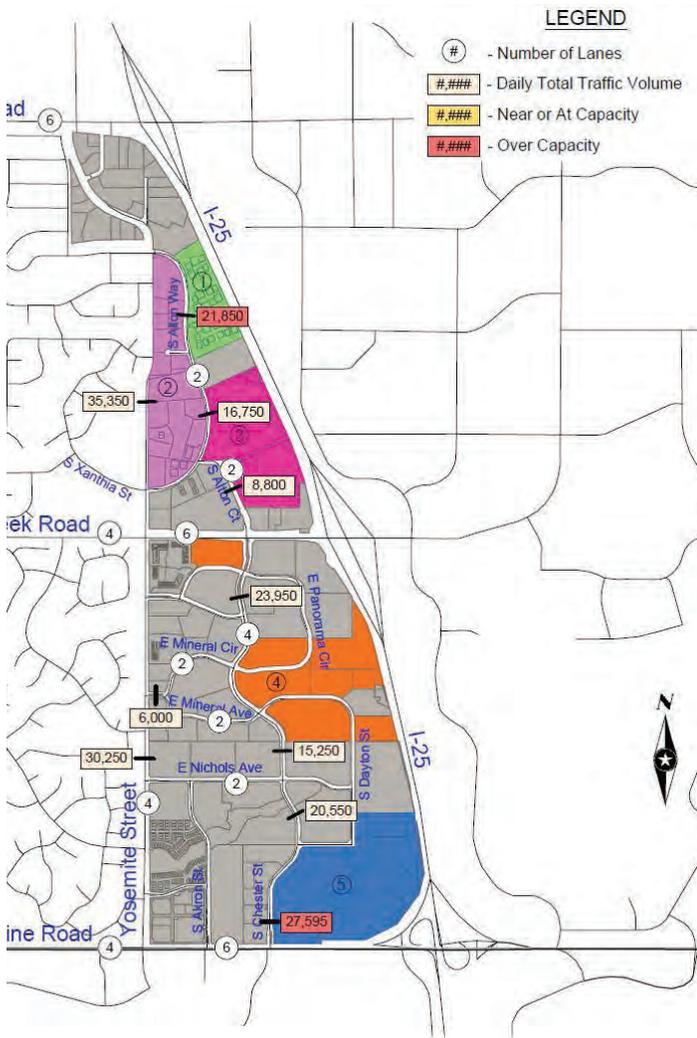


Figure 5-6: Year 2035 daily total traffic volumes with preferred land use plan

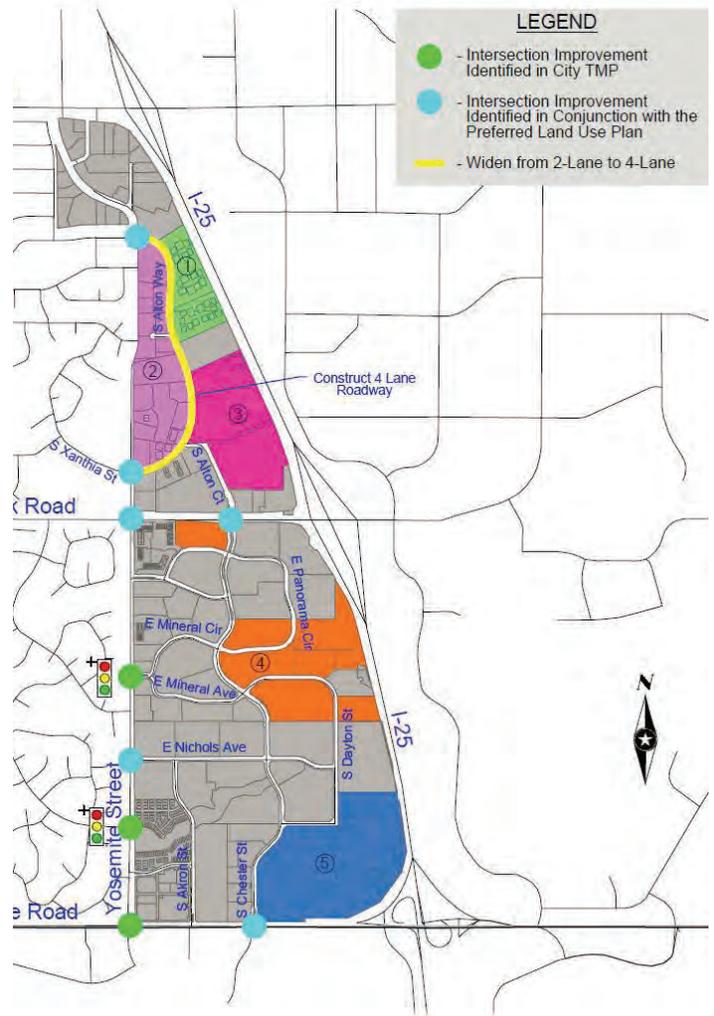


Figure 5-7: Corridor improvements

- The Year 2035 future daily traffic volumes on Yosemite Street were estimated to be between 30,250 and 35,350 vehicles per day. This volume is near to, but within the threshold limits for capacity of a 4-lane roadway.
- It is expected that Yosemite Street will be able to accommodate the future land use development plan without the need for widening to 6-lanes.
- It is expected that Alton Court would carry approximately 8,800 vehicles per day and could

accommodate the additional traffic volumes and would remain as a 2-lane roadway.

- The north section of Alton Way will be operating above capacity for a 2-lane roadway with approximately 21,850 vehicles per day and the south section of Alton Way will be operating near capacity for a 2-lane roadway with approximately 16,750 vehicles per day. It is likely that Alton Way will need to be improved to a 4-lane roadway in the longterm to accommodate potential redevelopment plan for this area.

- Based on the trips generated between Arapahoe Road and County Line Road, it is expected that intersection improvements will be needed at the following signalized intersections on Yosemite Street (see Figure 5-7):
 - Nichols Avenue
 - Mineral Avenue
 - Alton Way (South)
 - Alton Way (North)
 - Dry Creek.
- Based on the trips generated on Chester Street, it is expected that intersection improvements will be needed at the following signalized intersections on Chester Street:
 - Alton Court
 - County Line Road.
- Based on the information in the City of Centennial TMP, there are already improvements identified in this study area as part of that document which include the following:
 - Widen County Line Road from 4-lanes to 6-lanes west of Yosemite Street
 - Install traffic signals at Mineral Drive and Mineral Avenue
 - Construct intersection improvements at Yosemite Street / County Line Road.
- Based on the information that is available, there is some concern with the proposed density of the Promenade (blue-shaded region) land use. Chester Street near County Line is currently congested. With the density nearly tripling, Chester Street is expected to experience further congestion and likely induced traffic diversion to other roadways in the network. This induced traffic diversion phenomenon was accounted for by increasing the distribution of trips to the north on Chester. However, there is still a significant amount of traffic that will use Chester / County Line Road.
 - The Promenade is expected to generate approximately 13,972 additional daily trips above the existing condition. A generous 30% of traffic was assumed to travel north on Chester street with the remainder using Chester to access County Line Road. There is significant volume currently using Chester Street / County Line Road. The total volume that could potentially use this intersection is approximately 27,595 vehicles per day. It is unlikely that this intersection could support this level of traffic even with significant intersection improvements. There are a few solutions to consider regarding the proposed land use for the Promenade region:
 - The land use density could be reduced to alleviate the potential for significantly more congestion along Chester Street north of County Line Road
 - More information could be gathered regarding the peak hour turning movements at Chester Street / County Line Road to evaluate whether there are improvements at the intersection that could help mitigate future congestion
 - Additional internal linkages could reduce traffic on Chester Street by dispersing traffic to Yosemite or County Line Road
 - There is the 'no action' plan with the understanding that this intersection will operate at congested levels in the long term.

Zone	Land Use	ITE Code	Size	Unit	Internal Capture	Pass-by	Average Daily Trips ¹			
							Rate	Total	In	Out
Trip Estimate for Existing Land Use										
Existing	Office	710	543	TGFA	1.0	1.0	11.03	5,989	2,995	2,994
	Office									
	Office	710	496	TGFA	1.0	1.0	11.03	5,471	2,735	2,736
	Office	710	85.55	TGFA	0.7	1.0	11.03	613	307	306
	Shopping Center	820	544.6	TGLA	0.7	0.7	44.32	10,982	5,491	5,491
Total - Existing LU								23,056	11,528	11,528
Trip Estimate for Preferred Land Use Plan										
Preferred LU	Office	710	2,804	TGFA	1.00	1.00	11.03	30,928	15,464	15,464
	Office	710	545	TGFA	1.00	1.00	11.03	6,011	3,006	3,005
	Office	710	3,006	TGFA	0.65	1.00	11.03	21,552	10,776	10,776
	Specialty Retail	826	39.2	TGLA	0.90	1.00	44.32	1,564	782	782
	Office	710	457	TGFA	0.95	1.00	11.03	4,789	2,394	2,395
	Shopping Center	820	1,000	TGLA	0.70	0.65	44.32	20,166	10,083	10,083
Total - Preferred LU								85,009	42,505	42,504
Additional Trips Generated by the Preferred Land Use Plan										
Additional Daily Trips								24,939	12,469	12,470
								540	270	270
								22,502	11,251	11,251
								13,972	6,986	6,986
Total - Preferred LU								61,953	30,976	30,977

Figure 5-8: Weekday trip generation estimate comparison - existing vs. preferred land use

APPENDIX 3 - ROUNDABOUT ANALYSIS & CRITERIA

A roundabout feasibility analysis was performed in response to whether roundabouts could be used along Yosemite to help slow traffic, allow easier egress from the neighborhoods, and provide aesthetic value.. The result of the analysis shows locations along Yosemite where roundabouts might be considered in the future if intersection improvements are warranted.

Figure 5-9 shows the potential locations and feasibility of roundabouts along Yosemite Street. All locations are expected to function well as roundabouts based on the traffic volumes contained in the Transportation Master Plan. The ‘maybe’ indicates that the location would require further more in-depth study to determine how the roundabout operations would be impacted by the adjacent traffic signal.

Figure 5-10 shows a breakdown of each location and the criteria used to examine each location. Road sections with a 120-foot right-of-way are not wide enough to adequately accommodate a dual lane roundabout at any location. There are some locations that have open space or parking lots that the roundabout would fit into, but right-of-way negotiations would be required. If a roundabout was expected to impact a building structure or residential property, the feasibility category has a ‘no’ due to the cost involved in acquiring the structure and associated land.

Figure 5-11 frames the advantages and disadvantages of roundabouts as compared to other conventional signalized intersections. This information should be used when considering the

use of a roundabout when intersection improvements are necessary.

The analysis should also consider the split of volume between the side streets and the delay comparisons with signals. Roundabouts show the best performance when volumes are more evenly split between legs. Removing signals in favor of a roundabout may not be a good operational solution for some levels of congestion.

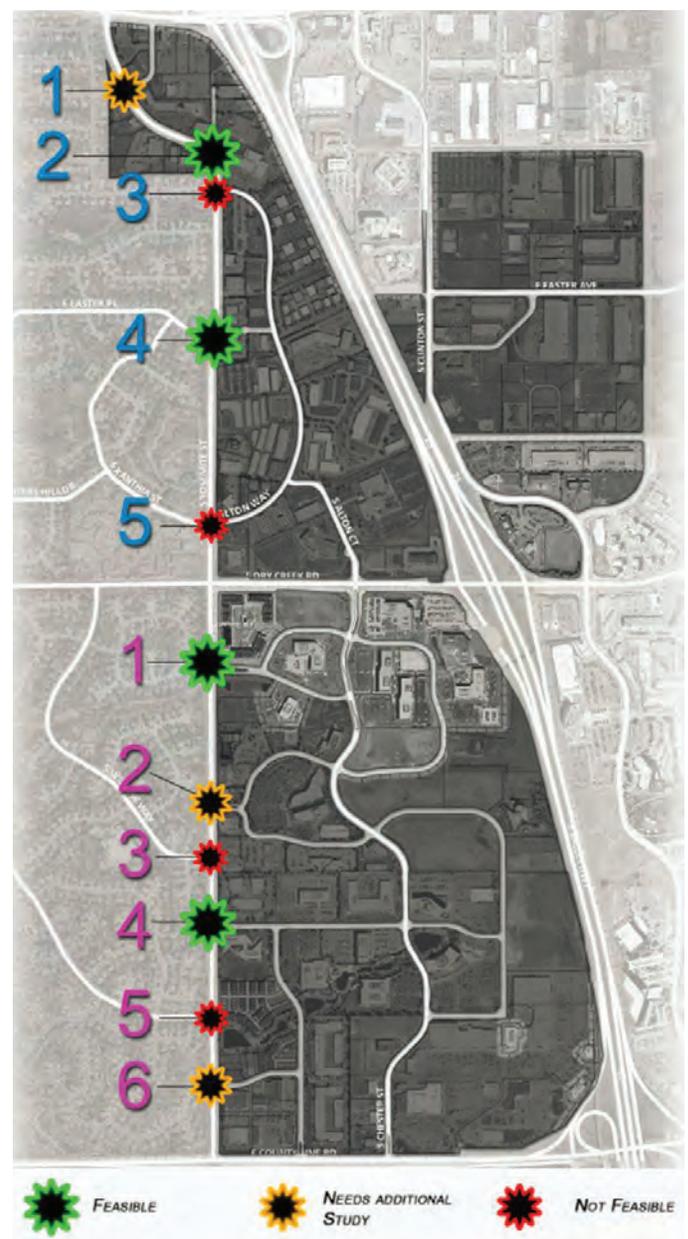


Figure 5-9: Potential roundabout locations on Yosemite

Approx. RAB Dimensions	
150'	= East/West width for dual lane north/south
130'	= North/South width for a single east/west lane

Table 1. Summary of Roundabout Feasibility along Yosemite Street between Arapahoe Road and County Line Road

Location	# of Approaches	Existing Traffic Control	Signal Proximity Issue	Year 2035 Capacity Issues?	ROW Available? (120')	Available Room?	Feasible?	Impacts to Adjacent Property	Comment	
Arapahoe Road	1 Xanthia Street	4	Stop	Maybe	No	No	Yes	Maybe	Slight parking Impact	This location may be a bit close to the signal at Arapahoe Road. Further study will be needed to determine if the northbound queue at Arapahoe will encroach on a RAB at this location.
	2 Yosemite Court	3	Stop	No	No	No	Yes	Yes	Parking Impact	This location would work if surface parking impacts are not a significant decision factor. It is close to the Alton Way (North) signal, however, if the signal were removed and a RAB installed, this location would work.
	3 Alton Way (North)	3	Signal	No	No	No	Yes	Yes	Parking Impact	This location could be retro-fitted to remove the signal and construct a RAB and would work if surface parking impacts are not a significant decision factor.
	4 Easter Place	3	Stop	No	No	No	No	No	Structure and Residential Impacts	This location would likely NOT be feasible as the office building structures and residential properties would be impacted.
	5 Alton Way (South)	4	Signal	Maybe	No	No	Yes	Maybe	Detention Impact	This location may be a bit close to the signal at Dry Creek Road. Further study will be needed to determine if the southbound queue at Dry Creek will encroach on a RAB at this location. The signal at this location could be removed and a RAB constructed.
Dry Creek Road	1 Panorama Drive	3	Stop	No	No	No	Yes	Yes	Detention Impact	This location would work if the impacts to the detention could be mitigated as part of the project.
	2 Mineral Avenue	3	Stop	No	No	No	Maybe	Maybe	Recreational Park Impact	This location may NOT work as park space is significantly more precious to the residents than a parking lot.
	3 Willow Way	3	Stop	No	No	No	Unlikely	No	Rec. Park Impact and Potential Structure Impact	This location would likely NOT be feasible as the building structures and recreational park would be impacted.
	4 Nichols Avenue	3	Signal	No	No	No	Yes	Yes	Parking Impact	This location would work if surface parking impacts are not a significant decision factor.
	5 Mineral Drive	3	Stop	No	No	No	No	No	Structure and Residential Impacts	This location would likely NOT be feasible as the building structures and residential properties would be impacted.
	6 Phillips Place	4	Signal	Maybe	No	No	Maybe	Maybe	Parking Impact	This location may be a bit close to the signal at County Line Road. Further study will be needed to determine if the southbound queue at County Line will encroach on a RAB at this location.
County Line Road										

Figure 5-10: Considerations for whether or not to install a roundabout: versus a traditional lighted intersection

Table X: Roundabouts: Advantages / Disadvantages

Category	Advantages	Disadvantages	
Safety - 37% Reduction in overall collisions - 75% Reduction in injury collisions - 90% Reduction in fatality collisions - 40% Reduction in pedestrian collisions	<ul style="list-style-type: none"> Reduced number of conflict points compared to conventional intersections Elimination of high angles of conflict and lower operations speeds Fewer and less severe accidents Reduced decision making at point of entry Long splitter islands and other geometric features provide good advanced warning of the intersection Raised level of consciousness for drivers 	<ul style="list-style-type: none"> Accidents may temporarily increase due to improper driver education During emergencies, signalized intersections can preempt control 	
	Capacity	<ul style="list-style-type: none"> Traffic yields, nonstop, continuous traffic flow Generally higher capacities experienced 	<ul style="list-style-type: none"> Coordinated signal systems can increase capacity of the network
		Delay	<ul style="list-style-type: none"> Generally reduced delay as compared with an equivalent volume for signalized intersection During off-peak hours, signal timing can create undue delay at signalized intersections
	Cost		<ul style="list-style-type: none"> Maintenance of signals (heads, loop detectors, controllers) and power is eliminated Lower accident rate and severity; reduced accident costs
Pedestrians & Bicyclists		<ul style="list-style-type: none"> Splitter islands provide pedestrian refuge and shorter one-directional traffic crossing Low speed conditions improve bicycle and pedestrian safety 	<ul style="list-style-type: none"> Pedestrians, especially handicapped may experience increased delay in securing acceptable gaps to cross Longer travel path
	Environmental	<ul style="list-style-type: none"> Reduced starts and stops; reduced air pollution 	

Figure 5-11: Roundabout advantages and disadvantages

APPENDIX 4 - PUBLIC IMPROVEMENT COST ESTIMATION RATIONALE

The following spreadsheets describe the items considered during the key public project cost estimation. Costs are in 2013 dollars.

SIDEWALK IMPROVEMENTS

6-foot

Yosemite -Alton to Arapahoe

1 side

340 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Sidewalk	\$ 10.00	SY	227	\$ 2,270.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	227	\$ 7,945.00
Contingency (20%)	\$ 2,100.00	LS	1	\$ 2,100.00
Design (9%)	\$ 1,200.00	LS	1	\$ 1,200.00
	340		Total	\$ 13,515.00

Yosemite -Alton to Dry Creek

1 side

2600 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Sidewalk	\$ 10.00	SY	1,740	\$ 17,400.00
Clearing and Grubbing	\$ 2,000.00	AC	0.4	\$ 720.00
Unclassified Excavation	\$ 7.50	CY	640	\$ 4,800.00
Aggregate Base Course (Class 6)	\$ 30.00	TN	480	\$ 14,400.00
Concrete Sidewalk (6")	\$ 35.00	SY	3,480	\$ 121,800.00
Contingency (20%)	\$ 31,900.00	LS	1	\$ 31,900.00
Design (9%)	\$ 17,200.00	LS	1	\$ 17,200.00
	2600		Total	\$ 208,220.00

Alton Way

1750 west

3150 east

4900 feet

2 sides

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Sidewalk	\$ 10.00	SY	3,270	\$ 32,700.00
Clearing and Grubbing	\$ 2,000.00	AC	0.7	\$ 1,340.00
Unclassified Excavation	\$ 7.50	CY	1,200	\$ 9,000.00
Aggregate Base Course (Class 6)	\$ 30.00	TN	700	\$ 21,000.00
Concrete Sidewalk (6")	\$ 35.00	SY	6,540	\$ 228,900.00
Contingency (20%)	\$ 58,600.00	LS	1	\$ 58,600.00
Design (9%)	\$ 31,700.00	LS	1	\$ 31,700.00
	4900		Total	\$ 383,240.00

Alton Court

1200 west side 1 side

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Sidewalk	\$ 10.00	SY	800	\$ 8,000.00
Clearing and Grubbing	\$ 2,000.00	AC	0.2	\$ 340.00
Unclassified Excavation	\$ 7.50	CY	300	\$ 2,250.00
Aggregate Base Course (Class 6)	\$ 30.00	TN	220	\$ 6,600.00
Concrete Sidewalk (6")	\$ 35.00	SY	1,600	\$ 56,000.00
Contingency (20%)	\$ 14,700.00	LS	1	\$ 14,700.00
Design (9%)	\$ 8,000.00	LS	1	\$ 8,000.00
	1200		Total	\$ 95,890.00

Total of Sidewalk Improvements 9,040.00 feet

\$ 700,865.00

INTERNAL PATHS**Alton to Yosemite (North 1)**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.2	\$ 400.00
Unclassified Excavation	\$ 7.50	CY	70	\$ 525.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	400	\$ 14,000.00
Sod	\$ 1.00	SF	5,280	\$ 5,280.00
Contingency (20%)	\$ 4,100.00	LS	1	\$ 4,100.00
Design (9%)	\$ 2,200.00	LS	1	\$ 2,200.00
			Total	\$ 26,505.00

Alton to Yosemite (North 2)

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.2	\$ 400.00
Unclassified Excavation	\$ 7.50	CY	70	\$ 525.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	400	\$ 14,000.00
Sod	\$ 1.00	SF	5,280	\$ 5,280.00
Contingency (20%)	\$ 4,100.00	LS	1	\$ 4,100.00
Design (9%)	\$ 2,200.00	LS	1	\$ 2,200.00
			Total	\$ 26,505.00

Alton to Yosemite (Middle)

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.31	\$ 620.00
Unclassified Excavation	\$ 7.50	CY	110	\$ 825.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	610	\$ 21,350.00
Sod	\$ 1.00	SF	8,220	\$ 8,220.00
Contingency (20%)	\$ 6,300.00	LS	1	\$ 6,300.00
Design (9%)	\$ 3,400.00	LS	1	\$ 3,400.00
			Total	\$ 40,715.00

Alton to Yosemite (South)

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.3	\$ 600.00
Unclassified Excavation	\$ 7.50	CY	100	\$ 750.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	590	\$ 20,650.00
Sod	\$ 1.00	SF	7,920	\$ 7,920.00
Contingency (20%)	\$ 6,000.00	LS	1	\$ 6,000.00
Design (9%)	\$ 3,300.00	LS	1	\$ 3,300.00
			Total	\$ 39,220.00

INTERNAL PATHS (continued)**Alton Way (East)**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.34	\$ 680.00
Unclassified Excavation	\$ 7.50	CY	120	\$ 900.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	670	\$ 23,450.00
Sod	\$ 1.00	SF	9,000	\$ 9,000.00
Contingency (20%)	\$ 6,900.00	LS	1	\$ 6,900.00
Design (9%)	\$ 3,700.00	LS	1	\$ 3,700.00
			Total	\$ 44,630.00

Alton Court (East)

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.44	\$ 880.00
Unclassified Excavation	\$ 7.50	CY	150	\$ 1,125.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	850	\$ 29,750.00
Sod	\$ 1.00	SF	11,400	\$ 11,400.00
Contingency (20%)	\$ 8,700.00	LS	1	\$ 8,700.00
Design (9%)	\$ 4,700.00	LS	1	\$ 4,700.00
			Total	\$ 56,555.00

Along I-25 North of Dry Creek

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	2.11	\$ 4,220.00
Unclassified Excavation	\$ 7.50	CY	690	\$ 5,175.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	4,090	\$ 143,150.00
Sod	\$ 1.00	SF	55,200	\$ 55,200.00
Contingency (20%)	\$ 41,600.00	LS	1	\$ 41,600.00
Design (9%)	\$ 22,500.00	LS	1	\$ 22,500.00
			Total	\$ 271,845.00

Mineral to Yosemite (North)

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.17	\$ 340.00
Unclassified Excavation	\$ 7.50	CY	60	\$ 450.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	320	\$ 11,200.00
Sod	\$ 1.00	SF	4,320	\$ 4,320.00
Contingency (20%)	\$ 3,300.00	LS	1	\$ 3,300.00
Design (9%)	\$ 1,800.00	LS	1	\$ 1,800.00
			Total	\$ 21,410.00

INTERNAL PATHS (continued)**Mineral to Yosemite (South)**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.13	\$ 260.00
Unclassified Excavation	\$ 7.50	CY	50	\$ 375.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	250	\$ 8,750.00
Sod	\$ 1.00	SF	3,360	\$ 3,360.00
Contingency (20%)	\$ 2,600.00	LS	1	\$ 2,600.00
Design (9%)	\$ 1,400.00	LS	1	\$ 1,400.00
			Total	\$ 16,745.00

Mineral South toward Nichols

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.14	\$ 280.00
Unclassified Excavation	\$ 7.50	CY	50	\$ 375.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	270	\$ 9,450.00
Sod	\$ 1.00	SF	3,600	\$ 3,600.00
Contingency (20%)	\$ 2,800.00	LS	1	\$ 2,800.00
Design (9%)	\$ 1,500.00	LS	1	\$ 1,500.00
			Total	\$ 18,005.00

Nichols North to Mineral

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.21	\$ 420.00
Unclassified Excavation	\$ 7.50	CY	70	\$ 525.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	400	\$ 14,000.00
Sod	\$ 1.00	SF	5,400	\$ 5,400.00
Contingency (20%)	\$ 4,100.00	LS	1	\$ 4,100.00
Design (9%)	\$ 2,300.00	LS	1	\$ 2,300.00
			Total	\$ 26,745.00

Yosemite Between Nichols and Mineral

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.24	\$ 480.00
Unclassified Excavation	\$ 7.50	CY	80	\$ 600.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	470	\$ 16,450.00
Sod	\$ 1.00	SF	6,300	\$ 6,300.00
Contingency (20%)	\$ 4,800.00	LS	1	\$ 4,800.00
Design (9%)	\$ 2,600.00	LS	1	\$ 2,600.00
			Total	\$ 31,230.00

INTERNAL PATHS (continued)**Chester to Akron**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.39	\$ 780.00
Unclassified Excavation	\$ 7.50	CY	130	\$ 975.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	760	\$ 26,600.00
Sod	\$ 1.00	SF	10,200	\$ 10,200.00
Contingency (20%)	\$ 7,800.00	LS	1	\$ 7,800.00
Design (9%)	\$ 4,200.00	LS	1	\$ 4,200.00
			Total	\$ 50,555.00

Promenade to County Line Road Interchange

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.22	\$ 440.00
Unclassified Excavation	\$ 8.00	CY	80	\$ 640.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	430	\$ 15,050.00
Sod	\$ 1.00	SF	5,760	\$ 5,760.00
Contingency (20%)	\$ 4,400.00	LS	1	\$ 4,400.00
Design (9%)	\$ 2,400.00	LS	1	\$ 2,400.00
			Total	\$ 28,690.00

Total of Internal Paths Improvements \$ 699,355.00

PEDESTRIAN BRIDGE**Dry Creek**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Pedestrian / Bicycle Bridge	\$ 180.00	SF	11,400	\$ 2,052,000.00
Contingency (20%)	\$ 410,400.00	LS	1	\$ 410,400.00
Design (9%)	\$ 221,700.00	LS	1	\$ 221,700.00
			Total	\$ 2,684,100.00

SIDEWALK**Dayton Street**

1300 west 1350 east 2650 feet 2 sides

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Sidewalk	\$ 10.00	SY	1,770	\$ 17,700.00
Clearing and Grubbing	\$ 2,000.00	AC	0.4	\$ 740.00
Unclassified Excavation	\$ 7.50	CY	650	\$ 4,875.00
Aggregate Base Course (Class 6)	\$ 30.00	TN	490	\$ 14,700.00
Concrete Sidewalk (6")	\$ 35.00	SY	3,540	\$ 123,900.00
Contingency (20%)	\$ 32,400.00	LS	1	\$ 32,400.00
Design (9%)	\$ 17,500.00	LS	1	\$ 17,500.00
			Total	\$ 211,815.00

EAST SIDE GRID**N/S Geddes to Easter 1**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	1.35	\$ 2,700.00
Unclassified Excavation	\$ 7.50	CY	1,460	\$ 10,950.00
Curb and Gutter (Type IIB)	\$ 15.00	LF	2,500	\$ 2,500.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	1,670	\$ 58,450.00
Handicap Ramps (8)	\$ 90.00	SY	64	\$ 5,760.00
Asphalt (8")	\$ 90.00	TN	1,852	\$ 166,666.50
Stormwater Pipe (18" RCP)	\$ 60.00	LF	1,250	\$ 75,000.00
Type R Inlets	\$ 5,000.00	EA	4	\$ 20,000.00
Manholes	\$ 3,000.00	EA	2	\$ 6,000.00
Sod	\$ 1.00	SF	15,000	\$ 15,000.00
Contingency (20%)	\$ 72,700.00	LS	1	\$ 72,700.00
Design (9%)	\$ 39,300.00	LS	1	\$ 39,300.00
			Total	\$ 475,026.50

N/S Geddes to Easter 2

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	1.35	\$ 2,700.00
Unclassified Excavation	\$ 7.50	CY	1,460	\$ 10,950.00
Curb and Gutter (Type IIB)	\$ 15.00	LF	2,500	\$ 2,500.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	1,670	\$ 58,450.00
Handicap Ramps (8)	\$ 90.00	SY	64	\$ 5,760.00
Asphalt (8")	\$ 90.00	TN	1,852	\$ 166,666.50
Stormwater Pipe (18" RCP)	\$ 60.00	LF	1,250	\$ 75,000.00
Type R Inlets	\$ 5,000.00	EA	4	\$ 20,000.00
Manholes	\$ 3,000.00	EA	2	\$ 6,000.00
Sod	\$ 1.00	SF	15,000	\$ 15,000.00
Contingency (20%)	\$ 72,700.00	LS	1	\$ 72,700.00
Design (9%)	\$ 39,300.00	LS	1	\$ 39,300.00
			Total	\$ 475,026.50

EAST SIDE GRID (continued)**N/S Easter to Costilla 1**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	1.35	\$ 2,700.00
Unclassified Excavation	\$ 7.50	CY	1,460	\$ 10,950.00
Curb and Gutter (Type IIB)	\$ 15.00	LF	2,500	\$ 2,500.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	1,670	\$ 58,450.00
Handicap Ramps (10)	\$ 90.00	SY	80	\$ 7,200.00
Asphalt (8")	\$ 90.00	TN	1,852	\$ 166,666.50
Stormwater Pipe (18" RCP)	\$ 60.00	LF	1,250	\$ 75,000.00
Type R Inlets	\$ 5,000.00	EA	4	\$ 20,000.00
Manholes	\$ 3,000.00	EA	2	\$ 6,000.00
Sod	\$ 1.00	SF	15,000	\$ 15,000.00
Contingency (20%)	\$ 72,900.00	LS	1	\$ 72,900.00
Design (9%)	\$ 39,400.00	LS	1	\$ 39,400.00
			Total	\$ 476,766.50

N/S Easter to Costilla 2

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	1.35	\$ 2,700.00
Unclassified Excavation	\$ 7.50	CY	1,460	\$ 10,950.00
Curb and Gutter (Type IIB)	\$ 15.00	LF	2,500	\$ 2,500.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	1,670	\$ 58,450.00
Handicap Ramps (10)	\$ 90.00	SY	80	\$ 7,200.00
Asphalt (8")	\$ 90.00	TN	1,852	\$ 166,666.50
Stormwater Pipe (18" RCP)	\$ 60.00	LF	1,250	\$ 75,000.00
Type R Inlets	\$ 5,000.00	EA	4	\$ 20,000.00
Manholes	\$ 3,000.00	EA	2	\$ 6,000.00
Sod	\$ 1.00	SF	15,000	\$ 15,000.00
Contingency (20%)	\$ 72,900.00	LS	1	\$ 72,900.00
Design (9%)	\$ 39,400.00	LS	1	\$ 39,400.00
			Total	\$ 476,766.50

EAST SIDE GRID (continued)

E/W Fulton to Clinton

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	2.05	\$ 4,100.00
Unclassified Excavation	\$ 7.50	CY	2,220	\$ 16,650.00
Curb and Gutter (Type IIB)	\$ 15.00	LF	3,800	\$ 3,800.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	2,540	\$ 88,900.00
Handicap Ramps (12)	\$ 90.00	SY	96	\$ 8,640.00
Asphalt (8")	\$ 90.00	TN	2,815	\$ 253,332.00
Stormwater Pipe (18" RCP)	\$ 60.00	LF	1,900	\$ 114,000.00
Type R Inlets	\$ 5,000.00	EA	5	\$ 25,000.00
Manholes	\$ 3,000.00	EA	3	\$ 9,000.00
Sod	\$ 1.00	SF	22,800	\$ 22,800.00
Contingency (20%)	\$ 109,300.00	LS	1	\$ 109,300.00
Design (9%)	\$ 59,000.00	LS	1	\$ 59,000.00
			Total	\$ 714,522.00

E/W Fulton to Clinton Half Way

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	1.17	\$ 2,340.00
Unclassified Excavation	\$ 7.50	CY	1,260	\$ 9,450.00
Curb and Gutter (Type IIB)	\$ 15.00	LF	2,160	\$ 2,160.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	1,440	\$ 50,400.00
Handicap Ramps (12)	\$ 90.00	SY	96	\$ 8,640.00
Asphalt (8")	\$ 90.00	TN	1,600	\$ 144,000.00
Stormwater Pipe (18" RCP)	\$ 60.00	LF	1,080	\$ 64,800.00
Type R Inlets	\$ 5,000.00	EA	4	\$ 20,000.00
Manholes	\$ 3,000.00	EA	2	\$ 6,000.00
Sod	\$ 1.00	SF	12,960	\$ 12,960.00
Contingency (20%)	\$ 64,200.00	LS	1	\$ 64,200.00
Design (9%)	\$ 34,700.00	LS	1	\$ 34,700.00
			Total	\$ 419,650.00

Total East Side Grid Development \$ 3,037,758.00

YOSEMITE MEDIAN**Alton and Davies**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	180	\$ 3,600.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	400	\$ 6,000.00
Median Cover Material (Decorative)	\$ 6.00	SF	1,600	\$ 9,600.00
Contingency (20%)	\$ 3,900.00	LS	1	\$ 3,900.00
Design (9%)	\$ 2,100.00	LS	1	\$ 2,100.00
			Total	\$ 25,200.00

Davies and Easter Place 450 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	400	\$ 8,000.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	900	\$ 13,500.00
Median Cover Material (Decorative)	\$ 6.00	SF	3,600	\$ 21,600.00
Contingency (20%)	\$ 8,700.00	LS	1	\$ 8,700.00
Design (9%)	\$ 4,700.00	LS	1	\$ 4,700.00
450			Total	\$ 56,500.00

Easter Place and Xanthia 1000 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	890	\$ 17,800.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	2,000	\$ 30,000.00
Median Cover Material (Decorative)	\$ 6.00	SF	8,000	\$ 48,000.00
Contingency (20%)	\$ 19,200.00	LS	1	\$ 19,200.00
Design (9%)	\$ 10,400.00	LS	1	\$ 10,400.00
1000			Total	\$ 125,400.00

Dry Creek and Panorama 250 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	230	\$ 4,600.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	500	\$ 7,500.00
Median Cover Material (Decorative)	\$ 6.00	SF	2,000	\$ 12,000.00
Contingency (20%)	\$ 4,900.00	LS	1	\$ 4,900.00
Design (9%)	\$ 2,700.00	LS	1	\$ 2,700.00
250			Total	\$ 31,700.00

Panorama and Mineral 900 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	800	\$ 16,000.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	1,800	\$ 27,000.00
Median Cover Material (Decorative)	\$ 6.00	SF	7,200	\$ 43,200.00
Contingency (20%)	\$ 17,300.00	LS	1	\$ 17,300.00
Design (9%)	\$ 9,400.00	LS	1	\$ 9,400.00
900			Total	\$ 112,900.00

YOSEMITE MEDIAN (continued)**Mineral and Willow Way** 280 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	250	\$ 5,000.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	560	\$ 8,400.00
Median Cover Material (Decorative)	\$ 6.00	SF	2,240	\$ 13,440.00
Contingency (20%)	\$ 5,400.00	LS	1	\$ 5,400.00
Design (9%)	\$ 3,000.00	LS	1	\$ 3,000.00
	280		Total	\$ 35,240.00

Willow to Nichols 225 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	200	\$ 4,000.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	450	\$ 6,750.00
Median Cover Material (Decorative)	\$ 6.00	SF	1,800	\$ 10,800.00
Contingency (20%)	\$ 4,400.00	LS	1	\$ 4,400.00
Design (9%)	\$ 2,400.00	LS	1	\$ 2,400.00
	225		Total	\$ 28,350.00

Nichols to Nichols Place 425 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	380	\$ 7,600.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	850	\$ 12,750.00
Median Cover Material (Decorative)	\$ 6.00	SF	3,400	\$ 20,400.00
Contingency (20%)	\$ 8,200.00	LS	1	\$ 8,200.00
Design (9%)	\$ 4,500.00	LS	1	\$ 4,500.00
	425		Total	\$ 53,450.00

Nichols Place to Mineral Drive 50 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	50	\$ 1,000.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	100	\$ 1,500.00
Median Cover Material (Decorative)	\$ 6.00	SF	400	\$ 2,400.00
Contingency (20%)	\$ 1,000.00	LS	1	\$ 1,000.00
Design (9%)	\$ 600.00	LS	1	\$ 600.00
	50		Total	\$ 6,500.00

YOSEMITE MEDIAN (continued)**Mineral Drive to East Phillips**

250 feet

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Removal of Asphalt	\$ 20.00	SY	230	\$ 4,600.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	500	\$ 7,500.00
Median Cover Material (Decorative)	\$ 6.00	SF	2,000	\$ 12,000.00
Contingency (20%)	\$ 4,900.00	LS	1	\$ 4,900.00
Design (9%)	\$ 2,700.00	LS	1	\$ 2,700.00
	250		Total	\$ 31,700.00

Total of median Improvements 3,830.00 feet \$ 506,940.00

COUNTY LINE ROAD MULTI-USE PATH**Trail Connection to Interchange (10 feet wide)**

4300 feet long

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Unclassified Excavation	\$ 7.50	CY	800	\$ 6,000.00
Concrete Sidewalk (6 Inch)	\$ 35.00	SY	4,780	\$ 167,300.00
Sod	\$ 1.00	SF	8,600	\$ 8,600.00
Contingency (20%)	\$ 36,400.00	LS	1	\$ 36,400.00
Design (9%)	\$ 19,700.00	LS	1	\$ 19,700.00
			Total	\$ 238,000.00

Total Multi-Use Path Improvements \$ 238,000.00

STREETSCAPE IMPROVEMENTS

pavers at intersections - 3.5 inters'ns; 14 corners	300 sf/corner	\$8 sf	4200 sf	\$33,600.00
benches at intersections	14	\$1200 each		\$49,200.00
trash receptacles	14	\$1000 each		\$14,000.00
wayfinding signage	7	\$ each		
pedestrian scale street light system	140	10,000 per light for system		\$1,400,000.00

Total Streetscape Improvements \$1,496,800.00

INTERSECTION IMPROVEMENTS**Yosemite and Nichols**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.5	\$ 1,000.00
Removal of Sidewalk	\$ 10.00	SY	135	\$ 1,350.00
Removal of Curb and Gutter	\$ 5.00	LF	200	\$ 1,000.00
Removal of Concrete Curb Ramp	\$ 30.00	SY	2	\$ 60.00
Removal of Pavement Marking	\$ 2.00	SF	45	\$ 90.00
Aggregate Base Course (Class 6)	\$ 30.00	CY	10	\$ 300.00
Asphalt Cement Performance Grade	\$ 550.00	TON	54	\$ 29,700.00
Concrete Sidewalk (6 Inch)	\$ 30.00	SY	133	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	200	\$ 3,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 8,290.00	LS	1	\$ 8,290.00
Design (9%)	\$ 4,500.00	LS	1	\$ 4,500.00
			Total	\$ 50,440.00

Yosemite and Dry Creek

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.5	\$ 1,000.00
Removal of Sidewalk	\$ 10.00	SY	135	\$ 1,350.00
Removal of Curb and Gutter	\$ 5.00	LF	200	\$ 1,000.00
Removal of Concrete Curb Ramp	\$ 30.00	SY	2	\$ 60.00
Removal of Pavement Marking	\$ 2.00	SF	45	\$ 90.00
Aggregate Base Course (Class 6)	\$ 30.00	CY	10	\$ 300.00
Asphalt Cement Performance Grade	\$ 550.00	TON	54	\$ 29,700.00
Concrete Sidewalk (6 Inch)	\$ 30.00	SY	133	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	200	\$ 3,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 8,290.00	LS	1	\$ 8,290.00
Design (9%)	\$ 4,500.00	LS	1	\$ 4,500.00
			Total	\$ 50,440.00

INTERSECTION IMPROVEMENTS (continued)**Yosemite Alton south**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.5	\$ 1,000.00
Removal of Sidewalk	\$ 10.00	SY	135	\$ 1,350.00
Removal of Curb and Gutter	\$ 5.00	LF	200	\$ 1,000.00
Removal of Concrete Curb Ramp	\$ 30.00	SY	2	\$ 60.00
Removal of Pavement Marking	\$ 2.00	SF	45	\$ 90.00
Aggregate Base Course (Class 6)	\$ 30.00	CY	10	\$ 300.00
Asphalt Cement Performance Grade	\$ 550.00	TON	54	\$ 29,700.00
Concrete Sidewalk (6 Inch)	\$ 30.00	SY	133	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	200	\$ 3,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 8,290.00	LS	1	\$ 8,290.00
Design (9%)	\$ 4,500.00	LS	1	\$ 4,500.00
			Total	\$ 50,440.00

Yosemite Alton north

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.5	\$ 1,000.00
Removal of Sidewalk	\$ 10.00	SY	135	\$ 1,350.00
Removal of Curb and Gutter	\$ 5.00	LF	200	\$ 1,000.00
Removal of Concrete Curb Ramp	\$ 30.00	SY	2	\$ 60.00
Removal of Pavement Marking	\$ 2.00	SF	45	\$ 90.00
Aggregate Base Course (Class 6)	\$ 30.00	CY	10	\$ 300.00
Asphalt Cement Performance Grade	\$ 550.00	TON	54	\$ 29,700.00
Concrete Sidewalk (6 Inch)	\$ 30.00	SY	133	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	200	\$ 3,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 8,290.00	LS	1	\$ 8,290.00
Design (9%)	\$ 4,500.00	LS	1	\$ 4,500.00
			Total	\$ 50,440.00

INTERSECTION IMPROVEMENTS (continued)

Yosemite and Mineral

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Traffic Signalization	\$ 500,000.00	LS	1	\$ 500,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 100,200.00	LS	1	\$ 100,200.00
Design (9%)	\$ 54,100.00	LS	1	\$ 54,100.00
			Total	\$ 655,050.00

Dry Creek -Alton - Chester

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.5	\$ 1,000.00
Removal of Sidewalk	\$ 10.00	SY	135	\$ 1,350.00
Removal of Curb and Gutter	\$ 5.00	LF	200	\$ 1,000.00
Removal of Concrete Curb Ramp	\$ 30.00	SY	2	\$ 60.00
Removal of Pavement Marking	\$ 2.00	SF	45	\$ 90.00
Aggregate Base Course (Class 6)	\$ 30.00	CY	10	\$ 300.00
Asphalt Cement Performance Grade	\$ 550.00	TON	54	\$ 29,700.00
Concrete Sidewalk (6 Inch)	\$ 30.00	SY	133	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	200	\$ 3,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 8,290.00	LS	1	\$ 8,290.00
Design (9%)	\$ 4,500.00	LS	1	\$ 4,500.00
			Total	\$ 50,440.00

Chester - County Line Road

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.5	\$ 1,000.00
Removal of Sidewalk	\$ 10.00	SY	135	\$ 1,350.00
Removal of Curb and Gutter	\$ 5.00	LF	200	\$ 1,000.00
Removal of Concrete Curb Ramp	\$ 30.00	SY	2	\$ 60.00
Removal of Pavement Marking	\$ 2.00	SF	45	\$ 90.00
Aggregate Base Course (Class 6)	\$ 30.00	CY	10	\$ 300.00
Asphalt Cement Performance Grade	\$ 550.00	TON	54	\$ 29,700.00
Concrete Sidewalk (6 Inch)	\$ 30.00	SY	133	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	200	\$ 3,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 8,290.00	LS	1	\$ 8,290.00
Design (9%)	\$ 4,500.00	LS	1	\$ 4,500.00
			Total	\$ 50,440.00

Total of Intersection Improvements \$ 957,690.00

PEDESTRIAN REFUGES**Arapahoe and Yosemite**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Thermoplastic Pavement Marking	\$ 10.00	SF	400	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Solar Pedestrian Crossing Sign	\$ 1,000.00	SF	4	\$ 4,000.00
Contingency (20%)	\$ 1,700.00	LS	1	\$ 1,700.00
Design (9%)	\$ 900.00	LS	1	\$ 900.00
			Total	\$ 10,800.00

County Line Road and I-25

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Thermoplastic Pavement Marking	\$ 10.00	SF	400	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Solar Pedestrian Crossing Sign	\$ 1,000.00	SF	4	\$ 4,000.00
Contingency (20%)	\$ 1,700.00	LS	1	\$ 1,700.00
Design (9%)	\$ 900.00	LS	1	\$ 900.00
			Total	\$ 10,800.00

Yosemite Mid-Block Alton Between Alton

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Thermoplastic Pavement Marking	\$ 10.00	SF	400	\$ 4,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Solar Pedestrian Crossing Sign	\$ 1,000.00	SF	4	\$ 4,000.00
Contingency (20%)	\$ 1,700.00	LS	1	\$ 1,700.00
Design (9%)	\$ 900.00	LS	1	\$ 900.00
			Total	\$ 10,800.00

Total Pedestrian Refuges Improvements \$ 32,400.00

ALTON COURT RE-ALIGNMENT AND WIDENING

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$2,000.00	AC	0.4	\$ 800.00
Remove Asphalt (8")	\$20.00	SY	340	\$ 6,800.00
Remove Curb and Gutter	\$5.00	LF	2,000	\$ 10,000.00
Remove Sidewalk (6")	\$10.00	SY	670	\$ 6,700.00
Remove Crosspans (10")	\$7.50	SY	340	\$ 2,550.00
Remove Concrete Curb Ramps (11)	\$17.00	SY	90	\$ 1,530.00
Sawcutting (18"from curb)	\$1.00	LF	2,080	\$ 2,080.00
Remove Pavement Marking	\$1.00	SF	1,000	\$ 1,000.00
Unclassified Excavation	\$7.50	CY	720	\$ 5,400.00
Aggregate Base Course (Class 6)	\$30.00	TN	480	\$ 14,400.00
Concrete Sidewalk (6")	\$35.00	SY	1,340	\$ 46,900.00
Curb and Gutter (Type II-B)	\$15.00	LF	2,000	\$ 30,000.00
Concrete Curb Ramp with Domes (16)	\$90.00	SY	130	\$ 11,700.00
Crosspans (10")	\$50.00	SY	350	\$ 17,500.00
Asphalt Patch	\$120.00	TN	150	\$ 18,000.00
Hot Mix Asphalt (64-22) (8")	\$90.00	TN	400	\$ 36,000.00
Pavement Marking	\$5.00	SF	1,500	\$ 7,500.00
Seeding	\$1.00	SF	12,000	\$ 12,000.00
Remove Asphalt (8")	\$20.00	SY	1,120	\$ 22,400.00
Sawcutting (tie in)	\$1.00	LF	80	\$ 80.00
Remove Curb and Gutter	\$5.00	LF	500	\$ 2,500.00
Remove Sidewalk (6")	\$10.00	SY	170	\$ 1,700.00
Remove Crosspans (10")	\$7.50	SY	40	\$ 300.00
Remove Concrete Curb Ramps (2)	\$17.00	SY	20	\$ 340.00
Fine Grading/Soil Conditioning	\$2,500.00	AC	0.4	\$ 1,000.00
Aggregate Base Course (Class 6)	\$30.00	TN	510	\$ 15,300.00
Top Soil (4")	\$10.00	CY	200	\$ 2,000.00
Seeding	\$1.00	SF	15,750	\$ 15,750.00
Clearing and Grubbing	\$2,000.00	AC	0.4	\$ 800.00
Remove Asphalt (8") (Parking lot)	\$20.00	SY	130	\$ 2,600.00
Remove Curb and Gutter	\$5.00	LF	300	\$ 1,500.00
Unclassified Excavation	\$7.50	CY	680	\$ 5,100.00
Aggregate Base Course (Class 6)	\$30.00	TN	460	\$ 13,800.00
Concrete Sidewalk (6")	\$35.00	SY	340	\$ 11,900.00
Curb and Gutter (Type II-B)	\$15.00	LF	500	\$ 7,500.00
Concrete Curb Ramp with Domes (2)	\$90.00	SY	20	\$ 1,800.00
Crosspans (10")	\$50.00	SY	50	\$ 2,500.00
Asphalt Patch	\$120.00	TN	10	\$ 1,200.00
Hot Mix Asphalt (64-22) (8")	\$90.00	TN	600	\$ 54,000.00
Pavement Marking	\$5.00	SF	380	\$ 1,900.00
Seeding	\$1.00	SF	3,000	\$ 3,000.00
Contingency (20%)	\$79,970.00	LS	1	\$ 79,970.00
Design (9%)	\$43,190.00	LS	1	\$ 43,190.00
			Total	\$ 522,990.00

INTERSECTION REALIGNMENT**Alton Way / Alton Court**

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	0.5	\$ 1,000.00
Unclassified Excavation	\$ 7.50	CY	30	\$ 225.00
Removal of Asphalt	\$ 20.00	SY	4,800	\$ 96,000.00
Removal of Sidewalk	\$ 10.00	SY	135	\$ 1,350.00
Removal of Curb and Gutter	\$ 5.00	LF	200	\$ 1,000.00
Removal of Concrete Curb Ramp	\$ 30.00	SY	2	\$ 60.00
Removal of Pavement Marking	\$ 2.00	SF	45	\$ 90.00
Aggregate Base Course (Class 6)	\$ 30.00	CY	90	\$ 2,700.00
Asphalt Cement Performance Grade	\$ 550.00	TON	174	\$ 95,700.00
Concrete Sidewalk (6 Inch)	\$ 30.00	SY	267	\$ 8,000.00
Concrete Curb Ramp	\$ 100.00	SY	2	\$ 200.00
Curb and Gutter Type 2 (Section II-B)	\$ 15.00	LF	400	\$ 6,000.00
Thermoplastic Pavement Marking	\$ 7.50	SF	100	\$ 750.00
Contingency (20%)	\$ 42,615.00	LS	1	\$ 42,615.00
Design (9%)	\$ 23,100.00	LS	1	\$ 23,100.00
			Total	\$ 176,365.00

Total Intersection Re-alignment Improvements \$ 176,365.00

Notes:

1. Estimate includes widening and realignment of Alton Court between Dry Creek Rd. and Alton Way.
2. Estimate does not include widening of Alton Way. See Alton Way Widening Estimate.
3. Estimate for the widening and realignment of Alton Court is broken up into 3 sections
 1. Widening approximately 1000LF of Alton Court from E. Dry Creek Rd
 2. Demolition of approximately 250LF of Alton Court into Alton Way and appropriate area regrading
 3. Approximately 250LF of new realigned Alton Court into Alton Way
4. Estimate includes new Curb, Gutter and 6' Sidewalk on both sides of newly aligned and widened Alton Court

ALTON WAY WIDENING (53')

ITEM	UNIT PRICE	UNIT	ESTIMATED QUANTITY	ESTIMATED COST
Clearing and Grubbing	\$ 2,000.00	AC	1.3	\$ 2,600.00
Remove Asphalt (8")	\$ 20.00	SY	1,270	\$ 25,400.00
Remove Curb and Gutter	\$ 5.00	LF	7,600	\$ 38,000.00
Remove Sidewalk (6")	\$ 10.00	SY	2,540	\$ 25,400.00
Remove Crosspans (10")	\$ 7.50	SY	1,100	\$ 8,250.00
Remove Concrete Curb Ramps (16)	\$ 17.00	SY	130	\$ 2,210.00
Sawcutting (18"from curb)	\$ 1.00	LF	7,680	\$ 7,680.00
Remove Pavement Marking	\$ 1.00	SF	950	\$ 950.00
Unclassified Excavation	\$ 7.50	CY	2,620	\$ 19,650.00
Aggregate Base Course (Class 6)	\$ 30.00	TN	1,740	\$ 52,200.00
Concrete Sidewalk (6")	\$ 35.00	SY	5,070	\$ 177,450.00
Curb and Gutter (Type II-B)	\$ 15.00	LF	7,600	\$ 114,000.00
Concrete Curb Ramp with Domes (52)	\$ 90.00	SY	420	\$ 37,800.00
Crosspans (10")	\$ 45.00	SY	1,110	\$ 49,950.00
Asphalt Patch	\$ 120.00	TN	570	\$ 68,400.00
Hot Mix Asphalt (64-22) (8")	\$ 90.00	TN	1,510	\$ 135,900.00
Pavement Marking	\$ 5.00	SF	5,700	\$ 28,500.00
Seeding	\$ 1.00	SF	45,600	\$ 45,600.00
Contingency (20%)	\$ 125,990.00	LS	1	\$ 125,990.00
Design (9%)	\$ 86,940.00	LS	1	\$ 86,940.00
			Total	\$ 1,052,870.00

Total Alton Way Widening \$ 1,052,870.00

APPENDIX 5 - IMAGE SOURCES

The following are the sources for the images shown in Figure 2-20.

Image Sources:

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<http://urbangreens.tumblr.com/post/914031202/green-roofs-sprout-toward-the-horizon-in>
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<http://www.asymptote.net/posts/>
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<http://news.theregistrysf.com/bay-meadows-san-mateos-progressive-urban-village-on-the-caltrain-line-sells-out-phase-one-release-of-homes-at-two-neighborhoods/>

