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City of
Thornton

Original Thornton at 88th Station Area Master Plan



January 13, 2015

Acknowledgements

The Project Team would like to thank and acknowledge the significant contributions of the members of this plan's Project Management Team and Technical Advisory Committee, who provided valuable guidance and vision throughout the course of the planning process. We would also like to thank attendees who participated in the Developer Forum on June 25, 2014.

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RESOLUTION

A RESOLUTION ADOPTING THE ORIGINAL THORNTON AT 88TH STATION AREA MASTER PLAN AS A PART OF THE COMPREHENSIVE PLAN.

WHEREAS, the Original Thornton at 88th Station ("Station") located at 88th Avenue and Welby Road has been identified by RTD as a transit station for the North Metro FasTracks corridor; and

WHEREAS, the City was awarded Transportation Improvement Program funding to conduct a station area master plan study of the area in the vicinity of the Station; and

WHEREAS, the Original Thornton at 88th Station Area Master Plan ("STAMP") was prepared to guide development in the vicinity of the future Original Thornton at 88th Station; and

WHEREAS, the STAMP provides guidance related to the types of land uses, transportation infrastructure and amenities desired by the community through specific STAMP elements including the Station Area Vision, the Preferred Alternative, Guiding Principles, and Implementation Strategies; and

WHEREAS, the Thornton City Council adopted the 2012 update to the Thornton Comprehensive Plan on September 11, 2012; and

WHEREAS, the STAMP furthers the Comprehensive Plan policy to "Facilitate the development of well-designed and integrated mixed-use developments at anticipated future FasTracks stations, and ensure suitable pedestrian connections with surrounding neighborhoods"; and

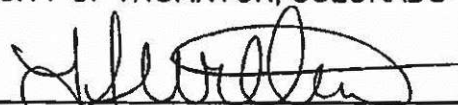
WHEREAS, the Original Thornton at 88th STAMP will be used by City Council, City Boards and Commissions, other City officials, residents, developers and City staff to ensure a well-designed and integrated mixed-use development around the future Original Thornton at 88th Station.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF THORNTON, COLORADO, AS FOLLOWS:

The Original Thornton at 88th STAMP, attached as Attachment A to this Resolution, is hereby adopted as an implementation document of the 2012 Thornton Comprehensive Plan.

PASSED AND ADOPTED at a regular meeting of the City Council of the City of Thornton, Colorado, on January 13, 2015.

CITY OF THORNTON, COLORADO


Heidi K. Williams, Mayor

ATTEST:

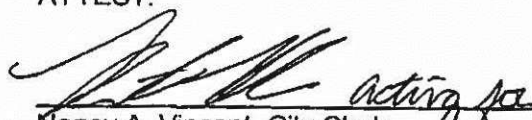

Nancy A. Vincent, City Clerk

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Chapter 1.0 Introduction

1.1 Context

The North Metro commuter rail line is part of the Regional Transportation District (“RTD”) FasTracks regional transit system expansion program to build over one hundred miles of rail transit throughout the Denver region. The 18.5-mile North Metro line is proposed to run from Denver Union Station in downtown Denver, through Commerce City, Thornton and Northglenn to just north of Highway 7 in north Thornton. Currently, the line is funded to the 124th Avenue/Eastlake station. The Original Thornton at 88th Station will be the most southerly station within the City of Thornton, as shown in Figure 1.1, and is expected to open in 2018.

Figure 1.1: RTD FasTracks North Metro Rail Line



It is with this backdrop that the City of Thornton initiated development of the Original Thornton at 88th Station Area Master Plan to capitalize on opportunities that commuter rail service will bring to the community and potentially help to transform the station area into a vibrant, walkable, mixed-use community with convenient train access.

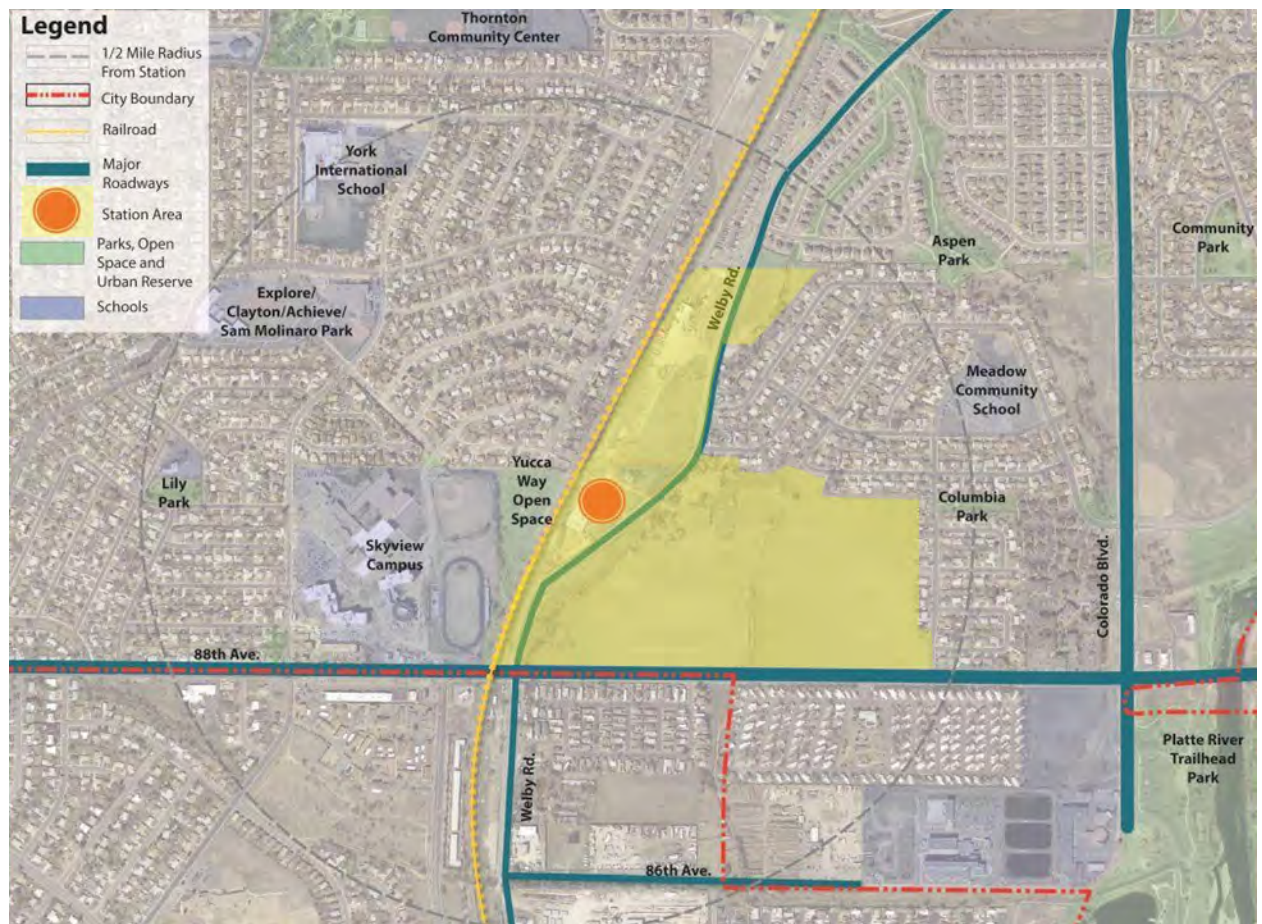
The Original Thornton at 88th Station will open up a new gateway into the City for travelers throughout the Denver region. As such, planning for this station area presents a tremendous opportunity to make a first and lasting impression of Thornton. This impression, and the experience of living and working in the station area, should be one that is distinctive, attractive and desirable for residents and visitors alike.

Station Area and Station Influence Area

The Original Thornton at 88th commuter rail station and Park-n-Ride will be located north of 88th Avenue and east of the Union Pacific railroad tracks. The 82-acre Station Area, highlighted in yellow in Figure 1.2, incorporates the station itself and properties to the east and north of the station that are likely to develop and/or redevelop over time. While the focus of the Plan is the Station Area, the Project Team, which included the consultants and the City-appointed project staff, also assessed conditions within approximately one-half mile of the station, termed the Station Influence Area. This half-mile radius is generally the distance that people are willing to walk to transit; and it is important that future plans consider the relationship between the Station Area and surrounding neighborhoods within one-half mile of the station.

Figure 1.2 on the following page shows the extent of the Station Area and Station Influence Area.

Figure 1.2: Original Thornton at 88th Station Area and Station Influence Area



1.2 TOD Defined

The Station Area presents a unique opportunity for a Transit Oriented Development (TOD) in Thornton. TOD has many definitions, but it generally has three major characteristics:

A vibrant mix of land uses for people to comfortably live, work, & enjoy amenities in and around the Station Area. Instead of land being designated for just one purpose such as single-family housing, commercial or industrial, TOD allows a mix of uses within a station area. Often this means having retail or office uses on lower floors of buildings, with residential above; or it could mean having different uses located within comfortable walking distance of each other. While most transit patrons will use the North Metro line to travel inbound to Denver in the morning and outbound to Thornton during the evening, TOD can help to foster more balanced two-way travel so that riders have a reason to travel to the station area for jobs, school or shopping.

Well-connected street network that makes it easy and convenient to get around on foot, by bicycle, car and on transit. TOD is located within walking distance of a transit facility and provides the ability for residents or

employees to walk to and from their origins and destinations, reducing the need for driving. For example, local residents might have easy walking access to the transit station, stores and restaurants, or employees and students who arrive at the station by commuter rail could easily walk to their places of work or school. A key goal of TOD is to reduce the need to drive and encourage the use of alternative travel modes such as rail, bus, bicycle and walking. The idea of TOD fostering travel by means other than private autos goes hand-in-hand with the City of Thornton's Complete Streets Policy which seeks "...to ensure that roadways are designed and operated to be safe, comfortable, and convenient for drivers, bicyclists, transit vehicles and users, trail users, and pedestrians of all ages and abilities."

Includes compact and compatible development. TOD allows higher density development – or more units and square footage per acre – than other traditional neighborhoods. As mentioned above, it might include both horizontal and vertical mixed uses, meaning that more and different types of development could occupy a smaller 'footprint' of land than traditional development. This type of compact land use pattern promotes easy pedestrian connections and comfortable access to the transit station and surrounding uses. To do so successfully however, and to garner support by the local community, TOD must be designed to complement the existing character of surrounding areas, so that the scale of higher density and compact development is seamlessly integrated into the more single-family, lower density character of the surrounding community.

1.3 Station Area Vision

Based on these TOD characteristics, the City of Thornton has articulated a vision that is specific to the Original Thornton at 88th Station Area and has both guided development of this Plan and will continue to guide future development and decision making in the Station Area.

Guiding Vision: Create a station area that is integrated and well-connected to the existing neighborhood; that promotes and builds upon appropriate commercial, educational, employment and housing opportunities.

1.4 Purpose of the Plan

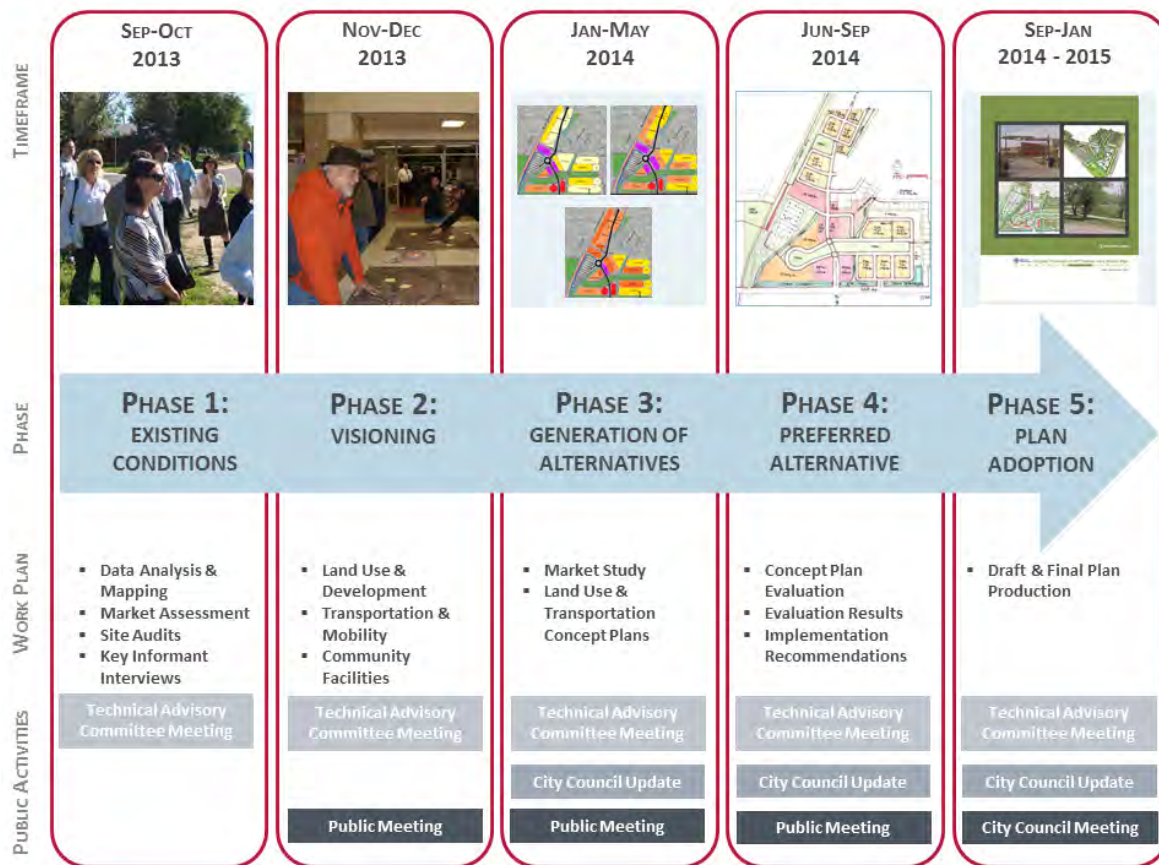
The Original Thornton at 88th Station Area Master Plan provides a clear vision and planning framework for future private development and public investment over the next 25 years. This Station Area Master Plan will serve as a blueprint for City staff and elected officials to use as they move forward in making policy, regulatory and investment decisions needed to make TOD in the station area a reality. The Plan establishes a flexible framework for private investment in development and redevelopment, while providing appropriate guidance related to the types of land uses, transportation infrastructure and Station Area amenities desired by the community.

1.5 Planning Process

The Project Team initiated the planning process in Fall 2013 and developed the Plan through a series of five phases, as described here and shown in Figure 1.3:

- **Phase 1: Existing Conditions.** The first phase of the planning process involved (1) collecting and analyzing data on existing conditions; (2) conducting a market analysis of the Station Area; and (3) holding focused discussions to assess land use planning and development opportunities and constraints within the Station Area.
- **Phase 2: Visioning.** In the second phase of the planning process, the Project Team used the information gathered in Phase 1 to articulate a Station Area vision that relays what community members, elected officials and City staff would like to see in the Station Area as it transforms. The Project Team used the vision statement throughout the planning process as a means to ensure that the development, evaluation and refinement of Land Use Alternatives would meet the community's articulation of what it envisions for the area.
- **Phase 3: Generation of Alternatives.** The third phase of the planning process involved working with City staff and stakeholders to develop conceptual level Land Use Alternatives for the Station Area. Building on a circulation and open space framework, the Project Team developed three distinct alternatives that varied by their land use configurations and levels of planned residential densities. Each of the alternatives was designed to meet the future build-out or development potential for the area, as outlined in the market study.
- **Phase 4: Preferred Land Use Alternative.** In the fourth phase of the planning process, the Project Team, with guidance from elected officials and property owners and public input, carried forward and further refined the land use alternative that best met the station area vision, market realities and desired densities for the Station Area. The Preferred Land Use Alternative is intended to be a flexible blueprint that illustrates a concept that can accommodate change over time while still maintaining the overall vision for transit supportive development within the Station Area. This phase also entailed developing a set of guiding principles and implementation strategies to guide future development and investment.
- **Phase 5: Plan Adoption.** The last phase of Plan development involved developing and presenting the draft Plan to City Council, posting the draft Plan on the City's webpage for public review, and incorporating final recommendations into the document for adoption by City Council.

Figure 1.3: Planning Process and Timeline



1.6 Community Engagement

Involving community members in the planning process was an important part of gaining broad support for the Plan. During each phase of Plan development, the Project Team engaged City staff, City Council, regional agency partners, key stakeholders and residents to obtain their ideas and perspectives. The Project Team offered a range of community engagement activities, allowing ample opportunities for all interested community members to become informed and provide input and feedback into the Plan. These activities are described below.

Table 1.1 lists the primary community engagement activities, their dates and the items covered at that event.

Table 1.1: Community Engagement Activities

Meeting/Activity	Date	Topic
City Council Update #1	April 23, 2013	- Project Overview - Funding Overview - Intergovernmental Agreement
Thornton Harvestfest	September 7, 2013	- Project Overview - Issues & Opportunities
Key Information Interviews (8)	September 24 & 26, 2013	- Station Area Interests & Plan Goals - Issues

Meeting/Activity	Date	Topic
Technical Advisory Committee (TAC) #1	October 1, 2013	• Site Audit • TAC Roles & Responsibilities • Project Overview • Strengths, Weaknesses, Opportunities, Constraints (SWOC)
Technical Advisory Committee #2	November 12, 2013	• Existing Conditions • SWOC Results • Market Conditions & Potential Barriers • Draft Vision
Community Meeting #1	December 4, 2013	• Project Overview • Station Area Opportunities & Constraints • TOD Concepts • Draft Vision
City Council Update #2	January 28, 2014	• Project Introduction & Outreach Activities • Station Area Conditions • Draft Vision
LiveWell South Adams County – Thornton Neighborhood Group	February 6, 2014	• Project Overview
Technical Advisory Committee #3	February 11, 2014	• Market Assessment & Forecast • Initial Land Use Alternatives
City Council Update #3	April 22, 2014	• Market Forecast • Draft Land Use Scenarios
Thorntonfest	May 17, 2014	• Project Update • Draft Land Use Alternatives
Technical Advisory Committee #4	May 22, 2014	• Draft Land Use Alternatives
Community Meeting #2	May 28, 2014	• Station Area Vision • Market Assessment
Developer Forum	June 25, 2014	• Station Area Overview • Draft Land Use Alternatives • Developer Perspective & Input
City Council Update #4	July 15, 2014	• Public & Developer Input • Preferred Land Use Alternative
Technical Advisory Committee #5	August 21, 2014	• Preferred Land Use Alternative
Community Meeting #3	September 4, 2014	• Preferred Land Use Alternative
City Council Update #5	December 9, 2014	• Draft Station Area Master Plan
City Council Meeting	January 13, 2015	• Adopt Station Area Master Plan

City Council Updates

The Project Team provided periodic updates and briefings to City Council throughout the duration of the planning process. City Council provided direction related to the vision for the Station Area, draft Land Use Alternatives, the Preferred Land Use Alternative and final recommendations to ensure the Plan aligns with the greater goals of the Thornton community.

Community Meetings

The Project Team held three community meetings at key milestones throughout the planning process. The purpose of these meetings was to maximize information sharing and effectively incorporate the concerns, ideas and needs of the public into development of the Plan. Meeting formats included open house workshops with interactive formats as well as formal presentations with question and answer periods. All meetings were held in close proximity to the Station Area and included targeted community engagement efforts to include the Spanish-speaking community, with Spanish translation available.



Thornton residents review project information at the first community meeting.

Technical Advisory Committee

At the initiation of the planning process, the Project Team invited a cross-section of City staff and local and regional agency partners to join a Technical Advisory Committee (TAC). The TAC met five times throughout the planning process at key milestones and was instrumental in addressing issues, reviewing options and alternatives and developing recommendations as a group.

Other Outreach Activities

Other community engagement consisted of activities that were intended to provide multiple ways of participating in the process and provide access to different segments of the public, as described here:

Key Informant Interviews

At the outset of the planning process, the Project Team conducted eight 45-minute interviews with key informants who represented a cross-section of interests within the station area and the greater Thornton community. The Project Team conducted interviews between September 24th and 26th, 2013.

Property Owner and Stakeholder Meetings

The Project Team held one-on-one meetings with interested Station Area property owners and stakeholders throughout the planning process to inform them of the project, provide updates and understand their respective interests in Station Area development.

Developer Forum

As conceptual alternatives were being developed and refined, the Project Team invited local and national developers to provide input into the Plan. The developers relied on their experience and perception of the market to provide feedback on feasible types of development and densities for the Station Area. They provided a realistic appraisal of issues and opportunities which ultimately helped to inform development of a Preferred Land Use Alternative.



Local developers provided their perspective and experience as they related to the Original Thornton at 88th Station Area.

MindMixer Website

The Project Team developed a customized Mindmixer website specifically for this planning process. Mindmixer provided an online tool for capturing public input, promoting on-line community dialogue and served as an on-going source of providing information for those that may not have been able to attend community meetings. Website visitors provided ideas on a range of topics, from improving walkability in the station area to the types of land uses people would like to see developed around the station.

1.7 Organization of the Plan

Following this introductory chapter, the Plan includes the following chapters:

Chapter 2 - Existing Conditions. Describes current conditions in the Station Area and includes details on land use, community facilities, demographics, development and infrastructure. The Project Team used this background data and information to comprehensively understand the Station Area context and to describe the physical, regulatory and policy setting that shaped development of the Plan.

Chapter 3 - Station Area Market Potential. Outlines the long-term market potential for various types of land uses in the Station Area. The information contained in this chapter is the result of a detailed residential and commercial market analysis, presented in full in Appendix A. It was used by the Project Team to gauge the short-range and long-term demand for development and to align Station Area planning with market realities and dynamics.

Chapter 4 - Alternatives Considered. Describes the range of Land Use Alternatives created by the Project Team. Using information from the existing conditions and market analysis, the Project Team developed three distinct Land Use Alternatives that are illustrated as land use and circulation diagrams. This chapter also describes the level of densities proposed under each alternative and how build-out of the Station Area would meet the area's market potential.

Chapter 5 - Preferred Alternative. Presents the Preferred Land Use Alternative, which best meets the Station Area vision. The Preferred Land Use Alternative provides a flexible framework by which the public and private sectors can move forward with future planning, development and implementation strategies to realize the Station Area vision. This chapter includes a description of the general land use, transportation, open space and infrastructure framework for the Preferred Land Use Alternative.

Chapter 6 - Guiding Principles. Details a number of principles used by the Project Team to develop the Preferred Land Use Alternative. These are guidelines the City can expect to see incorporated into future development plans for the Station Area. It also includes case studies that provide useful information and lessons learned from communities implementing TOD in similar settings.

Chapter 7 - Implementation Strategies. Explains the steps needed to transform the Plan into reality, with the aim of providing guidance on ways to implement projects recommended through this planning process. This chapter clearly describes the public and private tools, programs and mechanisms needed to implement the Preferred Land Use Alternative. It identifies implementation timeframes, roles and responsibilities, taking into account the City's limited fiscal resources.

Chapter 2.0 Existing Conditions Analysis

An important aspect of the Station Area planning process is understanding the existing conditions in the half-mile Station Influence Area surrounding the station, as well as any future plans for this area.

This chapter provides an overview of existing conditions, including the following characteristics:

- Land use;
- Community facilities;
- Demographics;
- Development; and
- Infrastructure.

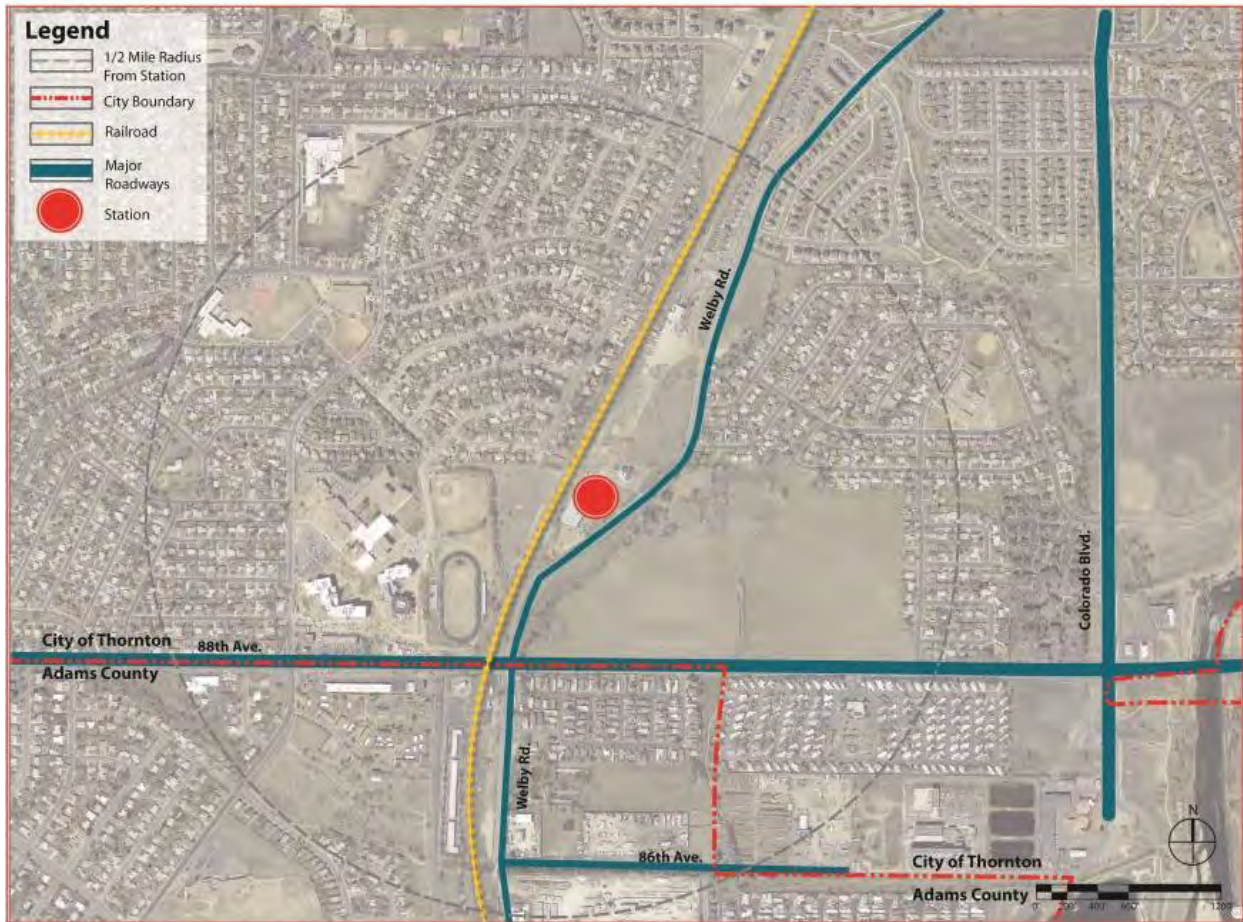
Existing conditions information provided the Project Team and Technical Advisory Committee with a detailed understanding of the Station Area. This perspective helped inform the planning process.

2.1 Land Use

Jurisdiction

The FasTracks North Metro Line Original Thornton at 88th Station will be located within Thornton city limits along Welby Road, approximately 0.25 miles north of 88th Avenue. The Station Influence Area, as shown within the half-mile radius in Figure 2.1, is predominantly within the City of Thornton, however, the City's boundary with Adams County lies along 88th Avenue and the extension of Steele Street alignment north from 86th Avenue to 88th Avenue. This means that part of the Station Influence Area south of 88th Avenue falls within the jurisdiction of unincorporated Adams County, requiring close coordination with the County as City plans progress.

Figure 2.1: City of Thornton Jurisdiction Boundaries



Existing Land Uses and Character

The existing land uses surrounding the station are predominantly residential, with a mix of diverse uses occupying various parcels throughout the Station Influence Area.

The majority of residential uses west of the rail alignment are considered part of “Original Thornton,” a neighborhood developed in the 1950’s and 60’s which has an increasingly aging population. On the north side of 88th Avenue, the Mapleton School District’s Skyview Campus (described further in Section 2.3) is the newest and most prominent land use feature in the area. A string of auto-oriented small-scale commercial buildings fronts much of 88th Avenue between York Street and the rail alignment; and a mix of single-family and multifamily neighborhoods characterize the area further south of 88th Avenue.

The northeast quadrant of the Station Influence Area is comprised mostly of single-family detached homes, with adjacent portions of vacant land, parks and open space within the Thornton Valley East and Columbia Park neighborhoods. These single-family neighborhoods were well established throughout the 1960’s and 70’s, followed by the development of higher

density multifamily apartments along Colorado Boulevard almost a decade later. Townhomes further north along Welby Road were also developed in the early 2000's. Two smaller parcels of industrial uses are located immediately east of the rail alignment and west of Welby Road. The largest area of undeveloped land is located immediately east of the station and north of 88th Avenue and totals approximately 57 acres.

The area immediately south of 88th Avenue is occupied largely by the manufactured home communities of Thornton Mobile Estates, with just over 200 units, and Chaparral Village, located in unincorporated Adams County, with just over 100 units. The southwest quadrant of the Station Influence Area also contains a large concentration of industrial uses. This area is characterized by a mix of light and heavy industrial facilities, ranging from outdoor storage to steel manufacturing.

These pictures of the Station Area show the current land uses and character of the surrounding land.



Typical single-family residence in the Station Influence Area.



Truck traffic at 88th Avenue and Welby Road.



View looking south toward 88th Avenue across large vacant parcel.



Typical neighborhood park.



Retail stores located along 88th Avenue.



View of the Union Pacific Railroad tracks looking north from 88th Avenue.



Manufactured home community.



View looking south along the Lower Clear Creek Canal, which runs the extent of the largest vacant parcel within the station.



Thornton Valley East neighborhood.



View looking west toward Welby Road across large vacant parcel.

2.2 Zoning and Planned Land Use

The majority of zoning in the Station Influence Area is residential (71.6%), with pockets on the east side of the rail tracks zoned for alternate land uses. Most of the zoning in the Station Influence Area is consistent with existing land uses, as well as future land uses identified in the City of Thornton 2012 Comprehensive Plan (shown in Figure 2.2), with the exception of the following two areas:

- Immediately to the northeast of the station along the rail tracks, there are approximately 65 acres zoned for industrial and business park uses. However, the City's Future Land Use Map, a component of the Thornton Comprehensive Plan, calls for these parcels, along with most of the large vacant property to the east, to be developed as an "urban village." The Urban Village future land use category allows high intensity mixed-use development in a compact, pedestrian-oriented environment.
- To the south of 88th Avenue, a 42-acre tract of land between 86th and 87th Avenues is zoned as industrial land, however the City's Future Land Use Map designates this area as an employment center and institutional use. The Employment Center future land use category is intended to serve as a primary location for non-retail employment, providing flexibility for the location of such diverse uses office parks, corporate campuses and industrial parks that provide business infrastructure. The Institutional future land use category allows for government, civic, and community facilities such as libraries, recreation, and schools.

Figure 2.2: Station Influence Area Planned Land Uses

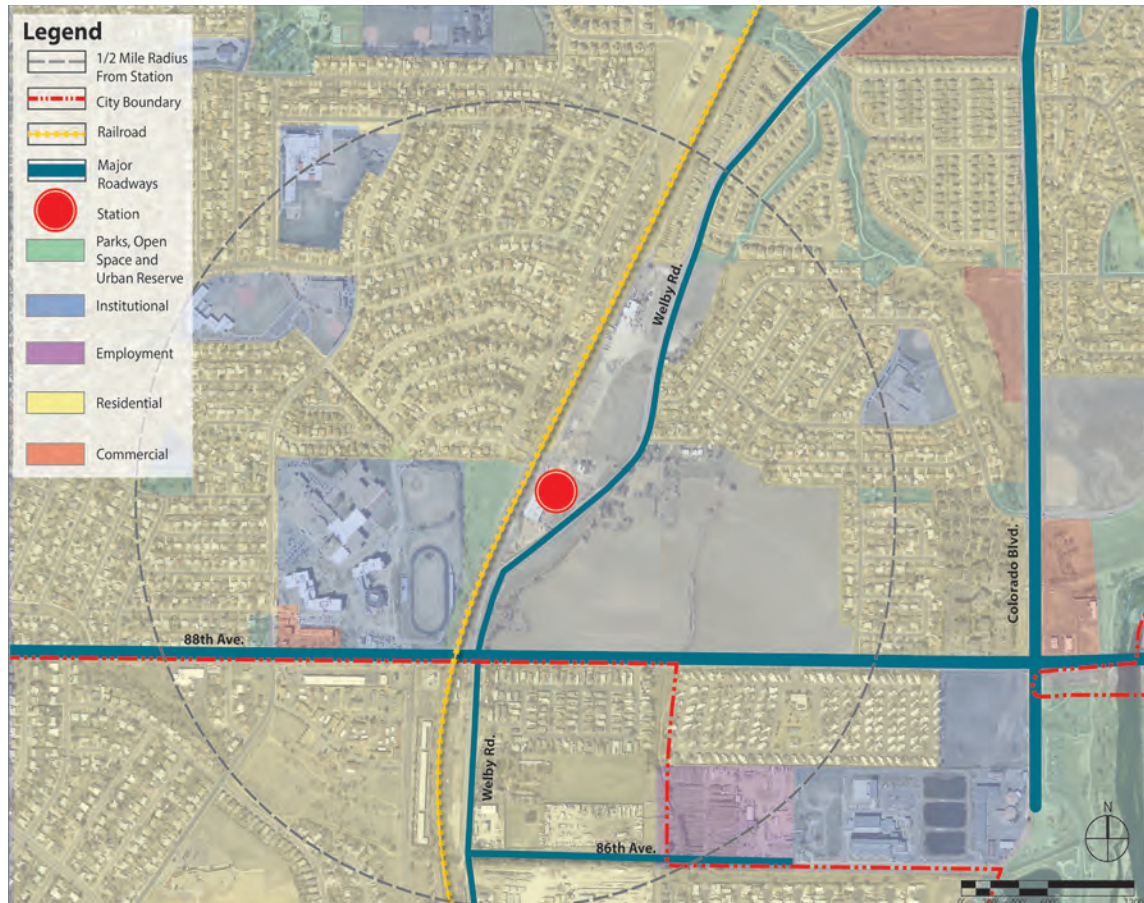


Table 2.1 illustrates current zoning within one-half mile of the station. Figure 2.3 shows the housing mix between single-family homes and multifamily/manufactured homes.

Table 2.1: Station Influence Area Zoning

Zoning	Percent
Single-Family Detached	59.0%
Parks and Open Space	10.8%
Single-Family Attached	7.5%
Planned Development	6.3%
Multifamily	5.1%
Manufactured Home	4.5%
Industrial	2.8%
Mineral Conservation & Agricultural	1.9%
Community Retail	1.6%
Business Park	0.4%

Source: City of Thornton, Adams County

Land Ownership Patterns

Much of the land ownership pattern in the Station Influence Area is typical of well-established single-family residential neighborhoods, with individual small lot (<1/4 acre) ownership patterns. The Station Influence Area, however, is also characterized by a handful of larger lots in the immediate vicinity of the station. The area west of the rail tracks on either side of 88th Avenue contains relatively large parcels, ranging in size from 1.5 to 35 acres. While most of the larger developed parcels have fragmented ownership, the largest undeveloped parcel immediately east of the station is currently under single ownership.

2.3 Community Facilities

Schools

The Original Thornton at 88th Station Influence Area contains a large concentration of public schools. There are over 3,500 students enrolled in the nine schools located within one-half mile of the station, all of which are part of the Mapleton School District. Over 1,500 of these students are housed at one of the



Newly constructed Mapleton School District Skyview Campus.

five schools located on the Skyview Campus. The campus underwent a \$64 million renovation and re-opened in 2012 with a community library, theater, sports fields, and a gymnasium. A joint use agreement has been established with the City of Thornton for public use of these facilities. Table 2.2 details the schools in the Station Area.

Table 2.2: Station Influence Area Schools

Name	Grades	Enrollment (2013-2014)
Academy High School (Skyview Campus)	9-12	311
Mapleton Expeditionary School of the Arts (Skyview Campus)	7-12	543
Clayton Partnership School (Skyview Campus)	K-8	417
Mapleton Early College (Skyview Campus)	9-13	174
North Valley School for Young Adults (Skyview Campus)	Ages 17-21	83
Explore Elementary	PK-6	339
Achieve Academy at Bertha Heid	PK-8	482
York International	K-12	740
Meadow Community School	PK-8	415
Total	-	3,504

Source: www.schoolmap.org

Parks, Open Space and Community Facilities

The Station Influence Area includes varying types of parks and open spaces as shown in Figure 2.4. In addition to those owned by the City, parks that are under a joint use agreement with schools provide additional opportunities for recreation within the Station Influence Area. Though located just outside of the Station Influence Area, Thornton Community Center has been included in this inventory because of the significant recreational resources it provides to the community. Aspen Park, Community Park, Platte River Trailhead Park, and Meadow Community School, located just outside the Station Influence Area, are also identified in Figure 2.4 because they are close enough to provide recreational opportunities for residents and students in this area. Table 2.3 details the parks in the area.

Table 2.3: Parks Within and Near the Station Influence Area

Name	Grades	Amenities
Skyview Campus	Community center (joint use)	Playground, playing fields, open space, sports courts, community garden, library.
Lily Park	Park	Playground, open space.
Yucca Way Open Space	Open space (non-developed)	Open land.
Thornton Community Center	Park, community center	Outdoor pool, skate park, playing fields, gym, teen center, open space.
Aspen Park	Park	Trails, open space.
Columbia Park	Park	Playground, open space.
Meadow Community School	Park (joint use)	Playing fields, pavilion.
Sam Molinaro Park at Explore Elementary at Bertha Heid Campus	Park (joint use)	Playing fields, pavilion.

Source: City of Thornton 2012 Parks and Open Space Master Plan

Other Community Facilities

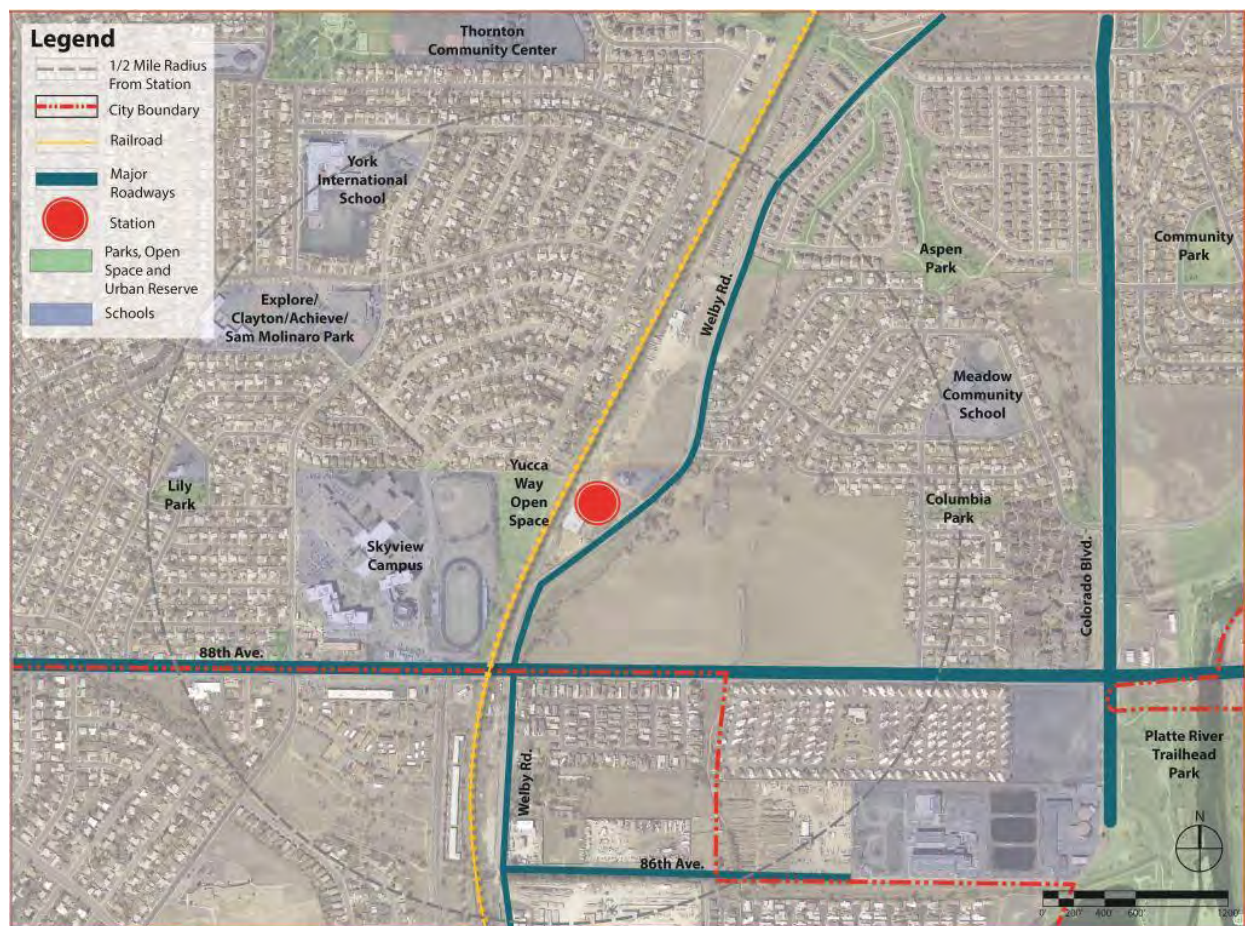
Churches. There are two churches located within the Station Influence Area: Victory Chapel along 88th Avenue, and Thornton United Methodist Church located adjacent to Lily Park. In addition, the Holy Cross Catholic Church, a significant local institution, is located just outside the Station Influence Area, alongside Thornton Community Center.

Library. The Anythink York Street public library opened in 2013 and is housed on the Skyview Campus. The library serves students, as well as the broader community of Thornton and Adams County residents.

Community Garden. The new Mapleton Public Schools Community Garden at Skyview Campus contains forty-two 10-by-13 plots. Twelve of the plots are reserved specifically for Mapleton schools that want to participate, and the rest are open to Mapleton Public School residents.

Food Bank. The Thornton Community Food Bank is located adjacent to the community gardens on the Skyview Campus, housed in the School District's former vocational/tech building. The Food Bank provides free emergency food assistance to those in need, including residents within the Station Influence Area.

Figure 2.3: Schools and Parks/Open Space Within and Near the Station Influence Area



For the purposes of this analysis, the Project Team has included Census block, ACS, and TAZ data for an area that is within approximately one-mile from the commuter rail station.

2.4 Demographics

Although this Plan generally focuses on the half-mile Station Influence Area for purposes of land use development, demographics have been analyzed for a broader one-mile area to consider the greater distance that transit users will come from. Demographic indicators from 2010 Census Block and 2008-2012 American Community Survey (ACS) 5-year estimate data, and the Denver Regional Council of Government's ("DRCOG's") Transportation Analysis Zones ("TAZs") have been assessed for a one-mile radius around the Original Thornton at 88th Station and compared to overall values for the City of Thornton. A summary table is presented in Table 2.4, while detailed descriptions are provided in the sections which follow.

Table 2.4: Demographic Summary Table

	Within one mile of 88th Ave Station	City of Thornton
General (TAZ)		
Population (2010)	25,500	118,800
Population (2035)	31,670	232,940
Employment (2010)	2,540	36,770
Employment (2035)	2,820	71,230
Race and Ethnicity (Census)		
White	46%	62%
Hispanic	47%	29%
Black/African American	1%	3%
Asian	3%	5%
Other	3%	2%
Language (Census and ACS)		
English Primary	78.8%	78.9%
Spanish Primary, English Fluent	14.4%	15.1%
Spanish Primary	6.8%	6.5%
Income (Census)		
Median Household Income	\$53,429	\$62,512
Housing (Census)		
Housing Units	8,845	43,939
Median Housing Value	\$150,000	\$203,000
Home Owners	68%	69%
Transportation (Census)		
Households without a Vehicle	1.5%	3.5%
Average Commute Time	29.3 minutes	28 minutes

Sources: US Census Bureau, DRCOG 2013, 2008-2012 American Community Survey

The one-mile radius around the Original Thornton at 88th Station has a population of 25,500, approximately 21 percent of Thornton's population. This is expected to grow by 24 percent to 31,667 residents by 2035.

Race, Ethnicity, and Language

The racial makeup of the area is divided equally between Hispanic (47%) and White (46%). This differs significantly from the City as a whole which is predominantly White (62%) and only 29 percent Hispanic.

Income

The median household income in the one-mile radius around the Original Thornton at 88th Station is \$53,429, 15 percent lower than the City's median income.

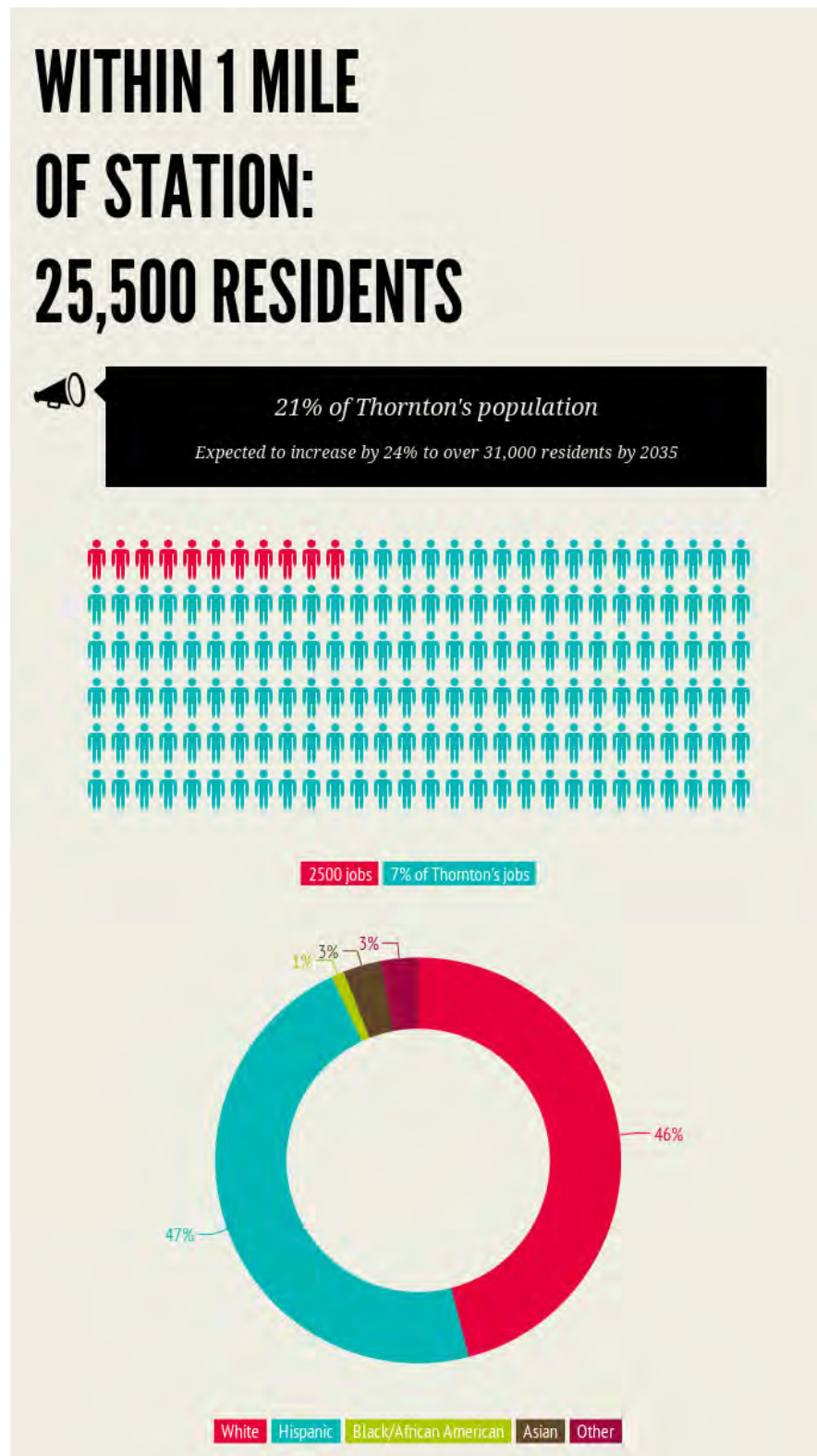
Housing

Sixty-eight percent of residents are homeowners, which is comparable to the City as a whole (69%). However, the median housing value (\$150,000) is 27 percent less than the median value for Thornton. This is explained by the older housing stock comprising 'Original Thornton' in the north-west quadrant of the Station Area which was built predominantly in the 1950's. Original Thornton has been identified as an area in need of revitalization in the South Thornton Revitalization Subarea Plan and is considered an eligible area for the City's Community Development Block Grant Program.

Figure 2.4: Thornton's Population Within One Mile of the Station

The number of jobs located within one mile of the station is much lower than the number of people who reside within one mile of the station: there are approximately 2,500 jobs located within one mile of the station, comprising about seven percent of Thornton's total jobs. This number is expected to increase by only eleven percent to 2,800 jobs by 2035.

Of those with Hispanic background living within one mile of the station, the majority, around 79 percent, are primary English speakers. Of those who are primary Spanish speakers, 14.4 percent speak English fluently, while only 6.8 percent have limited English speaking ability.



2.5 Development

Pending Development & Entitlements

There are three notable pending developments in the Station Area, described here:

The 53-acre Welby Station was rezoned Planned Development (PD) and platted in 2007 for a combined mixed-use and residential development south-east of the proposed station. The project was expected to add 604 mixed-income units in a multifamily context, with another 179 single-family units being added further east from the station. These entitlements are still in place, but this property has since been sold to a new development group and no development has taken place.

In 2011, the City of Thornton approved a 16,000 square-foot expansion project on the Dynamic Metal Fabrication site, located immediately north of the proposed station. This expansion is currently on hold. As this property will be acquired by RTD for the North Metro Rail, the business will need to relocate, preferably within the city of Thornton as the company is a primary employer and important to the City.

The Community Resources & Housing Development Corporation (CRHDC) owns a site east of Welby Road and just south of Beachwood Drive. The property was donated to CRHDC by Washington Mutual. The City and the County are providing funds to assist in the development of the affordable housing units. They are currently in the process of submitting a Conceptual Site Plan and subdividing the parcel to develop two duplexes. There are four units total: two three-bedroom units and two two-bedroom units. Monthly rents are proposed to be \$876 for the two bedroom units and \$1,300 for the three bedroom units which is considered affordable to residents making 80% Average Median Income (AMI) or less.

2.6 Infrastructure

Roadway Network and Traffic Patterns

The area adjacent to the station is characterized by a curvilinear street pattern connecting to a four-lane arterial, 88th Avenue, which has a 24-hour traffic volume of 17,005 vehicles. Welby Road is a two-lane collector, with a 24-hour traffic volume of 5,310 vehicles. To accommodate station access, Welby Road will eventually be realigned by shifting the southern portion to the east to become an extension of Steele Street. A traffic signal will be provided at the intersection of Welby Road/Steele Street and 88th Avenue to facilitate access.

According to the City of Thornton Transportation Master Plan, both Welby Road and 88th Avenue provide levels of service in the range of A-C (acceptable) which are expected to be maintained through 2035.

Drainage

Colorado Agricultural Canal is located immediately east of the current alignment of Welby Road and the Lower Clear Creek Canal is located approximately a quarter-mile further east. A primary concern for existing and future development in the Station Area is drainage and flooding in the low-lying portions of the Station Influence Area. The area was developed in the 1950's, prior to the creation of the Urban Drainage Flood Control District, and 100-year storms cause sheet flows. In 2002, the City and Adams County studied these issues related to the School Tributary and designed drainage and flood control improvements. However, the price tag of approximately \$2.3 million for the comprehensive solution is very expensive. City engineers are currently reinvestigating drainage plans for the area.

Transit, Bicycle and Pedestrian Facilities

North Metro Commuter Rail Station

The North Metro commuter rail service will operate within the existing Union Pacific Boulder Branch alignment through RTD's Original Thornton at 88th Station (shown in Figure 2.5). This alignment crosses 88th Avenue approximately parallel to the current alignment of Welby Road and continues along this trajectory north to 100th Avenue. The rail platform and bus loading areas are located approximately a quarter-mile north of 88th Avenue, with bus and vehicle access primarily via a realigned Welby Road.

Auto and bus access to the station will be via realigned Welby Road with a passenger loading area adjacent to the rail platform. The station will initially include about 561 surface parking spaces, and per RTD's original estimate, could expand to a 1,500-space parking structure by 2035. Bus, pedestrian and bicycle access is described in the sections which follow.

Bus

The Original Thornton at 88th Station Area is served by RTD's Route 88 which travels between Northglenn Marketplace and the Stapleton Park-n-Ride. This service runs along 88th Avenue between the I-76 and Grant Street with a 30 minute service frequency between 6:00 a.m. and 7:30 p.m.

Planned feeder routes to the commuter rail station include a connection north along Dahlia Street which then travels west along 88th Avenue. A service is also planned which travels along 84th Avenue and then loops through the neighborhood to the southwest of the station before turning east along 88th Avenue. RTD will develop a more extensive feeder bus service plan with a year or two of opening day. A Call-n-Ride service, which would shuttle passengers to and from the station on-demand, is also described in the City's Transportation Master Plan.

Figure 2.5: August 2014 RTD Station Concept Plan (Subject to Change)



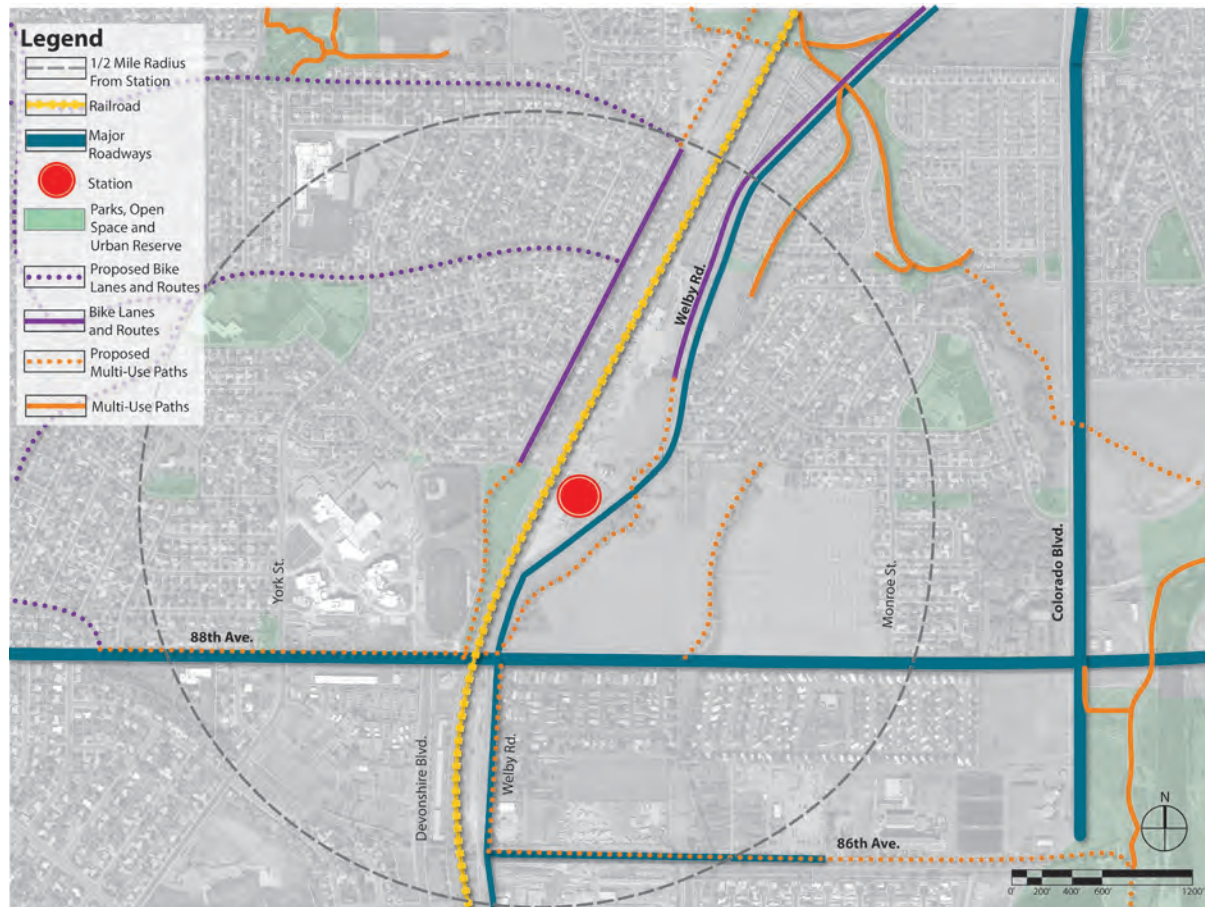
Source: Denver Regional Transportation District (RTD)

Bicycle

There are several discontinuous bicycle facilities within the Station Area. The closest to the proposed station is a multi-use path which travels adjacent to the east side of Welby Road between 88th Avenue and Beachwood Drive. There is also a ½-mile segment of bike lane along Yucca Road on the west side of the rail line. Further from the station, there are connected off-street trails and bike lanes through Aspen Park, along Welby Road and Thornton Parkway, connecting to the Union Pacific Trail which runs parallel to the rail line.

Proposed bicycle facility improvements, as set out in the City of Thornton Parks and Open Space Master Plan (2012), include the completion of the multi-use path and bike lanes along Welby Road. The plan also includes an off-street trail west of the proposed station along the rail alignment and 88th Avenue which connects to existing and proposed bicycle routes in the neighborhood. The City of Thornton Transportation Master Plan also includes a network of planned trails to connect surrounding communities to the proposed station. Existing and planned facilities are shown in Figure 2.6.

Figure 2.6: Station Influence Area Pedestrian and Bicycle Infrastructure



Pedestrian

There are existing pedestrian facilities serving the Station Area, but they do not adhere to the City's current Standards and Specifications for new streets at all locations and will not be adequate for students and community members who want to safely and conveniently walk to the Station Area. There are narrow sidewalks along both sides of 88th Avenue west of the rail line and sidewalks only on the north side of 88th Avenue east of the rail line. A pedestrian signal on 88th Avenue between Thornton Mobile Estates and Chaparral Village does facilitate pedestrian access along the north side of 88th Avenue. Sidewalks are also located in most of the residential neighborhoods to the north and southwest of the station. The neighborhood to the southeast of the proposed station is a manufactured home community and generally does not have pedestrian infrastructure. Social trails, created by pedestrians 'cutting through' are apparent throughout the vacant areas adjacent to the proposed station.

Proposed bicycle facility improvements are primarily multi-use paths which will also serve pedestrians. A pedestrian walkway is proposed to connect the station platform to Yucca Way and the Original Thornton neighborhood to the northwest of the station. This walkway will either be across the track at-grade, or via an underpass at the south end of the station Park-n-Ride.

The City is also looking into the possibility of extending this walkway south along the west side of the rail alignment to 88th Avenue. The trail along the Colorado Agricultural Canal will be relocated to the eastern edge of the RTD Park-n-Ride.

Chapter 3.0 Station Area Market Potential

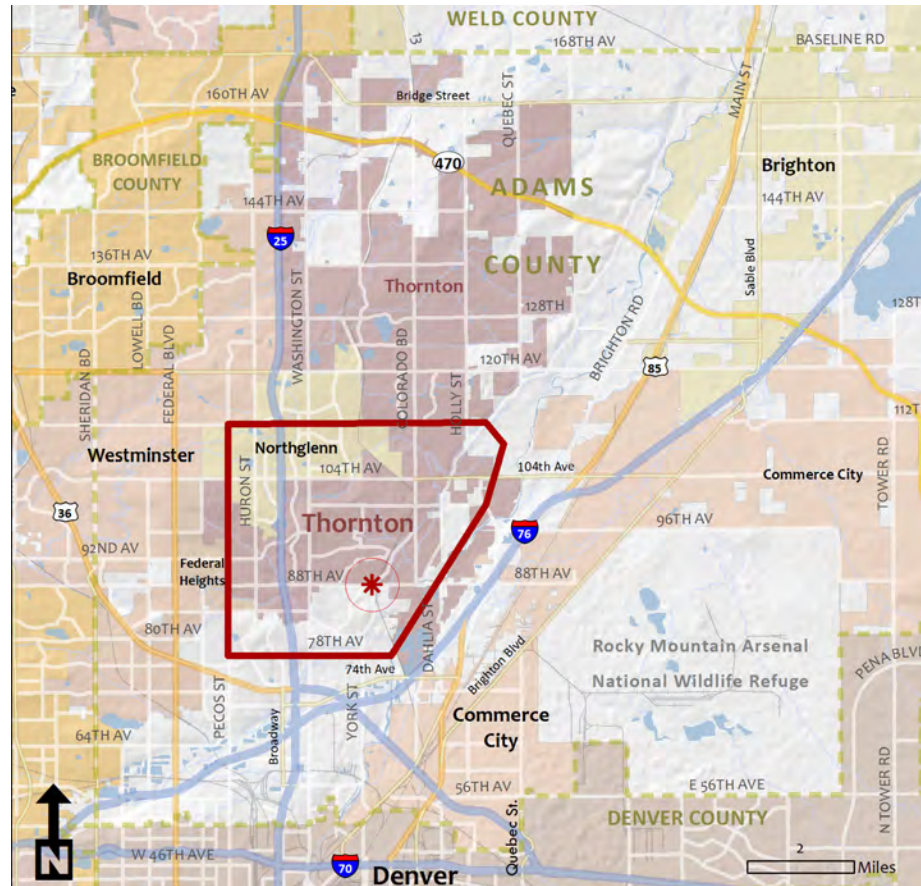
The Project Team conducted a detailed market study to analyze the potential demand for residential and commercial uses near the Station Area. The study considered local market trends, competitive development projects, stakeholder and City feedback as well as input from local and national developers. This analysis formed the basis for planning the types and intensities of uses, alternative scenarios and ultimately the Preferred Land Use Alternative described in Chapter 5. It should be noted that, as with any plan and ultimate development project, the actual mix and timing of development will likely vary based upon a variety of factors including the needs of the property owners, the development and financial markets, the timing and cost of public sector improvements and assistance, and level of private sector investment.

This chapter provides an overview of key market study results and Appendix A includes the full market study documentation.

3.1 Primary Market Area

For purposes of the residential and commercial analysis, a Primary Market Area was designated for the Original Thornton at 88th Station Area (Figure 3.1). It encompasses much of south Thornton; and is bordered by Pecos Street to the west, 112th Avenue in Northglenn to the north and most of the developed area along the eastern boundary of Thornton.

Figure 3.1: Original Thornton at 88th Station Primary Market Area



Developing a neighborhood which takes advantage of proximity to transit will help the Station Area be competitive when compared to other future residential offerings. Based on current development interest, it could potentially be the first station area developed in the City of Thornton and presents a strong development opportunity.

3.2 Residential Market Demand

While TOD market studies typically focus on higher density multifamily development close to the station, the Project Team also examined the single-family residential market. The single-family market was examined because of the neighborhood context and past popular development proposals that have incorporated higher density, small lot single-family residential in the neighborhood.

Market Challenges

One of the challenges with new residential development in this Station Area is the need and desire to attract a varied residential market segment to the area. Introducing a new residential project in the Station Area presents a number of challenges, including:

- The age of the existing housing stock in the immediate Station Area. Single-family residences built in the area average 1,000 square feet, were built in about 1962, and have low median values of \$150,000. Most of the newer single-family residential products at higher average price points are located in the growing suburbs of Thornton.

- Industrial land uses south of 88th Avenue and associated truck traffic. These uses are likely to remain for a long time and may be a deterrent to attracting new residential development.
- The potential cost of infrastructure, particularly stormwater infrastructure. The cost of addressing the storm drainage on the site has been a significant impediment to development in the Station area.

Market Opportunities

In order for a mixed income residential subdivision to take hold, it would be imperative to develop a new residential environment. Price is also important. While most of the new single-family housing sold in the last year was in the \$350,000+ price range in the market area, this Station Area is likely to be strongest offering housing products in the more affordable price ranges in the \$200,000 price range initially. However, it would be important to attract a mix of incomes to the development, and in order to do that, differentiating the area from other competitive offerings in the marketplace and taking advantage of the presence of transit, would be critical.

The Original Thornton at 88th Station represents an opportunity to introduce newer stock into the neighborhood and offer greater housing choices for future Thornton residents who may wish to benefit from proximity to transit. Based on the station context and market analysis, potential residential development at the station area could accommodate some single-family residential closer to the adjacent neighborhoods, while transitioning to higher density development closer to the station. The residential development should be a mix of unit types and income. In order to attract the market rate audience (middle income residents with incomes of \$50,000 plus), it would be imperative to leverage the presence of the station, and create a unique identity, or “sense of place”, particularly at the 53-acre vacant parcel adjacent to the station. [Note that Chapter 6: Guiding Principles, details land use and design principles that will contribute to creating a unique Station Area identity]. Following is a description of residential development potential in the Station Area by rental versus for-sale properties.

Residential Rental Demand

Successful development within the Station Influence Area will depend on identifying and marketing to a new niche (renters in the middle income ranges of \$50,000 to \$75,000 at about \$1.20 per square foot rents) that has been popular in Thornton, but not necessarily in this immediate area. Its success will be incumbent on creating a residential environment conducive to households that are smaller – typically singles and couples (or roommates) that are either childless adults or couples with part-time kids, seniors, and new empty nesters. These household types may like the easy transit proximity to downtown – especially the flexibility and low maintenance associated with smaller properties and pooled property management. One of the advantages a Thornton rental location could potentially provide is relative affordability and a high level of amenities. Potentially larger unit sizes could also be attractive relative to what is being

offered in downtown Denver. Attracting renters at a higher income than what exists currently in the area will require a targeted marketing strategy to attract this demographic.

There is currently market demand for a more affordable rental product, either a tax credit or a housing authority property at about \$1.00 per square foot rents or less. Tax credit programs provide income tax credits (4% or 9%) to developers of affordable housing. The developer must set aside and rent-restrict a number of units, with the units remaining affordable for at least 30 years. It is important to note that all rental projects must include a high level of design and proactive property management in order to create an attractive mixed-income development where affordable housing blends in with market rate housing and the predominantly single-family detached housing environment.

For-Sale Residential Demand

Although most of the area close to the Original Thornton Station Area is built out, the market analysis examined recent single-family residential development in the broader regional area to better understand what new residents to the area are buying and the competitive niche for the station area. Assuming the Station Area has a market area capture rate by price point of between 2 to 9 percent in the low, moderate, and middle income ranges, the Station Area could accommodate 335 to 560 residential ownership units based on long-term market demand (through 2035).

While the majority of demand is for single-family detached homes, there is also significant potential demand for single-family attached units (future demand). One of the challenges currently inhibiting the development of attached residential ownership units is the current construction defects law. While condo and attached housing units were formerly 20% of all new ownership units built, their current share has shrunk to less than 5% of ownership units constructed in the Denver Metro area. Currently, builders, developers and subcontractors have a liability risk posed by current laws that make it easy for homeowners' associations to file large, class-action lawsuits against builders for construction problems associated with new, for-sale housing units, such as condominiums. The resulting slowdown in condo construction has had serious implications for development around new transit stations and for new housing options for lower-income homebuyers.

3.3 Commercial Market Demand

The commercial market analysis examined current and future retail demand and supply in the market areas as well as small office demand. One of the challenges with respect to commercial services in the area is the fairly significant amount of commercial services available in the Thornton market already. While much of these services are located along I-25 and other major arterials, there would be the potential to provide some neighborhood serving uses within the Station Area.

Given the neighborhood orientation of the site, there is relatively modest demand for retail and commercial services (including small offices) of approximately 50,000 square feet in the future once there is a residential community on the site. Mapleton Public Schools / Skyview Campus may also desire additional campus and/or office space in the future.

3.4 Summary of Station Area Market Potential

Table 3.1 details the future development potential for residential and commercial development based on the results of the market analysis. The Project Team incorporated the forecast land use estimates into the development alternatives described in the following chapters.

Table 3.1: Summary of Station Area Developmental Potential

Land Use Type	Market Forecast
Residential	400- 850 units
Product Mix	Single-Family Detached & Attached: 40% Multifamily: 60%
Commercial	50,000 square feet

Source: Arland Land Use Economics

Chapter 4.0 Land Use Alternatives Considered

This chapter describes the evolution of the Land Use Alternatives proposed for the Original Thornton at 88th Station Area. Based on the guiding vision for the Station Area, results of the market analysis and ideas shared by stakeholders and the public, the Project Team developed a range of land use concepts to illustrate how the Original Thornton at 88th Station Area could develop over the next several years and beyond.

This chapter is intended merely to describe the development of the Land Use Alternatives and the process by which they were evaluated and ultimately refined to develop the Preferred Land Use Alternative described in Chapter 5.

4.1 Preliminary Circulation and Open Space Framework

Each of the Land Use Alternatives developed by the Project Team was based on a preliminary circulation and open space network, as shown in Figure 4.1. The framework represents an initial attempt to identify the logical key routes of travel and connections for vehicles, pedestrians and bicyclists throughout the station area and to surrounding neighborhoods and destinations. The primary route of vehicle travel will be via realigned Welby Road. Several suggested east-west connections leading to the commuter rail station and new development areas are also identified in Figure 4.1.

The complementary network of planned parks, open space and on- and off-road pedestrian and bicycle routes would create convenient connections for bicycle and pedestrian travel as well as areas for people to enjoy and recreate.

Figure 4.1: Preliminary Circulation & Open Space Framing (Developed January 2014)



Note: This framework was intended for initial guidance and does not represent approved roads, paths, or open space. The actual framework will be approved by the City at the time of development.

4.2 Proposed Land Uses

Proposed land uses envisioned for the Station Area include a mix of land use types. While development of the Station Area would predominantly be residential, a mix of neighborhood-supporting commercial, office and mixed use would help to create a dynamic and vital community around the station. Table 4.1 provides a description of the land uses identified in the Alternatives.

Table 4.1: Proposed Land Use Categories

Land Use Type	Description
Parks & Open Space	These places provide places for people to enjoy and recreate. In addition to the traditional parks and fields, other examples include: dog parks, fountains, multiuse paths, sculpture gardens, and playgrounds.
Single-Family Residential (Detached and Attached)	This type of housing can be either attached or detached. The City of Thornton predominantly includes single-family detached homes. While these homes do not share any walls, they may share other amenities, including park or playground areas. Single-family attached housing- also known as townhomes or brownstones- provide similar living to single-family detached homes, but units share walls.
Multifamily Residential	This type of housing provides higher density living, including condos and apartment buildings.
Commercial	Commercial can include office land uses, retail and restaurants.
Residential Mixed Use	This type of land use includes a variety of uses with living spaces usually on the upper levels of the building and office, retail or restaurants below.

Figures 4.2 through 4.8 show examples of the land uses described above and depicted in the Land Use Alternatives described in the following sections.

Figure 4.2: Examples of Parks & Open Space

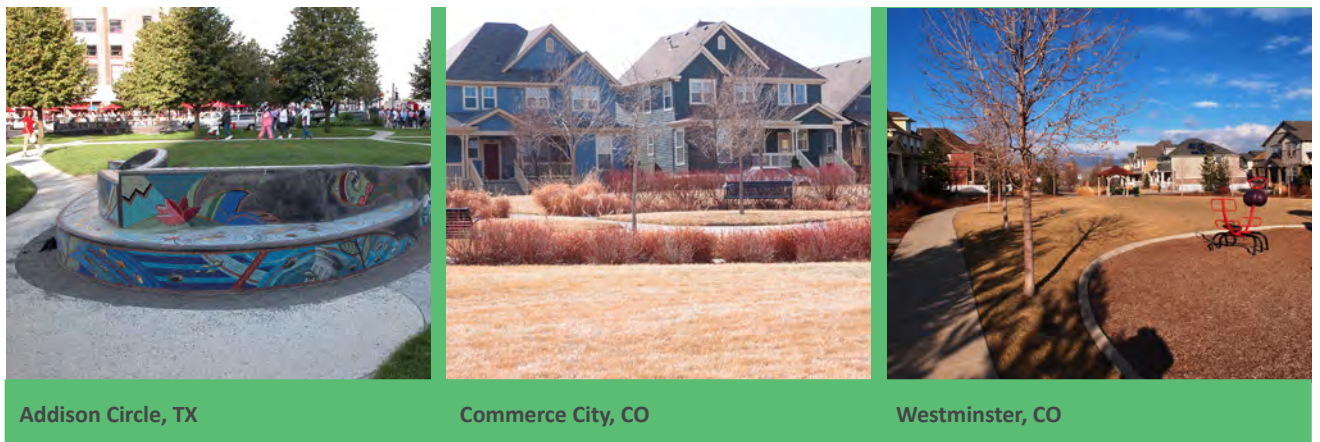


Figure 4.3: Examples of Single-Family Detached Housing



Commerce City, CO



Westminster, CO



Commerce City, CO

Figure 4.4: Examples of Single-Family Attached Housing



Commerce City, CO



Longmont, CO



Commerce City, CO

Figure 4.5: Examples of Multifamily Housing - High Density



Arvada, CO



Sacramento, CA



Madison, CT

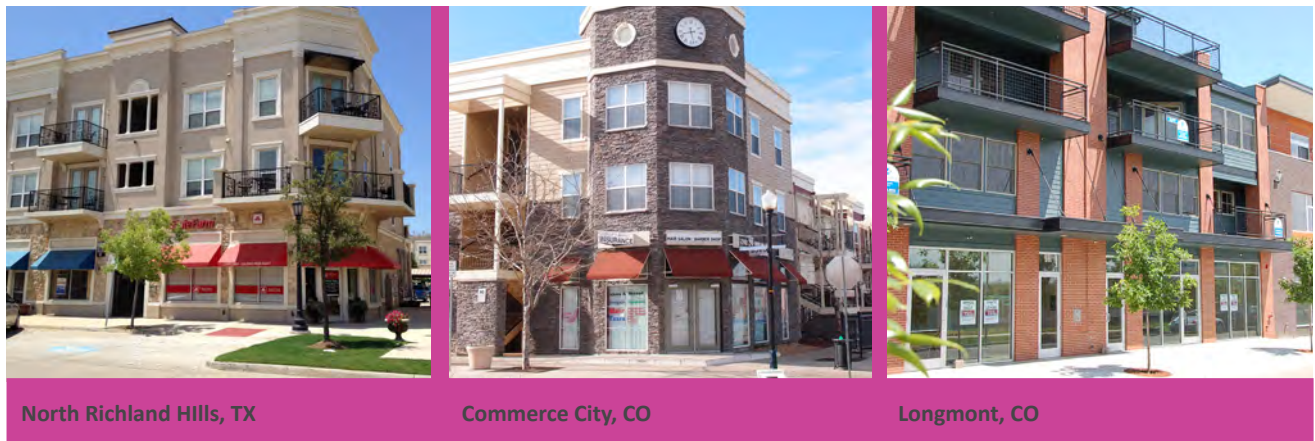
Figure 4.6: Examples of Multifamily Housing - Highest Density



Figure 4.7: Examples of Commercial



Figure 4.8: Examples of Residential Mixed Use



4.3 Land Use Alternatives

The Project Team developed three distinct Land Use Alternatives (as shown in Figures 4.9 through 4.11), each of which depicts various levels of residential density to create a new neighborhood and vibrant Station Area. While the Land Use Alternatives vary in their level of planned residential densities, they each have several land use configuration principles in common, as described here:

- A mix of commercial and residential uses are planned along Welby Road, given that this will be the highest trafficked area and is most likely to support a mix of commercial uses.
- The greatest residential densities and mix of uses are concentrated within the station core, or within a quarter-mile comfortable walking distance of the commuter rail station. This promotes a compact and walkable area within close proximity to transit.
- The planned east-west center open space provides a common recreational amenity to residents living in townhomes and apartments as well as those living on smaller lot single-family residential lots.
- Lower density residential uses are planned for those areas that abut established single-family neighborhoods to ensure compatibility with the Thornton Valley East neighborhood.

Figure 4.9: Low Density Alternative

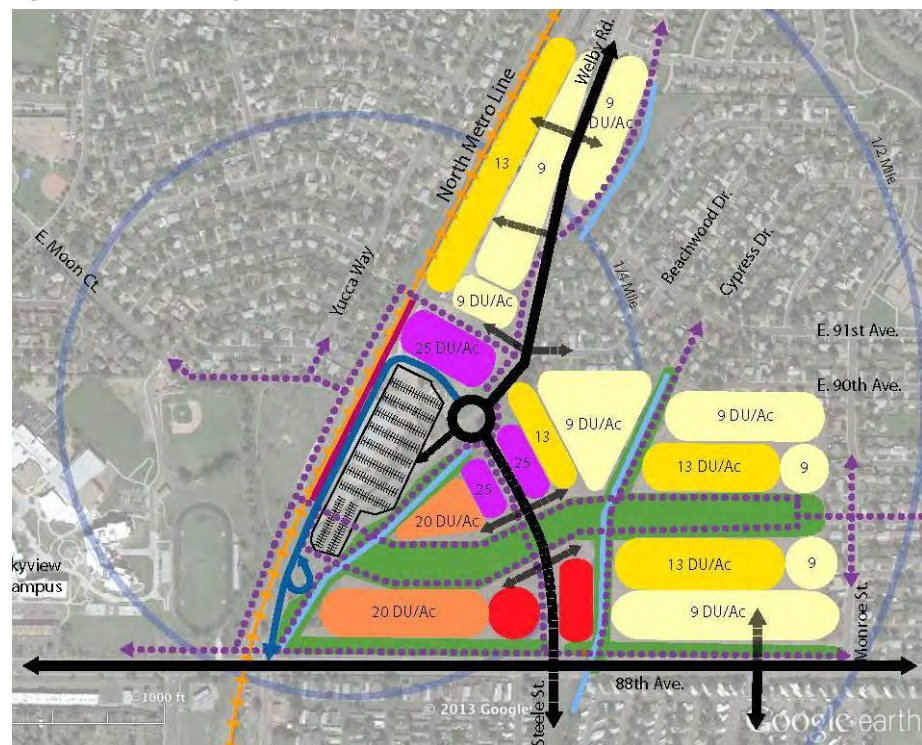


Figure 4.10: Medium Density Alternative

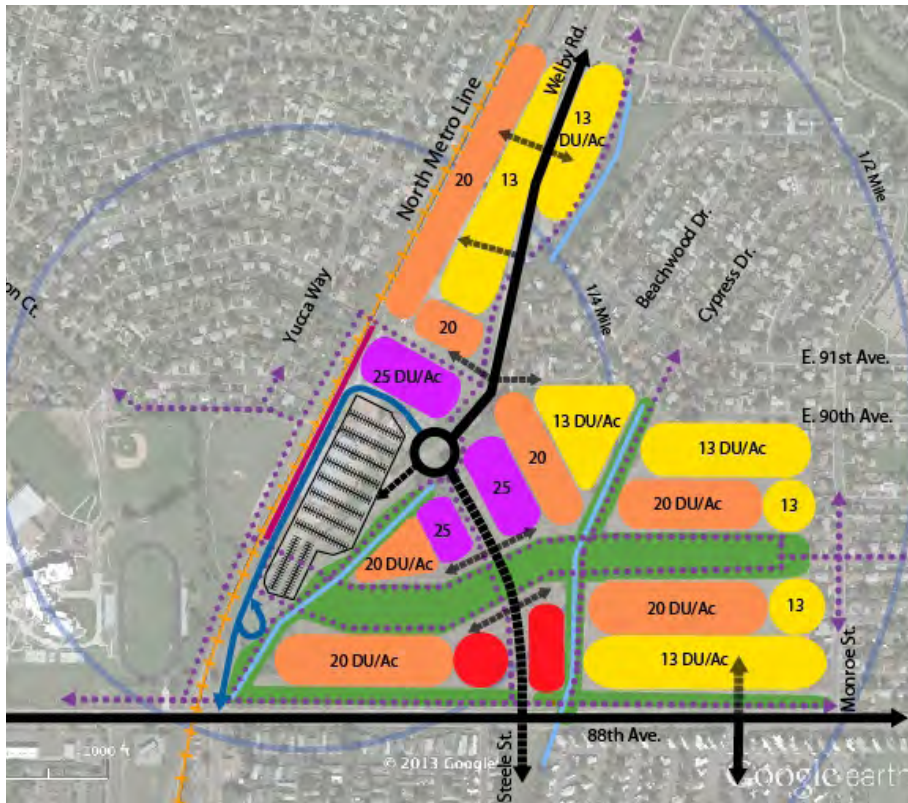


Figure 4.11: High Density Alternative



Table 4.2 below compares the land use build-out for each of the three Land Use Alternatives. The number of residential units and land use makeup generally fall within the range of what the market forecast calls for in the Station Area, with two exceptions. The High Density Alternative plans for a significantly greater amount of multifamily residential development than is forecasted for the area to absorb. Also, both the Medium Density and High Density Alternatives plan for considerably more commercial development than is forecasted.

Table 4.2: Summary of Proposed Land Uses

Land Use Type	Low Density Alternative	Medium Density Alternative	High Density Alternative	Market Forecast
Total Residential Units	500 units	650 units	700 units	400-850 units
Single-Family Detached + Attached	53%	34%	20%	40%
Multifamily	47%	66%	80%	60%
Commercial	50,000 sf	60,000 sf	70,000 sf	50,000 sf

4.4 Evaluation of Alternatives

The Project Team evaluated each Land Use Alternative based on its alignment with the vision, market feasibility, City Council direction, and community and stakeholder preference. The aim of the evaluation was to select one Land Use Alternative to carry forward for further refinement and designation as the Preferred Land Use Alternative. The evaluation included discussions with a number of stakeholders, developers, members of the general public and elected officials.

The Project Team presented the Land Use Alternatives to City Council and the general public, where the general preference was to see more moderate (low or medium density residential development) in the Station Area. At the same time, both elected officials and community members stressed the importance of introducing new services, amenities and attractions that would increase the area's market value.

Following these discussions, the Project Team held a Developer Forum to present the Land Use Alternatives to a number of developers who are active in the local and national development industry, and have extensive experience developing mixed-use and transit-oriented projects. The general consensus among the developer interests was that the overall vision and range of densities would be supportable in the Station Area and they stressed the importance of creating an identity and sense of place, irrespective of the selected density mix. Many developers noted that it is important that the City work with private developers to create a place people want to be and to actively market the Station Area as a destination with a unique and distinct identity.

4.5 Recommendations

Based on this evaluation and community feedback, the Project Team determined that a modified version of the Low Density Alternative best met the vision for the Station Area as well as the market forecast, with further refinements needed to provide a flexible range of densities to accommodate fluctuating market conditions, and increase density within the core area closest to the station. The land use mix and proposed densities would also meet the goals of the community by ensuring neighborhood compatibility while supporting neighborhood-serving retail development.

With this direction, the Project Team developed the Preferred Land Use Alternative described in the next chapter.

Chapter 5.0 Preferred Land Use Alternative

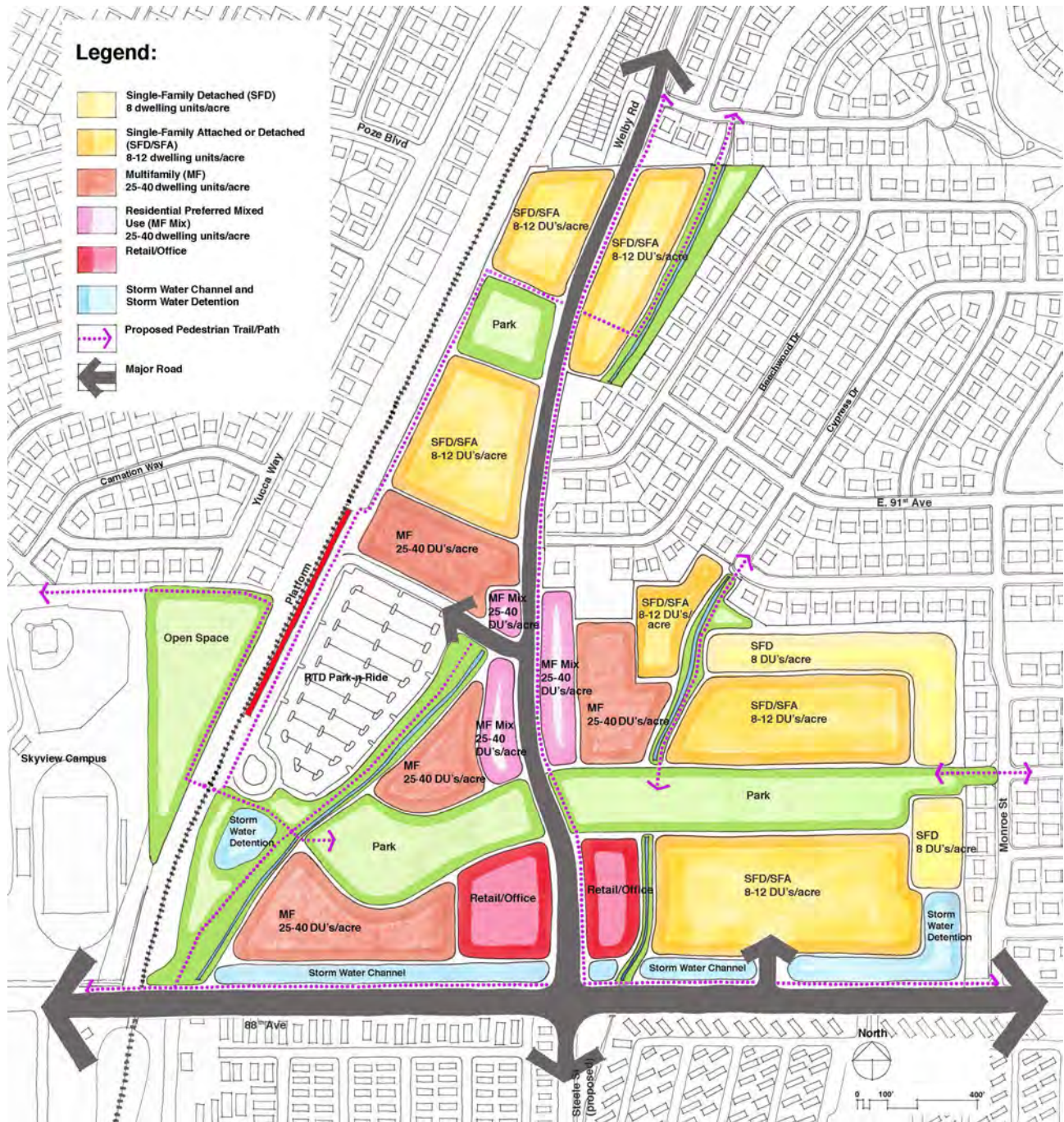
The Preferred Alternative is based on the long-term planning vision for this area and is intended to create a rich mix of land uses within convenient walking distance of the station. It was defined through multiple working sessions with City staff, stakeholders and public input and is planned to meet the forecast market absorption rates for this area. The Preferred Alternative is an example of how TOD could evolve in the Station Area. Actual development will depend heavily on the local economy and real estate market, local developer response to those market conditions, incentives that may be offered by the City as well as RTD investment and construction.

The intent of the Preferred Alternative is to provide a framework for a level of increased density that supports transit ridership, respects the lower density character of surrounding neighborhoods and ensures quality development that increases the market value of the entire area.

While most of the land area in the Preferred Alternative in Figure 5.1 is currently vacant, approximately 11 acres of land located along the east side of the railroad tracks is occupied by active industrial businesses, as well as former church property that is for sale. One of these properties, Dynamic Metals Fabricators, will be acquired by RTD for development of the commuter rail station. It is assumed that over time the other industrial businesses may choose to relocate; with the area adjacent to the tracks transitioning into more transit-supportive uses.

The proposed ratio and densities of land use types shown in the Preferred Alternative would create a strong residential community and allow for a modest amount of retail land use to serve transit users and support both new and established neighborhoods. At the high end of proposed units, and with a current household size of 2.86 persons per household, the station area could see a population increase of approximately 1,900 residents, with ample parks, open space and amenities incorporated into the new neighborhood.

Figure 5.1: Preferred Alternative for Original Thornton at 88th Station Area



Key elements of the Preferred Alternative include:

- A diversity of housing types integrated throughout the Station Area, with higher intensity uses located in close proximity to the station (core densities);
- A tapering down of land use intensity to the north and east (transitional densities) as they near the surrounding single-family neighborhoods; and
- A large central park spine running east-west through the length of the station area that knits the distinct areas into one cohesive neighborhood.

5.1 Land Uses

Land uses planned for the Station Area are primarily residential, with the highest density multifamily uses located adjacent to the station and residential densities stepping down as they near the surrounding neighborhood. Table 5.1 summarizes the types of land use for the Original Thornton at 88th Station Area and provides an estimate of the number of units that may be developed based on a conceptual build-out. Actual unit count will vary depending on the density, road configuration, amenities, and other development requirements.

Table 5.1: Proposed Station Area Land Uses

Proposed Land Uses	Estimated Units* & Square Footage
Residential	662 units
<i>Single Family Detached & Attached</i>	<i>218 units</i>
<i>Multifamily</i>	<i>444 units</i>
Commercial/Office	61,000 Square Feet
Parks and Open Space	9 acres

***Note:** These estimates are based on the example conceptual build-out configuration shown in Figure 5.2. However, the Preferred Alternative shows a flexible range of densities throughout the site and therefore the actual number of units developed will vary depending on whether the lower end of the density range (25 du/a for multifamily, and 8 du/a for single-family) or higher end of the density range (40 du/a for multifamily, and 12 du/a for single-family) is developed, the exact road configuration, and amenities included.

The residential mix is intended to encourage a wide range of housing choices to accommodate families, seniors, and young professionals and to promote a mixed-income community. Commercial, office and higher density mixed-use residential development would be concentrated along Welby Road to provide opportunities for neighborhood serving retail uses for residents and transit users alike.

The Preferred Alternative allows for up to 60,000 square feet of commercial or office uses along Welby Road, understanding that the demand for commercial space may be lower depending on location and market conditions. For instance, the northeast and northwest corner of 88th Avenue and realigned Welby Road have the highest visibility and would be well positioned to develop as commercial/office uses. Areas along Welby Road that are more internal to the Station Area (with less visibility) may need to transition to commercial uses as market conditions change; or the market may dictate that residential products are more viable in this location. Additionally, Mapleton School District could potentially locate administrative office or educational space at this site to take advantage of proximity to Skyview Campus.

Regardless of the land use type, strongly regulating the built form to create a high quality design will help to ensure that the core station area is distinct as a place. A mix of land uses that are designed to encourage pedestrian activity will enliven the area and encourage walkability. This includes:

- Buildings built to the front right-of-way line;
- Storefront design at the street level; and
- Full width sidewalks with streetscape amenities (e.g. trees in tree grates and pedestrian light fixtures).

To provide an example of this built form, Figures 5.2 through 5.4 illustrate, with building footprints, a conceptual build-out of the Preferred Land Use Alternative. Chapter 6 provides more detail on the Guiding Principles related to the built form and urban realm in the station area.

Land use subareas are used to structure the Preferred Alternative. Establishing these subareas serves to identify specific places within the Station Area that have development opportunities with distinct physical characteristics. The four distinct districts include the Eastern, Northwest, Central, and Southwest Subareas, as described on pages 5-9 through 5-12, and depicted in Figures 5.5 – 5.8.

Figure 5.2: Conceptual Build-out of Preferred Land Use Alternative (representational only)

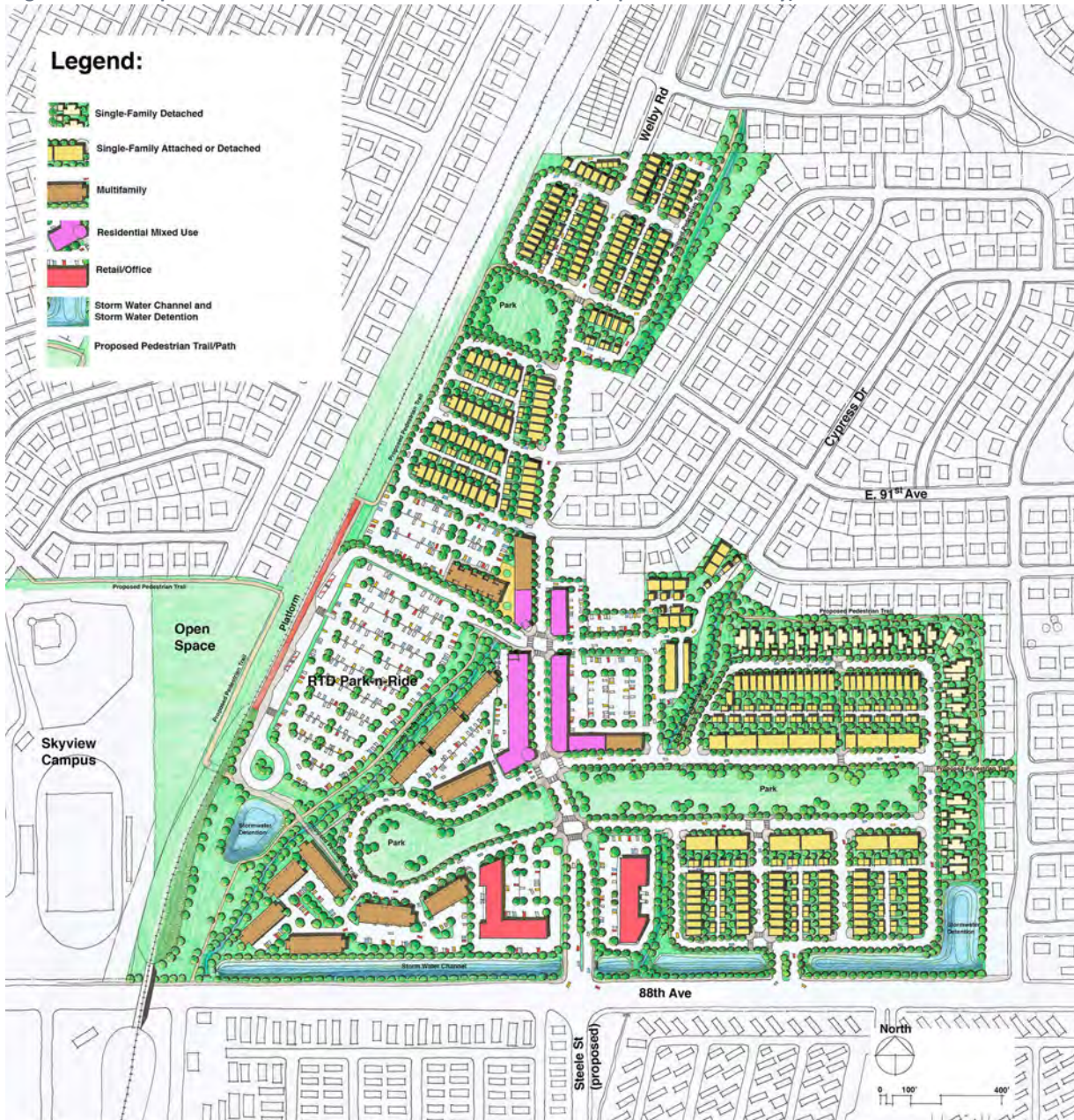


Figure 5.3: Birds Eye View of the Example Station Area Looking Northwest

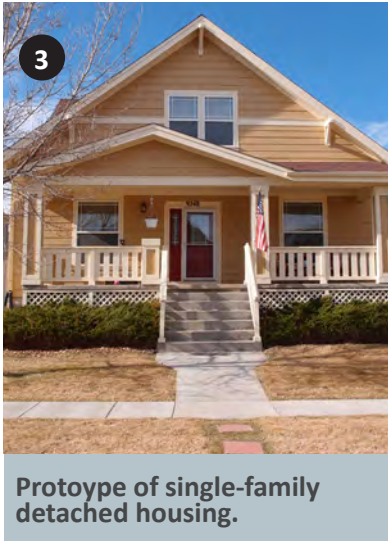
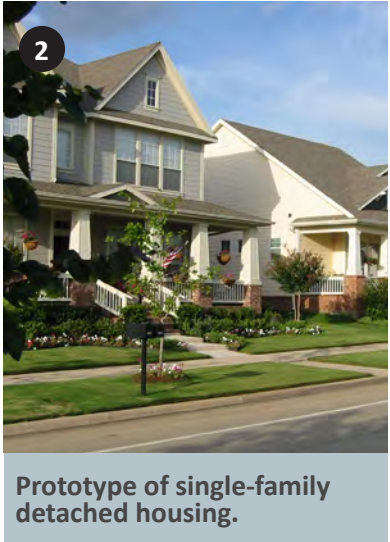
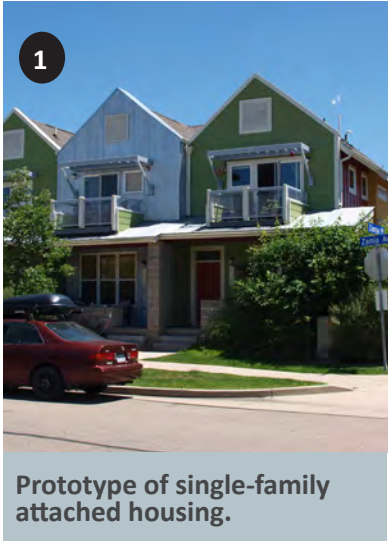


Figure 5.4: Birds Eye View of the Example Station Area Looking Northeast



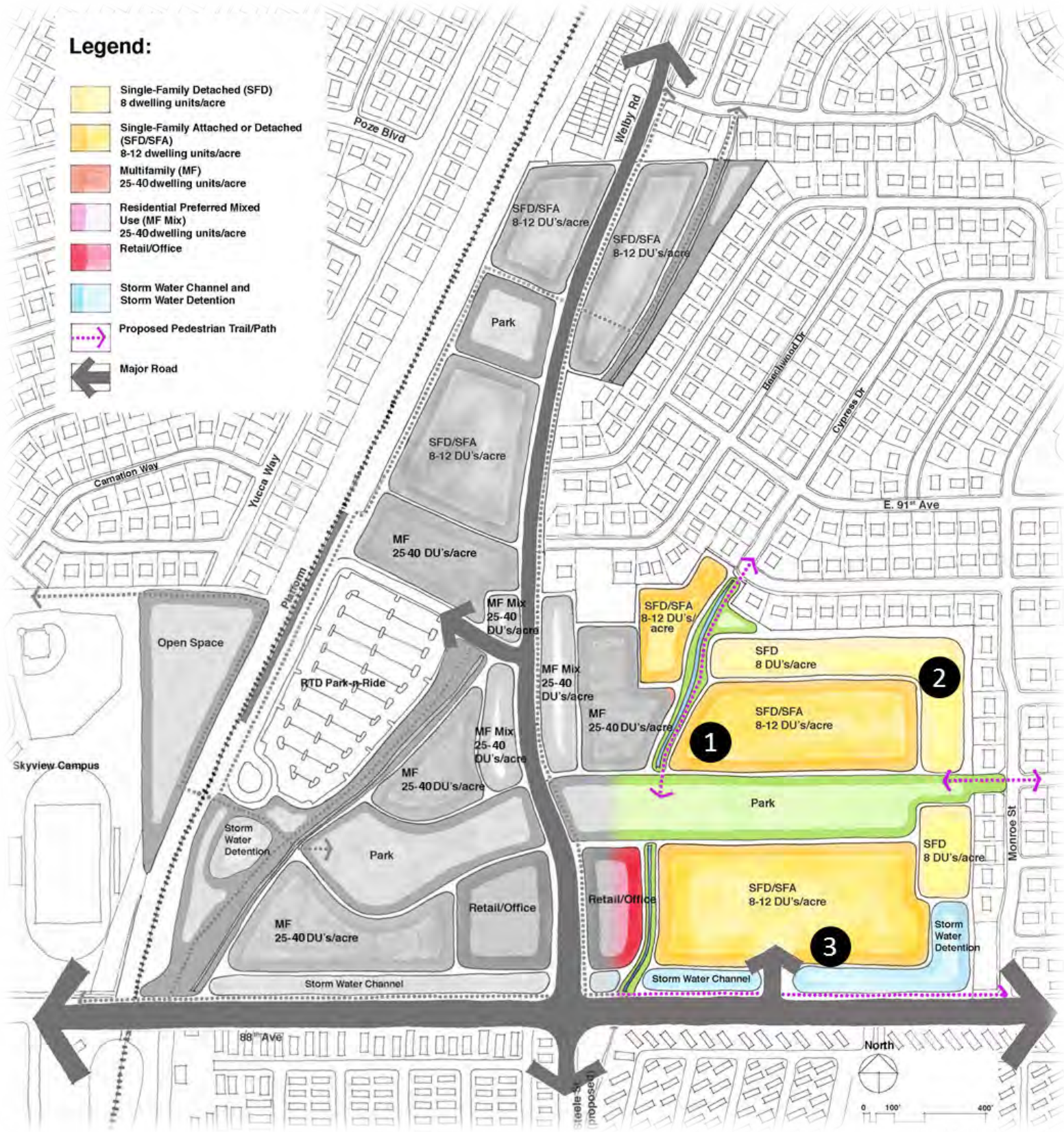
Eastern Subarea

The Eastern Subarea, located east of the Lower Clear Creek Canal, is a moderate density residential neighborhood (8-12 dwelling units per acre) with a large central park feature—see Figure 5.5 for full details. A small residential block configuration would create a clear, walkable and well-connected neighborhood with a human scale and distinct character. Two-story single-family attached or stacked row homes could front the central park, with residential densities stepping down further from the park and closer to the surrounding neighborhood. It is expected that single-family detached residences would back up to existing single-family homes to ensure the new development area is compatible with the existing scale of the surrounding neighborhood. Alleys and rear loaded garages could further break up the residential blocks and promote a more inviting and walkable neighborhood. An alley configuration is recommended as it would allow for porches, trees and sidewalks to front homes, rather than garages and driveways, as is more typical of suburban residential neighborhoods; thereby creating a more inviting residential character.



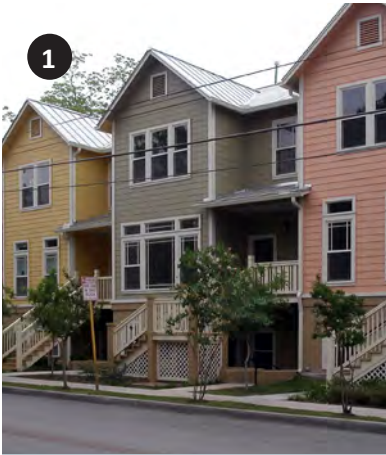
Photos are representational only not approved architecture or building forms.

Figure 5.5: Eastern Subarea



Northwest Subarea

The land use pattern of the Northwest Subarea is very similar to that of the Eastern Subarea. It would include a moderately dense mix of single-family attached and detached homes (8-12 dwelling units per acre), a small block configuration and a central park feature within convenient walking distance for all residents in the area. Figure 5.6 shows the subarea with land use details.



Prototype of single-family attached housing.



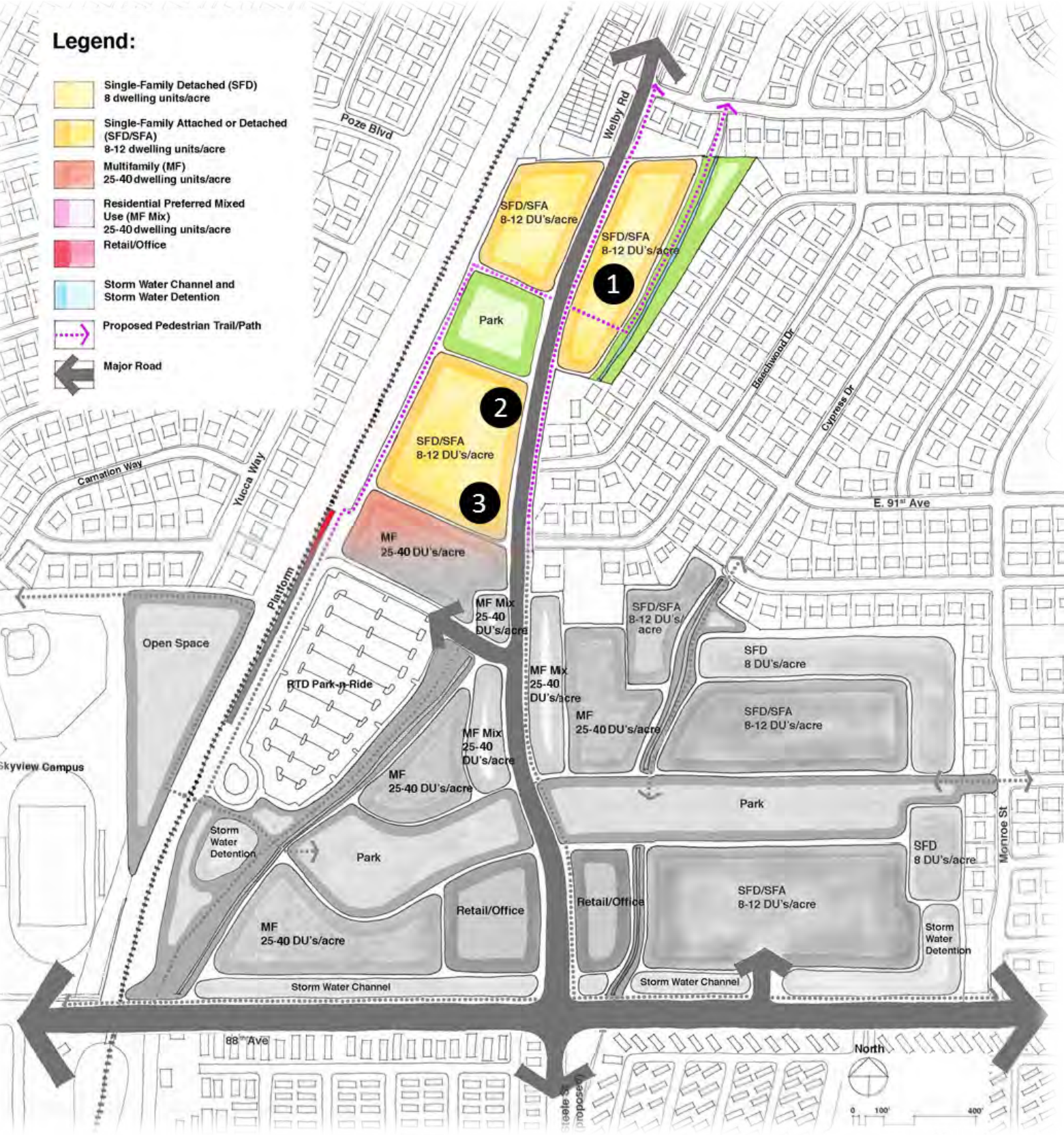
Prototype of single-family attached housing.



Prototype of single-family detached housing.

Photos are representational only not approved architecture or building forms.

Figure 5.6: Northwest Subarea



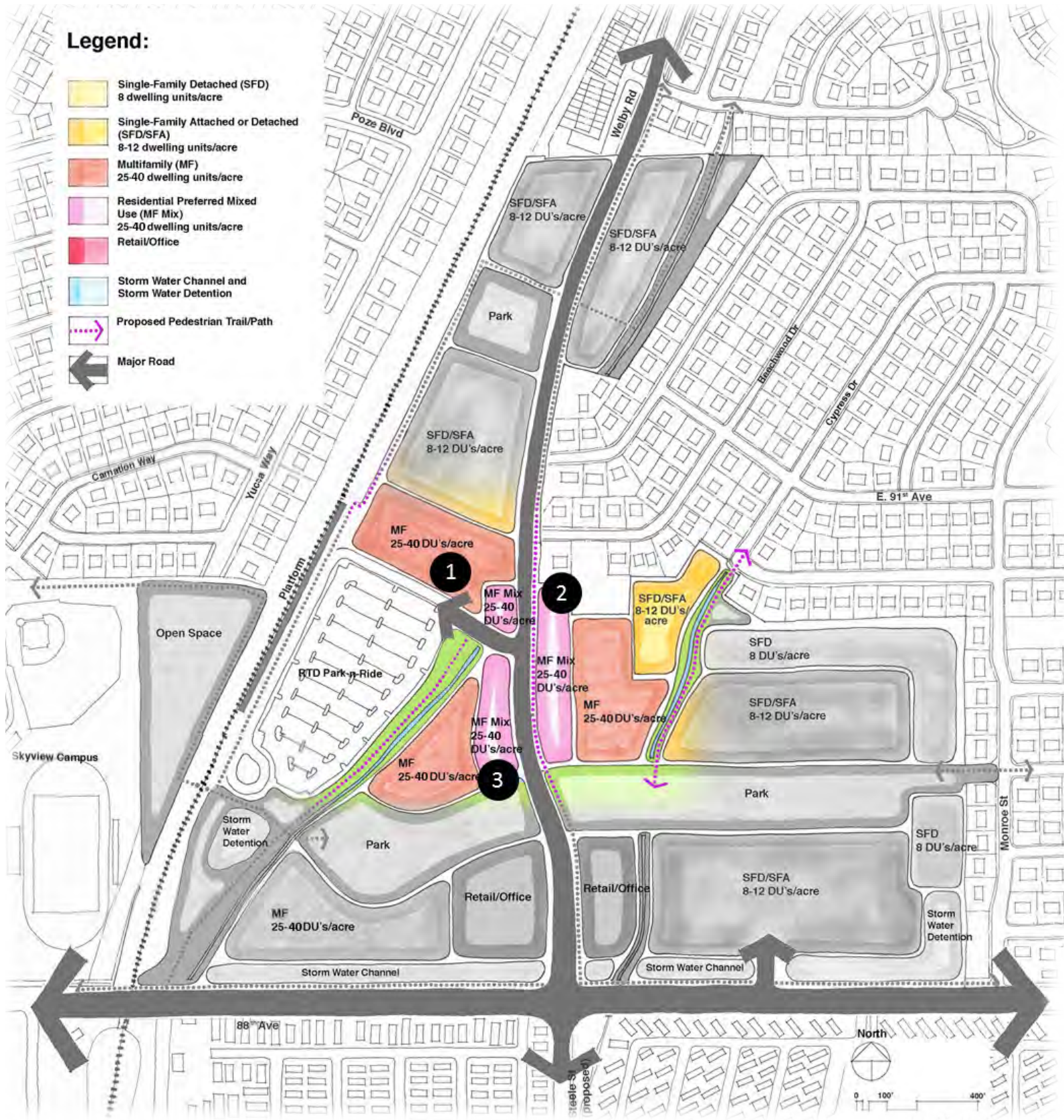
Central Subarea

The Central Subarea—as shown in Figure 5.7—provides the greatest opportunity to activate the Station Area as both an origin and a destination for transit commuters, pedestrians and cyclists alike. Well-designed residential mixed-use development with first floor commercial/office space located on the four corners of Welby Road near the station entrance would indicate that this is a signature place, in other words it is recognizable and distinct. This commercial and limited office development would provide local neighborhood serving retail and services to support the surrounding population and increase the desirability of these neighborhoods. Careful attention to building form and design, combined with an attractive public realm, are key to developing this as an area that attracts interest and provides eyes on the street throughout the day for both transit users and neighborhood residents. While the preference is for the development of some vertical mixed-use, if the market would not support first floor retail, the area at the four corners of Welby Road near the station entrance would be higher density multifamily development, along with the remainder of this subarea west of Welby Road. Moderate density single-family development is identified in the northeastern portion of this subarea to transition to the existing lower density neighborhoods. Overall, this subarea is intended to provide transit access that is only steps away from apartments and homes.



Photos are representational only not approved architecture or building forms.

Figure 5.7 Central Subarea



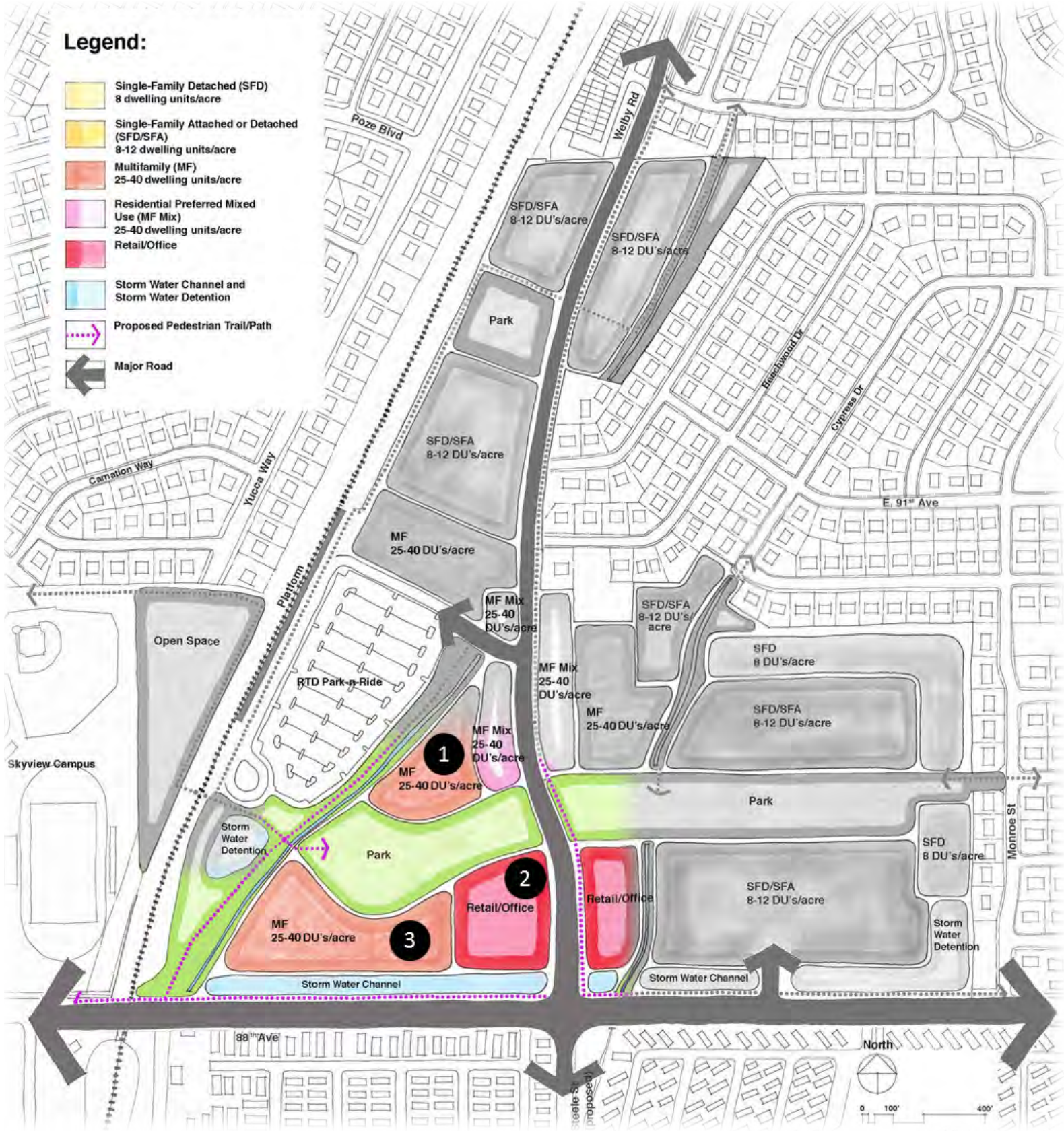
Southwestern Subarea

Like the Central Subarea, the Southwestern Subarea includes a mix of higher intensity land uses, including both commercial or office and high density multifamily development—see Figure 5.8 for full details. This area benefits from high visibility along 88th Avenue as well as its close proximity to the transit station. The area along realigned Welby Road between 88th Avenue to the south and the open space to the north forms the southern gateway into the Station Area and is well suited to develop as commercial/office corners. Like the multifamily development just to the north, the higher density apartments and/or townhomes would maximize the number of residents who have convenient access to the transit station from outside their front doors.



Photos are representational only not approved architecture or building forms.

Figure 5.8: Southwestern Subarea



5.2 Circulation

The intent for the Station Area is to create a functional, convenient and safe environment for drivers, pedestrians and bicyclists alike. Future development should be designed to meet the mobility needs of internal users, such as Station Area residents, employees, and transit riders, as well as external users, such as those who pass through the station area on their way to other neighborhoods or destinations. A well-connected street grid and multiuse path network would allow for neighborhood residents, as well as commuters from surrounding areas, a number of options for accessing the station and connecting to surrounding neighborhoods and activity centers.

Arterial and Collector Network

88th Avenue, a four-lane arterial, will continue to provide regional access to the Station Area from the east and west; with planned improvements including the signalization of the new intersection at 88th Avenue and realigned Welby Road as well as the addition of sidewalks and bicycle lanes on the north and south sides of the street.

With the planned realignment of Welby Road, this north-south collector will become the backbone of the vehicular circulation network. As such, it has a distinct function and character. As the only means of vehicular access into and out of the Station area, it will carry the heaviest traffic. In addition to park-and-ride patrons, it will handle feeder bus access into and out of the transit station and general north-south regional traffic between Thornton Parkway to the north and Adams County to the south. Figures 5.9 and 5.10 show possible cross sections of Welby Road south and north of the station, although the City is still in the process of designing the road and final cross sections may vary from those depicted in these figures.

The higher traffic levels can be an advantage in attracting active ground floor retail uses that require a high degree of visibility along Welby Road. However, key to promoting Welby Road as the mixed-use spine of the Station Area will be ensuring that it has the highest quality streetscape, with slower auto speeds, wider sidewalks, bicycle lanes and safe street crossings.

Figure 5.9: Cross Section of Welby Road South of Transit Station



Figure 5.10: Cross Section of Welby Road North of Transit Station



Local Street Network

The specific local street configuration will be determined at time of development. However, this Plan recommends a new local street network that provides efficient circulation to the transit station and surrounding mixed-use and residential areas. The future circulation plan should create a network of small blocks that are pedestrian-scaled and walkable. Block sizes throughout the residential areas should be approximately 320-feet long, creating a comfortable walking distance for pedestrians.

Where there are longer blocks, they should be broken up by signed pedestrian crossings. Incorporating a pedestrian mew as shown in figure 5.12 leading into the neighborhood is a recommended design feature that would function as a narrow pedestrian-only street.

The local street block structure in closer proximity to the transit station should maintain sufficient area for larger lots suited for mixed-use development around the station. Figures 5.11 and 5.13 show possible cross sections and examples of a local street network.

Figure 5.11: Example of Local Street Network



Figure 5.12: Example of Pedestrian Mew



A pedestrian mew can provide convenient access through the neighborhood by foot.

Figure 5.13 Example Local Street Cross Section



Pedestrian and Bicycle Network

The pedestrian and bicycle network is an integral part of the multimodal system and should be designed to provide direct and safe connectivity into and through the Station Area. On-street and off-street bicycle and pedestrian facilities essentially extend the reach of nonmotorized travel for transit patrons and provide new options for residents and local employees who either don't have a personal vehicle, or choose to travel by foot or bicycle. These facilities also create new connections for pedestrians and bicyclists to travel between the Station Area and surrounding neighborhoods and destinations.

The on-street pedestrian and bicycle network will be designed per the City's adopted Complete Streets Policy to accommodate all modes of travel within the right-of-way. Features will include a complete network of detached sidewalks and enhanced pedestrian crossings. Where appropriate, it is recommended that pedestrian crossing areas be extended via sidewalk bulbouts at intersections or mid-block crossings to improve pedestrian safety. Striped and/or buffered bicycle lanes along Welby Road and local streets leading into the transit station will promote safe and direct travel via bicycle on higher volume streets. On residential streets, lower auto volumes and speeds, along with clear bicycle signage, will accommodate safe travel via bicycle. Along the south side of the Station Area, widened sidewalks and bicycle lanes along 88th Avenue will enhance the connection to the regional Platte River Trail and recreation areas to the east and the Original Thornton neighborhood to the west. Where possible, the incorporation of trees along the pedestrian and bicycle network can increase comfort by providing shade for sun protection and create visual appeal.

The on-street pedestrian and bicycle network (multi-use paths) will connect the network of parks and open space areas within the Station Area and links to surrounding trails, open space, and neighborhoods. To the east, planned multiuse paths to Cypress Drive on the north and Monroe Street on the east will provide convenient pedestrian access between the Station Area and the Thornton Valley East neighborhood. On the west side of the Station Area, a planned multiuse path between the station platform and the City-owned Yucca Way Open Space will provide a pedestrian connection to the Highland Valley neighborhood.

5.3 Parks and Open Space

The Preferred Alternative incorporates a well-connected network of parks and open space that provide buffers, visual amenities and recreational opportunities for residents and area employees alike.

The east-west central open space spine, at approximately 3.8 acres, would become the major organizing feature and public greenway connecting the transit station, new development and established neighborhoods to the east. The central open space spine provides an important east-west connection—especially for travelers who may not want to walk or bike along a roadway. Although all types of users may prefer facilities separated from auto traffic, given the high number of schools in the area, separated paths make walking and biking more comfortable environments for children and their parents.

The central open space, which is anticipated to be about 150-feet wide could also provide a number of recreational functions and meet a variety of needs, ranging from gathering spaces with benches, areas for public art, an active sports field, to children's play structures. The exact configuration of this park will be determined at the time of development and may ultimately undulate or change in size. However, it is critical to creating a sense of place and connectivity between the eastern and western portions of the site

to retain the central location of the park spanning both sides of realigned Welby Road.

The existing natural features of the area, mainly the Colorado Agricultural Canal and the Lower Clear Creek Canal are seamlessly integrated into the overall park and open space network by creating north-south pedestrian links along both drainageways.

A 2.5-acre park located within the residential area north of the transit station would provide convenient active recreation opportunities for residents in this area.

5.4 Stormwater Infrastructure

The Preferred Alternative illustrates the drainage and conveyance of stormwater flows through the Station Area via 75-foot wide channels on the north side of 88th Avenue. These channels would likely be developed as landscape swales, or long, low depressions in the ground that temporarily store and move stormwater runoff. However, the City is currently undergoing a design study to determine the most appropriate design. In addition to providing stormwater mitigation, landscape swales would have the added benefit of providing a visual amenity and buffer between the developed station area and traffic along 88th Avenue if landscaped appropriately.

Chapter 6.0 Guiding Principles

TOD is not simply higher density housing near a transit station. An authentic and complete neighborhood with amenities such as stores, parks, landscaping, and engaging streetscapes supports a lifestyle that is attractive to people who choose to live close to transit stations. The interweaving of the transit station, adjacent mixed-use development, and surrounding residential neighborhoods is essential to creating a signature place of enduring value, strong character, and local activity. By virtue of the principles that guide its development – compactness, clear edges, human-scaled architecture, walkable streets, public spaces and amenities – it should be perceived as a distinctive place and an appealing destination.

Supporting each unique project in the Station Area are basic planning and design principles that will assure an enduring and engaging neighborhood environment, including public and private spaces and related infrastructure. The following pages describe and illustrate guiding principles for Station Area design and development. These principles have been used in the development of the Preferred Land Use Alternative and should serve as a guide for future public and private decision-making.

The last section of this chapter provides a description of relevant examples and case studies from station area projects that have similar characteristics to the Original Thornton at 88th Station Area.

6.1 Land Use

L1: Create a Mix of Uses

To fully realize the potential for the Original Thornton at 88th Station to become a community asset and a distinctive place, the Station Area should incorporate a mix of uses. The predominant character of the Station Area should be residential, but a mix of neighborhood-scaled commercial uses at targeted locations within the core Station Area will support and complement the entire Station Area and surrounding neighborhoods.

This mix (as detailed in the previous chapter) should include the types of uses that people want and need, including housing, retail and restaurants, small offices, and other amenities such as educational facilities where appropriate. The more complete the mixture of origins (homes) and destinations (retail and office), the greater the level of activity in the Station Area beyond traditional business hours – helping to create a safe environment and a thriving community – that is not abandoned after 5 pm. The additional benefit of mixing uses in the Station Area is that it allows people to more readily choose to walk or bike to their local activities, and thereby further reduces auto trips. In accordance with the findings of the 2012 Health Impact Assessment of the South Thornton Revitalization Subarea Plan, opportunities for enhancing access to fresh, healthy food should also be encouraged in this area, potentially through sit-down restaurants, vegetable gardens, fresh food vendors, or other healthy food retail.

The neighborhood-scaled mixed-use development envisioned for the Station Area can be mixed both horizontally and vertically. Vertical mixed-use development, where commercial or office space is located on the ground floor and residential or office above, has witnessed a re-emergence as a transit- and pedestrian-friendly building form. If the market does not yet exist for vertical mixed-use development in the Station Area, allowing development of space that emphasizes urban form over land use type can provide flexibility needed by the development community. For instance, ground floor uses may transition from residential to retail or office over time as market forces evolve.



Storefront windows and architectural features in a mixed-use project create visual interest for pedestrians.



Horizontal mixed-use development facilitates convenient walking access for neighborhood residents.



Neighborhood-scaled retail stores and restaurants create a dynamic and distinct place.

L2: Integrate Mixed-Income Housing

The Station Area should be designed to encourage a choice of residential unit sizes and pricing levels to serve a diversity of residents. The introduction of higher-density housing, as well as a mix of housing types near the Original Thornton at 88th Station, will provide choices for several income levels and can help promote access for the transit-dependent and reduce the need for private automobiles. An appropriate housing mix will also cater to people at all stages of their lives, including students, single adults, couples with or without children, and seniors aging in place. A key component of providing quality housing for a mix of income levels is ensuring that the design and architectural quality of more affordable residential products are on par with the design of market-rate housing products.

While most of the new single-family housing sold in the market area in 2013 was in the \$350,000+ price range, this Station Area is likely to be strongest offering housing products in the more affordable price ranges of up to \$200,000 initially.

In order to attract a mix of incomes, it will be important that the new residential environment meets this standard of quality. Differentiating the area from other competitive offerings in the marketplace and taking advantage of the presence of transit will be critical in ensuring the concept of an inclusive community takes hold.



A mix of product types attracts many income levels in the station area.



Affordable housing products should be designed to a high quality design standard.

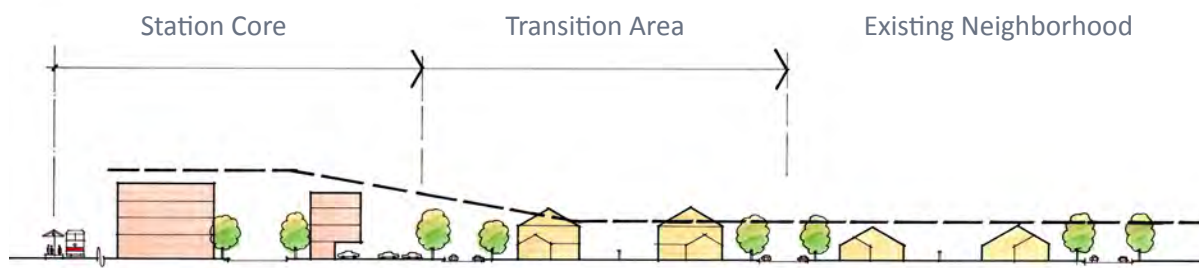


Housing for seniors and persons with disabilities located in close proximity to the transit station encourages an inclusive community.

L3: Create a Gradient of Densities

The appropriate transitioning of densities from higher-intensity uses within close proximity to the Original Thornton at 88th Station to less-intense uses adjacent to surrounding single-family neighborhoods is a key guiding principle for the Station Area. The compatibility of new development with surrounding neighborhoods is a value that has been expressed by members of the community throughout the planning process. To achieve this, densities should be tapered down as they near surrounding single-family neighborhoods so that the scale and proportion of new structures is in keeping with the surrounding Thornton Valley East neighborhood, as illustrated in Figure 6.1.

Figure 6.1: Example of Proportional Density and Height Transitions



Source: Project Team



Transitioning densities from multifamily to single-family residential development ensure compatibility with surrounding neighborhoods.



Transitioning building heights increase the visual scale of development closer to the transit station.

Higher-density uses, such as apartments, should be established within closer proximity to the commuter rail station (the station core), promoting a more compact and walkable scale of development with a mix of uses. Locating higher-density uses closer to the station can promote ridership on the North Metro line by allowing more potential transit riders to live within convenient walking distance of the station. With a variety of building types and architecture, greater densities can be achieved without negative visual impacts of massiveness and monotony.

As noted by community residents, the Station Area should include retail services, amenities, and attractions that increase the overall quality and value of surrounding neighborhoods. To create a market for, and help sustain, these desired retail uses, higher residential densities are needed and will allow residents and commuters to access everyday services by foot or bicycle. Also to this end, lower-density and/or auto-oriented uses should be discouraged within the station core.

6.2 Urban Design

U1: Create Active Edges

Creating a sense of place within the Station Area is very much tied to creating a quality pedestrian environment. This is particularly important along Welby Road, where the Preferred Land Use Alternative calls for a mix of retail, office, and residential uses close to the transit station. Where practical within the station core, Welby Road should be lined with active edges, meaning that buildings front the street and are designed to accommodate retail, office or other active ground floor uses, which are directly accessible to people walking by. This often requires establishing a “build-to” line, where structures are built to a continuous line rather than set back beyond the line. In this way, the space of the street is formed by the buildings and adjacent sidewalks rather than parking lots or unused landscaped areas. In addition to orienting building facades and entrances to the street, amenities such as seating can further enhance this active edge to create a welcoming environment.

Along secondary streets, active edges can be formed by creating build-to lines and/or street trees or other streetscape elements. While structure placement should be more flexible, buildings should be street-facing and parking areas should be well screened.



Street trees and on-street parking buffer pedestrians from traffic.



Active edges promote an engaging urban realm environment.



Distinctive architectural features create iconic places.



Inviting street corners feature landscaping, distinctive lighting and storefront windows.



Complete streets accommodate and balance the safe movement of all modes – vehicles, pedestrians and bicyclists.



Sidewalk bulbouts reduce street crossing distances for pedestrians.

U2: Develop Anchored Corners

The concept of active edges is especially important at those intersections along Welby Road where mixed-use buildings are located at the corner of Welby Road and the station entrance. This key point identifies the entrance to the station, and when buildings are pushed up to the intersection, can “anchor” the corner. This anchor will provide a distinct focal point, or landmark, within the Station Area and create an inviting environment that is not entirely dominated by parking lots. Rather, appropriate building massing and orientation and active building fronts are inviting to residents, visitors, and transit patrons on both sides of the street. Where access and lot configurations hinder the ability to push buildings to the street edge, such as the corner of 88th Avenue and Welby Road, distinctive signage, public art, screening of parking areas and landscaping can help to create a more active street edge and anchor a corner.

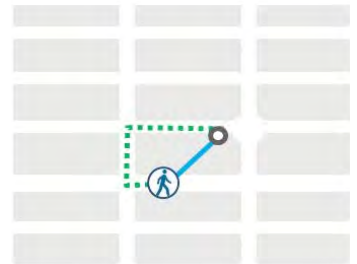
U3: Incorporate Multimodal Street Design

The design of streets themselves should reflect a dual concept of the street as both a vehicular thoroughfare and civic space. Therefore, it is important that access be prioritized and balanced by travel mode, giving top priority to pedestrians and cyclists to the extent possible and practical. Prioritizing pedestrian movements in and around the station entails a number of design principles that should be incorporated into future development. For instance, street trees and landscaping (or even parking) can create a visual buffer between roadways and sidewalks, thereby providing a sense of enclosure and comfort for pedestrians. Traffic-calming measures such as widened pedestrian bulbouts at intersections and mid-block crossings are additional features that will further improve safety for pedestrians.

6.3 Mobility and Circulation

M1: Design Well-Connected Streets

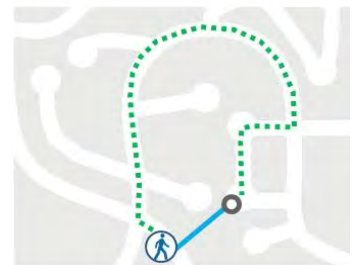
As the primary means of access and circulation for vehicular, bicycle, and pedestrian traffic, streets will serve an important function within the Original Thornton at 88th Station Area. A well-designed Station Area will benefit from an organized, understandable, and walkable network of streets and sidewalks. Relatively small blocks and well-connected streets allow for autos, pedestrians, and bicyclists to use direct routes and provide multiple ways to get to and from any given point within the Station Area and beyond. As a rule of thumb, blocks within the Station Area should be no more than a five-minute walk around their perimeters (approximately 1,320 feet). This helps to promote a well-connected and walkable neighborhood that is comfortable, safe, and designed to a human scale.



A well connected street network enables shorter and more direct connections and a greater number of routes for pedestrians.

M2: Create Good Trails and Open Space Linkages

A key guiding principle for the Station Area is a well-designed network of trails, open spaces, and parks that serves a number of important functions, primary among them being the creation of off-street walking and biking connections. The trails and open space network should be designed to link destinations within the Station Area and to points beyond while unifying the character and identity of the Station Area itself. Strong connections should be built to existing community assets and adjacent neighborhoods. Developing multiuse trails along existing drainage features (the Colorado Agricultural Canal and Lower Clear Creek Canal) would create distinct off-street north-south linkages. These ditches should be left open unless there is a critical and compelling infrastructure need for a portion to be piped. Developing an east-west open space spine through the Station Area creates an attractive alternative to on-street walking and bicycling and provides the added benefit of creating a new off-road connection for residents of surrounding neighborhoods. Any new development on the periphery of the Station Area should provide these trail linkages.



A disconnected street network results in long walking distances and few route options.



Convenient bicycle access to a commuter rail station reduces single-occupant auto trips.



Co-locating multiuse paths along natural drainage features creates a neighborhood amenity.



Distinct wayfinding lets travelers know how long the expected trip will take via walking or cycling.



Well-maintained alleys serve a number of functions – from parking to service access.

M3: Utilize Good Signage and Wayfinding

Wayfinding is more than merely signage. It is a system of information elements that support movement at all stages of a trip. Effective wayfinding throughout the Station Area will help travelers to easily access their destinations in a way that reduces the stress of travel and can reduce the perceived distance between places. Successful wayfinding strategies integrate and utilize signage, spatial planning, lighting, structural elements, and surface finishes alongside other building elements to create a coherent whole, thereby communicating clear and consistent messages and directions throughout the urban realm.

Wayfinding and transit user information should be closely integrated with the commuter rail station itself and the surrounding Station Area. Some communities have required developers to prepare Wayfinding Plans that identify a movement strategy (showing how information is disclosed through various areas in and around a transit facility or public space), a signage typology, and a location plan.

M4: Incorporate Alleys into Neighborhoods

One of the most effective ways to create a more welcoming and appealing residential neighborhood is to place porches, entryways, trees, and sidewalks in front of homes - and garages in the rear. To do this, residents would use alleys located behind houses to park in rear-loading garages or driveways. This street/alley configuration creates a more comfortable walking environment along the street, as driveway curb cuts are not necessary, auto-pedestrian conflicts are minimized, and more space is allocated for on-street parking, which can slow auto speeds and create a buffer between auto traffic and pedestrians.

Alleys would also afford public service workers access to utilities and waste collection. They would be designed for safety and security and for property access (at low speeds) but are not intended to accommodate through traffic, although they may be an alternate means of circulation for pedestrians and bicyclists.

6.4 Parking Management Strategies

Effective management of parking is one of the best tools available to encourage a shift away from single-occupant autos and toward transit, bicycling, and walking. Properly managed, parking supply characteristics such as price, location, and convenience, can positively influence mode choices to reduce single-occupant auto trips and help move the Station Area, and the City, toward more sustainable modes of transportation. Extensive research exists related to parking management practices in general and parking policies around TOD projects in particular. Relevant parking management options and guiding principles for consideration within the Original Thornton at 88th Station Area include the following:

P1: Assess Parking Ratios Currently Required by City Code

One of the best and most recent studies of the relationship between TOD, parking needs, and traffic generation was prepared by the federally-funded Transportation Research Board in 2008. Researchers examined seventeen built TOD's and concluded that "...under the right conditions lowering residential parking ratios by 50% for TODs in station areas with quality transit service can result in:

- An increase in the density of a residential TOD by 20% to 33% depending on the residential building type;
- Savings on residential parking costs from 5% to 36% after accounting for increases in the number of units to be parked from increased residential density; and
- Potentially greater developer profits and/or increased housing affordability from higher densities, lower capital costs for parking, and reduced traffic impact fees."

The study concludes that "tightening residential TOD parking ratios to reflect the actual transportation performance of TODs will be a very important step toward realizing the expected community benefits of TOD and enhancing their financial feasibility." (Source: TCRP Report 128, Effects of TOD on Housing, Parking, and Travel, 2008).

Current City of Thornton parking requirements are typical of suburban community parking standards and likely result in excess parking and an inefficient use of land. For instance, the City requires four parking spaces per single-family dwelling and one space per 500 square feet of multifamily dwelling floor area (plus guest parking). There are numerous examples of emerging parking standards specific for TOD areas that reduce these standards, but one of the most relevant and applicable to Thornton may be the City of Aurora's TOD District parking requirements. Within the TOD District, the City of Aurora requires two parking spaces per single-family dwelling unit and one parking space per multifamily dwelling unit.

Given emerging evidence of successful reductions in parking ratios, parking requirements for development within the Station Area could be reduced by 20-50% from the current City Code standards if an appropriate parking management plan was developed.

P2: Utilize Effective Parking Minimums and Maximums

A way to discourage excessive vehicle use and encourage the use of alternative transportation is to limit the supply of parking through parking maximums (which prescribe a maximum number of parking spaces required per development unit – usually a relatively low number – instead of a minimum). With this strategy, parking availability can accurately influence future modal split targets and encourage alternative modes of travel. Consideration should be given to relaxing parking rates within the Station Area in exchange for developers' implementation of measures that promote a shift in travel modes, such as increasing the provision of bicycle parking.

P3: Utilize Shared Parking Where Possible

Shared parking can be used as an efficiency tool, which recognizes that a single parking space can be shared between different land use types. The reason for this is clear: there are temporal shifts in the demand for parking spaces between various land uses. For example, one particular land use may generate its peak demand at lunch and dinner times, while another land use may generate peak demands from 9 a.m. to 5 p.m. business hours. This strategy lends itself to public-private partnerships where public uses (such as transit parking or parking related to civic buildings) dominate during the weekday but private parking (related to retail or other private uses) dominates in the evenings and on weekends.

P4: Unbundle Parking from Development

The costs of residential or commercial parking are often indirectly passed on to occupants when bundled into their purchase or lease costs. Unbundling parking, including renting or selling spaces exclusive from a property sale, can help to reduce the total amount of parking required for a building while promoting a “user pays” approach to parking. In addition, unbundled parking promotes housing affordability as parking spaces are not tied to any particular residential unit or commercial space. The cost of a parking space is then borne only by those building occupants who opt-in to pay for its use. Several cities encourage building owners, occupants, and employers to charge for parking as an unbundled cost to occupants in exchange for parking requirement reductions or increased building height and density.

P5: Utilize Paid Parking if Appropriate

The utilization of fees associated with parking both reflects the true costs associated with parking and automobile ownership, and can influence users to consider other modes of travel. Money collected can be allocated towards multimodal infrastructure and programs.

Further, efforts could be made to encourage building owners and occupants to implement a paid parking system on all or part of their developments, and to charge more for single-occupant vehicle parking spaces than for rideshare or car share spaces to further incent the use of these modes of transportation. Consideration could also be given to charges for short-stay on-street parking spaces. Obviously, paid parking systems should be implemented as the market (and related demand) requires and should only be used in conjunction with an overall neighborhood parking management strategy that takes into account potential impacts on surrounding neighborhoods.

6.5 Summary of Guiding Principles

Table 6-1 summarizes the guiding principles developed for the Original Thornton at 88th Station Area and its related development.

Table 6.1: Summary of Guiding Principles

Category	Guiding Principles	Key Features
Land Use	L1: Create a Mix of Uses	- Focus on residential land uses - Promote neighborhood-scaled commercial uses at targeted locations - Mix both horizontally and vertically - Ensure flexibility to adapt to changing market needs
	L2: Integrate Mixed-Income Housing	- Provide a choice of residential size and price points - Cater to people at all stages of life - Ensure good design of housing at all levels
	L3: Create a Gradient of Densities	- Focus highest density around transit station - Reduce density as development approaches established neighborhoods
Urban Design	U1: Create Active Edges	- Line core streets with strong mix of uses to create good pedestrian environment - Establish 'build-to' line for structures - Orient buildings and entrances to streets - Use streetscape as active edges and to screen parking areas
	U2: Develop Anchored Corners	- Create visible gateways to station core and at key intersections - Minimize visibility of parking lots
	U3: Incorporate Multimodal Street Design	- Give priority to pedestrians and bicyclists where possible - Use effective traffic calming measures to improve pedestrian safety
Mobility and Circulation	M1: Design Well-Connected Streets	- Design small blocks - Focus on human-scale grid system to provide direct routes to destinations
	M2: Create Good Trails and Open Space Linkages	- Provide good connections to existing facilities - Integrate facilities into design of new development - Integrate design with existing drainage features - Avoid removal or piping of drainage features
	M3: Utilize Good Signage and Wayfinding	- Focus on the needs of the user - Integrate with lighting, structures, and surface finishes - Focus on wayfinding to and from transit station - Develop Wayfinding Plan

Category	Guiding Principles	Key Features
	M4: Incorporate Alleys into Neighborhoods	• Eliminate garage entrances from roadways • Promote active residential front spaces (porches, yards) • Reduces curb cuts • Eliminate many auto-pedestrian conflicts • Provide easy access for neighborhood services • Design alleys for multimodal access
Parking Management Strategies	P1: Assess Parking Ratios	• Consider reducing parking currently required by City Code
	P2: Utilize Effective Parking Minimums and Maximums	• Use parking maximums when possible to discourage developers from providing too much parking
	P3: Utilize Shared Parking Where Possible	• Provide proper balance of temporal use of parking • Consider sharing transit parking
	P4: Unbundle Parking from Development	• Give residents the choice to use parking if needed • Encourage use of alternative modes
	P5: Utilize Paid Parking if Appropriate	• Regulate usage and provide a potential revenue source, if needed • Coordinate with neighborhood parking strategy

6.6 Case Studies

The Project Team conducted a peer system review of comparable station areas in the Denver region and around the country that have characteristics similar to those found in the Original Thornton at 88th Station Area. The review focused on station areas in outlying/suburban portions of light rail or commuter rail lines. These case studies provide the City of Thornton with relevant examples of TOD plans, best practices and lessons learned that have direct relevance to this Plan.

Sheridan Station (Denver and Lakewood, CO)

The Sheridan Station is located on RTD's West Rail Line and its station area straddles the border between the City and County of Denver and the City of Lakewood. It is characterized by industrial uses to the south, a greenway (Lakewood Dry Gulch), and single-family residential in most surrounding areas. It has experienced a modest population decrease and a modest employment increase during the past decade.

Station Area Plans and Results

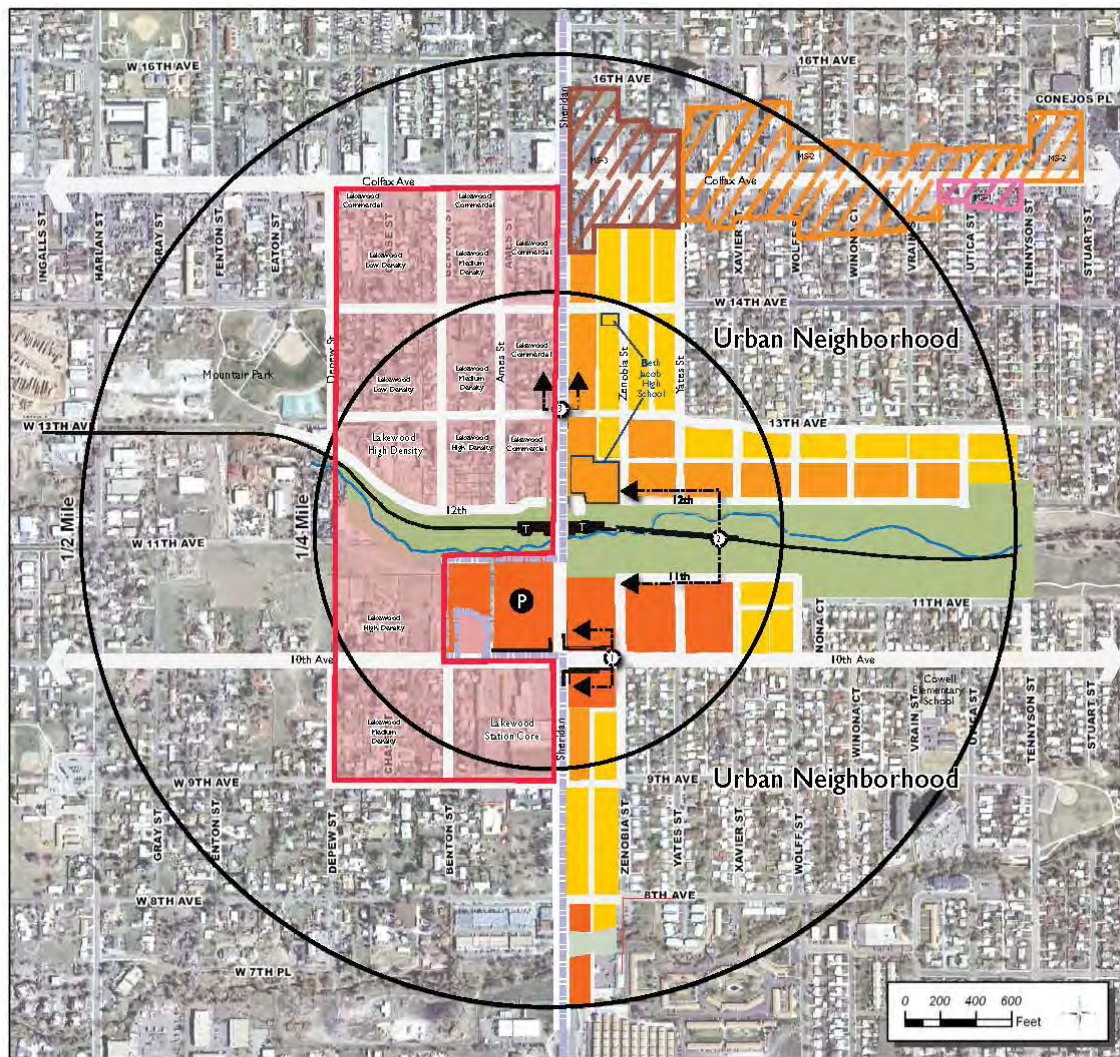
In 2006, the City of Lakewood developed an initial station area plan for its half of the station area, and in 2007, the City of Lakewood re-zoned its half of the station area to allow TOD development. The City and County of Denver approved a station area plan for the Sheridan Station in 2009. It was aimed at improving connectivity to Colfax Avenue to the north, incorporating Lakewood Dry Gulch, and incorporating mixed-income and market-rate housing, with a focus on station residential and townhouse residential to the north and east and along Sheridan to the south. The plan's land use concept is shown in Figure 6.2. Since that time, the City of Lakewood has embarked on a Catalytic Project analysis for the station to further develop future concepts for its share of the station area. The plan is anticipated to be completed in 2014.

In addition, the Urban Land Conservancy is working on affordable housing projects in the station area, including the Jody Apartments, a 62-unit affordable complex owned by the New West Side Economic Development and a 0.83-acre site along 11th Avenue east of the station that will be a future five-story TOD with 58 income-restricted senior housing units.

Lessons Learned for Thornton

- Focus highest density around station, with medium-density buffer zones: like many station plans along RTD's transit lines, higher densities adjacent to the station offer built-in ridership for RTD, while meeting the City's goals of transit supportive uses and respecting the scale of adjacent neighborhoods.
- Incorporate greenway/open space into development: incorporating natural features, such as the Lakewood Dry Gulch, offers station area residents and employees respite in an urban setting.
- Focus on adjacent corridors that lead to station: improving transportation and land use linkages to the station extends the benefits of TOD.
- Affordable and senior housing as a key component: creative partnering with organizations such as the Urban Land Conservancy helped to bring transit-dependent constituent groups, such as seniors and lower-income residents, to the station area.

Figure 6.2: Sheridan Station Area Plan Concept



Sheridan Land Use and Urban Design Concept

Proposed Land Use

- Mixed Use
- Station Residential
- Townhouse Residential
- Parks, Open Space and Drainageways

Existing Plans and Zoning

- Lakewood Station Plan
- Existing Main Street Zoning MS-1
- Existing Main Street Zoning MS-2
- Existing Main Street Zoning MS-3

Area Features

- West Corridor Light Rail Line
- Light Rail Station
- Denver / Lakewood Boundary
- RTD Parking Structure
- Active building at rear frontage
- Section Lines



Source: Sheridan Station Area Plan, City and County of Denver

Chicago Metro Mundelein Station

The Mundelein station is located on a Chicago Metro commuter rail line approximately 35 miles north of Chicago. The station is surrounded by retail and light industrial uses and major single-family residential areas. It is also characterized by significant vacant parcels formerly occupied by industrial and commercial uses. The station area's population and employment bases have remained relatively stable between 2000 and 2010, and its median household income increased by 11% between 2002 and 2009. As with other Chicago area stations, its transportation and housing affordability index is relatively high (63%).

Plans and Results

The Village of Mundelein conducted a TOD study in 2004. The concept plan (see Figure 6.3) focuses on the station as the anchor for the area and 'creating a tight-knit neighborhood around the station that is physically and programmatically connected to the rest of the community.' It includes convenience and national retail on vacant land around the station in addition to a diverse housing mix to create an 'intimate, pedestrian friendly retail district.' It also includes a civic campus integrated with open space to serve as a center for community participation and a municipal complex. The plan includes a phased development concept, with the underutilized land around the station slated for the earliest development. One new condo building adjacent to the station is under construction, and the Village has since initiated construction of a 10-acre site near the station to create a mixed-use building with a municipal center/village hall on the ground floor and office space above (a partnership with a local business headquarters).

Lessons Learned for Thornton:

- Public-private partnerships: the city has partnered with local business to construct space for both public and office spaces.
- Civic space: a major anchor within the station area will be the new civic complex and community destination.
- Commuter-oriented retail: the plan promotes the inclusion of both convenience and national retail within the station area to serve a variety of markets.

Figure 6.3: Mundelein station Land Use Concept Plan



Source: Village of Mundelein

Chapter 7.0 Implementation

The Original Thornton at 88th Station Area Master Plan (STAMP) establishes a vision for the future of the Station Area. To achieve that vision – as conceptualized in the Preferred Alternative – the City and its partners will take many purposeful and focused steps over the course of several years. This will require ongoing collaboration and strong partnerships between the City, RTD, other public agencies, the private sector, and the citizens of Thornton.

Fiscally Constrained Strategies

This chapter sets forth the recommended implementation strategies, roles and responsibilities and suggested timeframes for implementation. To ensure that identified strategies are realistic and achievable, the Project Team considered the market analysis, input from the developer forum, and impacts to the City and property owners. Having been vetted through these inputs, all of the following strategies are achievable based on fiscal constraints and market realities. These strategies, used in combination with each other, are intended to ensure the full development potential of the Station Area is met as envisioned by this station area master plan (STAMP).

Implementation strategies are organized by the following categories in the tables below:

- Plan Administration
- Land Use and Urban Design
- Transportation
- Infrastructure
- Financing
- Community

The following tables include a description of each strategy, the entities responsible for its implementation and an associated timeframe. Those strategies that should be implemented in the short-term are immediate actions that will be implemented within the next 1-2 years. Strategies with a medium-term timeframe will likely be implemented before and shortly after the opening of the commuter rail station and are expected to be put in place within 3-6 years. Strategies with a long-term timeframe are likely to occur in the 7+ year timeframe; and those strategies with an ongoing timeframe can occur within any of these timeframes.

The highest priority implementation strategies are shown in red text with a corresponding implementation number that is starred. ★ PA-1 ★

Table 7.1: Plan Administration Implementation Strategies

No	Strategy	Responsibility	Timeframe
Plan Administration			
★ PA-1 ★	Adopt the Original Thornton at 88th STAMP. Formally adopt the STAMP, emphasizing the Vision, Preferred Alternative, Guiding Principles and Implementation Strategies as the core Plan elements intended to guide public and private development and investment decisions related to land use, multimodal circulation, infrastructure and open space in the Station Area. The City will review future development proposals within the Station Area for compliance with the core Plan elements.	City Council, City Development	Short
PA-2	Comprehensive Plan Amendment. Amend the City of Thornton Comprehensive Plan to reference the Original Thornton at 88th STAMP as an area plan that details how this vision will be achieved in the Station Area. The Future Land Use Map should be consistent with the recommended land uses contained in the STAMP.	City Council, City Development	Short
PA-3	Propose implementation strategies for annual consideration in City Council Work Plans. Prioritize implementation strategies for annual inclusion into the City Council Work Plan.	City Development, City Manager's Office, City Council	Ongoing
PA-4	Consider Dedicated TOD Staff. Assess current staff capacity, and if needed, work towards the creation of a staff position or combination of positions dedicated solely to implementation of the station area master plans and TOD development along the North Metro line. Duties would include attracting and working with private sector interests to ensure new development and redevelopment meets the vision for each station area; proactive communication with property owners, developers and the surrounding community; pursuing planning and infrastructure funding opportunities; and serving as a single point of contact for all City department reviews and project implementation activities to ensure public and private sector actions are synchronized.	City Staff	Ongoing

Timeframe Key
Short = 1-2 years
Medium = 3-6 years
Long = 7+ years

No	Strategy	Responsibility	Timeframe
Plan Administration			
PA-5	Marketing Strategy. Coordinate and actively market TOD efforts for new development and redevelopment within the study area. This will include strong coordination among the various City divisions – Long Range (Policy) and Current Planning, Economic Development, Neighborhood Services and Development Engineering – for the regulatory, policy, and entitlement requirements associated with redevelopment. Marketing and outreach of development opportunities with the City’s economic partners should be actively pursued.	City Development, Economic Development, Communications	Ongoing
PA-6	Coordination with Adams County. Continue regular coordination with Adams County to monitor progress toward implementing the Original Thornton at 88th STAMP and Welby Subarea Plan and track development. Partner on joint infrastructure improvements such as 88th Avenue improvements, a north-south regional multiuse path, or other regional improvements.	City Development, Infrastructure, Community Services, Adams County	Ongoing
PA-7	Monitor Plan Progress. Conduct a periodic review of the STAMP to assess effectiveness and progress toward implementation. As needed and appropriate, recommended changes could include STAMP updates, amendments to governing regulations and/or consideration of new or modified financing strategies.	City Development	Ongoing

Timeframe Key

Short = 1-2 years
Medium = 3-6 years
Long = 7+ years

Table 7.2: Land Use and Design Implementation Strategies

No	Strategy	Responsibility	Timeframe
Land Use and Design			
★ LU-1 ★	Rezoning. Pursue rezoning (City-initiated if necessary) of the Station Area to a new Planned Development (PD) zone category with Planned Development Standards that would identify the permitted land uses and density ranges recommended by this STAMP, as well as Design and Streetscape Standards. The zoning district should be implemented as a specific zoning plan, not an overlay district, to ensure that the area develops and redevelops as the City desires.	City Council, City Development	Short
★ LU-1a ★	Design standards. Develop Design Standards as part of the new PD zone category that are consistent with the Guiding Principles described in Chapter 6. If development is proposed prior to rezoning occurring, the developer must establish design standards consistent with Chapter 6. Design Standards should be specific for the core Station Area and transition areas and should address pedestrian-scaled architectural standards, building orientation, build-to lines and setbacks, building façade transparency requirements, building heights, lot coverage, parking standards and location, among other standards.	City Development	Short
★ LU-1b ★	Streetscape Design Standards. Either as part of rezoning or as part of any development proposal submitted to the City prior to rezoning, develop streetscape design standards for all streets within the Station Area that exceed the minimum standards set forth in the City's Street Standards and Specifications. Based on Guiding Principles described in Chapter 6, the Streetscape Standards will define the desired street environment, from a visual and pedestrian standpoint. Standards will include recommended sidewalk dimensions, tree plantings and landscaping as well as urban design elements such as curb treatments, public art, paving, lighting and distinct wayfinding and signage. These standards should clearly establish the level of quality and investment expected and will establish a framework for new roadways as well as improvements to existing roadways.	City Development	Short

Timeframe Key
Short = 1-2 years
Medium = 3-6 years
Long = 7+ years

No	Strategy	Responsibility	Timeframe
Land Use and Design			
★ LU-1c ★	Parking Standards and Management. As part of the Planned Development Standards for this Station Area, the parking standards should be assessed to determine if they can be reduced (an estimated 20-50% reduction), otherwise TOD will likely not be developed, as envisioned, at this Station Area. The City should implement parking maximums, rather than minimums, and work with developer to develop a comprehensive parking management plan for the Station Area which can mitigate potential negative impacts of the reduction of parking requirements.	City Development	Short
LU-2	Housing Mix. Work with developers to attract an appropriate mix of housing and incomes to the Station Area based on the Market Study. The City should work with project developers on design standards and infrastructure provision to ensure a high quality development and to help close infrastructure gaps. This may include: - Facilitating conversations with organizations involved with affordable housing, regional affordable and market rate developers, and potential funding partners. - Reaching out to organizations to explore interest in financing a mix of affordable housing or land banking property. If there is interest, facilitate conversations between such organizations and developers to ensure mixed income housing development in the Station Area.	City Development; Outside Housing Organizations	Ongoing
LU-3	Business Attraction. Work on attracting personal and business services to the Station Area, including educational, medical, recreational, youth-oriented, and other services that would serve the community. Work closely with the Mapleton School District regarding their potential interest in office / educational space. Explore the potential for small grocery and alternative food provision.	Economic Development, City Development, Mapleton School District	Ongoing

Timeframe Key

Short = 1-2 years
 Medium = 3-6 years
 Long = 7+ years

Table 7.3: Transportation Implementation Strategies

No	Strategy	Responsibility	Timeframe
Transportation			
★ T-1 ★	Coordination with RTD and Regional Rail Partners (RRP). Continue to work with RTD and RRP, the North Metro design/build contractor, to ensure that the design and construction of the Original Thornton at 88th Station meets the City's needs, improves transit's visibility and ridership, and provides a new civic space in the Station Area that is beneficial to both the City and RTD. The City should encourage RTD to provide good design and rider amenities to ensure the facility is of the highest quality possible.	Infrastructure, City Development, RTD, RRP	Short to Medium
★ T-2 ★	Realignment of Welby Road. Relocate Welby Road east of its current location to align with the planned extension of Steele Street to the south. Welby Road will become the most important route transecting the Station Area and designing a street that sets the standard for the quality and image of the Station Area will help attract private investment and upgrade the overall character of adjoining neighborhoods. The recommended configuration and design speed for Welby Road should accommodate commuter traffic as well as provide access into new development areas. Welby Road should be designed as a "Complete Street" multimodal corridor that provides safe and efficient access for vehicles, bicycles and pedestrians. Streetscape enhancements for Welby Road should be developed as part of the Planned Development Standards.	Infrastructure, City Development	Short to Medium
T-3	Prioritize Pedestrian and Bicycle Routes to Transit. In addition to the 88th Avenue pedestrian improvements, prioritize other pedestrian and bicycle routes that provide direct, safe and convenient travel from surrounding neighborhoods into the Station Area and through the Station Area to the transit platform. (Depending on timing, this could be accomplished through the next Parks and Open Space Plan update). Routes should include all on-street and off-street facilities shown in the Preferred Alternative, including pedestrian connections to surrounding neighborhoods, the Mapleton Skyview Campus and along existing canals and ditches. These routes will be installed as new development occurs.	Community Services, Infrastructure	Short to Medium

Timeframe Key
 Short = 1-2 years
 Medium = 3-6 years
 Long = 7+ years

No	Strategy	Responsibility	Timeframe
Transportation			
T-4	88th Avenue Improvements. Complete pedestrian and bicycle improvements along 88th Avenue. Like Welby Road, improvements to 88th Avenue should create an attractive public realm and should be upgraded to improve safety for all modes of travel and encourage pedestrian and bicycle activity to and from the station.	Infrastructure, City Development	Short to Medium

Table 7.4: Infrastructure Implementation Strategies

No	Strategy	Responsibility	Timeframe
Infrastructure			
★ I-1 ★	Station Enhancement/Betterment Projects. Determine preferred station design upgrades and fund the cost of these enhancements through coordination with RTD/RRP. Design of the commuter rail station will set the standard for the quality of development desired in the Station Area. One of the primary betterments should be the pedestrian underpass connecting the station platform to the west side of the railroad tracks. Given the limited budget of RRP, it is likely that the City will also want to see upgraded urban design features that make a signature statement, letting travelers know that they have arrived in Thornton and that the Station Area itself is a unique place. Betterment projects could include higher quality design materials and features, wayfinding and signage, and public art at the platform and on the transit plaza, chosen and designed in a cohesive and comprehensive manner.	City Development, Community Services, Infrastructure	Short

Timeframe Key
Short = 1-2 years
Medium = 3-6 years
Long = 7+ years

No	Strategy	Responsibility	Timeframe
Infrastructure			
★ I-2 ★	Stormwater Improvements. Complete the stormwater drainage improvement design and possibly contribute public funds towards these improvements. The City should consider financially participating in a stormwater improvement project to offset costs and prepare the Station Area for development as envisioned in the STAMP. Additionally, work with Urban Drainage and Flood Control District to identify potential available funds, or funds that could be reallocated from another project, to help offset storm drainage costs.	Infrastructure, City Development, Urban Drainage, Private Developers	Short to Medium
I-3	Planned Parks and Linear Open Space. Once the parks envisioned in the STAMP are built, work with the Developer to determine best options for long-term park maintenance. Given the uniqueness of the linear park, the City should develop a maintenance cost estimate and determine whether funds can be set aside to maintain this as a City park.	City Development, Community Services, Metropolitan District, Private Developers	Medium to Long
I-4	Program Yucca Way Open Space. After, or in conjunction with, the final design and construction of stormwater improvements, explore opportunities for programming the 4.6 acre City-owned Yucca Way open space (located between the railroad tracks and Mapleton Skyview Campus) as part of the Parks and Open Space Plan update. Specifically consider the potential for this open space to be programmed for recreational uses and potential access between the transit station and Skyview Campus in a manner that allows for reasonable use by the community while protecting environmental resources on the land.	Community Services, City Development	Medium to Long

Table 7.5: Financing Implementation Strategies

No	Strategy	Responsibility	Timeframe
Financing			
F-1	Pursue Grants and Partnerships for Prioritized TOD Projects. Based upon the prioritization of Capital Improvement Plan projects within the Station Area, strategically pursue grant funding and public-private partnerships to pursue catalyst projects and infrastructure improvements, particularly related to enhanced pedestrian, bicycle and intersection facilities and public spaces.	City Development, Infrastructure, Community Services	Ongoing

Timeframe Key
Short = 1-2 years
Medium = 3-6 years
Long = 7+ years

No	Strategy	Responsibility	Timeframe
Financing			
F-2	Title 32 Metropolitan District Amendment. Work closely with master developer on amending the Service Plan for Welby Metropolitan District, the existing Title 32 Metropolitan District to address infrastructure and other project needs in area.	City Development, Developer	Short to Medium
F-3	CDBG Funds. Where possible, use Community Development Block Grant (CDBG) funds to help pay for needed storm drainage improvements. The CDBG program is a federally funded program through the U.S. Department of Housing and Urban Development which funds housing and community development projects to benefit low to moderate income residents.	City Development, Infrastructure	Short to Medium
F-4	Urban Renewal. Explore an Urban Renewal Area as one potential tool for financing, to help offset the cost of needed infrastructure improvements.	Economic Development, City Development	Short to Medium
F-5	Greater Outdoor Colorado Funds. Explore the use of Greater Outdoor Colorado (GoCO) funds to pay for trails, etc. in the Station Area.	Community Services	Ongoing
F-6	Development Incentives. The City should consider various incentive tools for developers who propose development consistent with the Preferred Alternative and Guiding Principles set forth in the approved STAMP, including but not limited to: • Rebate of development fees. • Rebate of a portion of new sales taxes. • Rebate of a portion of use taxes on construction. • Rebate of the City's real property taxes paid on a new facility. • Rebate of the City's personal property taxes paid on a new facility. • Expedited review • Other incentives as appropriate given the proposed development.	City Development, Management Services, Economic Development	Ongoing
F-7	Affordable Housing. For residential projects, work with developers on obtaining financing including low income housing tax credits (LIHTCs), and determine if HUD 221 (d) (3) and (4) financing, CDBG and HOME funds could be used at this project location.	City Development, Private Developers, Outside Housing Organizations	Ongoing

Timeframe Key

Short = 1-2 years
Medium = 3-6 years
Long = 7+ years

Table 7.6: Community Implementation Strategies

No	Strategy	Responsibility	Timeframe
Community			
C-1	Community Engagement. Engage the community for rezoning actions or specific development proposals. This should include keeping the website updated with current information about the project and appropriate City contact information, hosting community meetings or other outreach for rezoning or development proposals as needed, and looking into the possibility of supporting a community stakeholder group.	City Development	Ongoing
C-2	Property Owner and Developer Engagement. As needed, meet with Station Area property owners to work towards developing the Preferred Alternative and Guiding Principles as envisioned in the STAMP.	City Development	As needed

Timeframe Key
Short = 1-2 years
Medium = 3-6 years
Long = 7+ years

Appendix A: Market Study for the Original Thornton at 88th Station Area Plan



Market Study for the Original Thornton at 88th Station Area Plan

Presented to:

City of Thornton, Colorado

July 31, 2014

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I. EXECUTIVE SUMMARY

Steer Davies Gleave with ArLand Land Use Economics (ArLand) was retained by the City of Thornton in 2013 to prepare a Station Area Master Plan for its Original Thornton at 88th Station Area. As the economics and market lead, ArLand prepared this technical report summarizing the economic conditions and market potentials of the station area. The report is intended to serve as a framework and guide for the development of the Original Thornton at 88th station area plan.

Project Scope

The market study provides an analysis of the potential demand for residential and commercial uses near the station area taking into consideration local market trends, stakeholder, and City feedback. The information is a basis for planning the types and intensities of uses, buildout scenarios and preferred alternatives. As with any plan and ultimate development project, the actual mix and timing of development is going to vary.

Findings

- In November, 2013, the RTD Board approved a contract award to Regional Rail Partners (RRP) to design and build the North Metro Commuter Rail Line to 124th Avenue. The RRP team has committed to completing construction of the line by January 2018, with plans to open to the public in mid-2018. Although market fundamentals still apply, this changes the dynamic of the land use environment near the Original Thornton at 88th Station.
- There is an approximately 50 acre vacant parcel directly south and east of the station in addition to other scattered sites throughout the area with development or redevelopment potential. There is currently a development proposal on the 50-acre site. There have reportedly been three previous development proposals which fell through. One of the reported challenges is the storm drainage and other infrastructure costs. 2005 estimates for storm drainage alone were \$3.1 million. The recent recession has also had an impact.
- Thornton has added over 63,000 residents in the last twenty years, many in the northern section of the City. Employment in Adams County has started to return, much like the rest of the Denver Metro region.
- There are challenges presented by the existing housing stock in the immediate station area, presenting future marketing barriers to area redevelopment. According to the Adams County assessor's records, in the half mile radius around the station,
 - o The single family residences built in the area average 1,000 square feet, were built in about 1962, and have low average values of \$130,000.
 - o The townhouses in the area are newer, having been built in 1984, but have average values of \$65,000 and are slightly larger at 1,100 square feet.

- There are several mobile home communities close to the future station which provide affordable housing to area residents. They include Thornton Estates, at approximately 200 units, and Chaparral Village with just over 100 units.
- Other land uses presenting marketing challenges include the industrial land uses south of 88th Avenue which are unlikely to transition to any other uses quickly.
- Most TOD residential development focuses on higher density multifamily product types. Given the single family nature of much of the area adjacent to the station area as well as land availability and recent development proposals, potential residential development at the station area could accommodate some single family residential closer to the adjacent neighborhoods, while transitioning to higher density development closer to the station.
- Residential development should accommodate a mix of unit types and income levels. In order to attract the market rate audience (middle income residents with incomes of \$50,000 plus), it would be imperative to leverage the presence of the station, and create a sense of place, particularly at the 50 acre parcel adjacent to the station.
- There is a market for 400-850 residential units, including rental, future for-sale, single family detached and attached, and multifamily.
 - While there is a market for tax credit / affordable units charging less than \$1.00 per square foot, there is also demand for renters at \$50,000 to \$75,000 annual incomes who can afford to pay up to \$1.20 per square foot and above.
 - There is also demand for for-sale residential units. While the majority of demand is for single family detached homes, there is significant demand potentially for single family attached units.
- One of the challenges currently inhibiting the development of attached residential ownership units is the current construction defects law. While condo and attached housing units were formerly 20% of all new ownership units built, their current share has shrunk to less than 5% of ownership units constructed in the Denver Metro area. Currently, there is a liability risk for builders, developers and subcontractors posed by current laws that make it easy for homeowners' associations to file large, class-action lawsuits against builders for construction problems associated with new, for-sale housing units, such as condominiums. The resulting slowdown in condo construction has had serious implications for development around new transit stations and for new housing options for lower-income homebuyers.
- Most of the retail in the South Thornton community is centered along I-25 and major arterials. Given the neighborhood orientation of the site, there is relatively modest demand for retail and commercial services (including small offices) of up to 50,000 square feet. There may be a desire on the part of the Mapleton Public Schools / Skyview Campus for "professional presentation or office space" for student training. This would more than likely be a shared space situation and within the range of supportable commercial square feet in the area.

- Another significant development consideration is the potential cost of infrastructure, particularly storm drainage. An opinion of probable infrastructure cost associated with a previous development proposal on the site identified approximately \$6.6 million in infrastructure costs (\$2005). While some of that cost should be borne by the master developer of the site, the costs identified, particularly storm drainage at \$3.1 million, have been identified as an impediment to development.
- While there are a number of potential financial tools to put into place, further discussion would be necessary to assess what would be politically acceptable. Financial tools where the public is involved are typically used to pay for “public” amenities such as infrastructure, public plazas, and other amenities that can be used by the general public. Offsetting some of the high costs of public infrastructure could then leverage other funds to help pay for a pedestrian and neighborhood friendlier environment which would help with marketing, leasing and sales.

Table 1 summarizes the development potentials at the Original Thornton at 88th Station Area.

Table 1
Original Thornton at 88th Station Area Development Potentials

Land Use Type	Market Forecast
Total Units	400-850 Units
Single-Family Detached and Attached	40%
Multifamily	60%
	The residential portion of the development should ideally include residences accommodating a mix of incomes, ranging from affordable to market rate. The community should be a mix of for-sale and rental housing. It would be imperative to create a "community and sense of place" to attract a mix of incomes. Different housing types, including senior housing, should be included in the mix. The area could support a mix of heights and densities.
Commercial	Up to 50,000 square feet of neighborhood commercial services including office space for Mapleton student training and presentations.

Source: ArLand

II. INTRODUCTION

Steer Davies Gleave with ArLand Land Use Economics (ArLand) was retained by the City of Thornton in 2013 to prepare a Station Area Master Plan for its Original Thornton at 88th Station Area. As the economics and market lead, ArLand Land Use Economics prepared this technical report summarizing the development conditions and market potential for the area. Data analysis was completed and interviews were conducted in late 2013 and early 2014. The report is intended to serve as a framework and guide for the development of the station area plan.

Project Background

The RTD Fastracks project is a \$6.5 billion expansion of the regional transit system in the Denver metro region approved by Denver metro residents in 2004. The project proposes to add six additional rail transit lines, bus routes, approximately 70 transit stations, and associated parking. The North Metro Corridor, one of the six future transit lines, is an 18.5 mile electric commuter rail line that will run from Denver Union Station through Commerce City, Thornton, and Northglenn to just north of Highway 7 in Thornton.

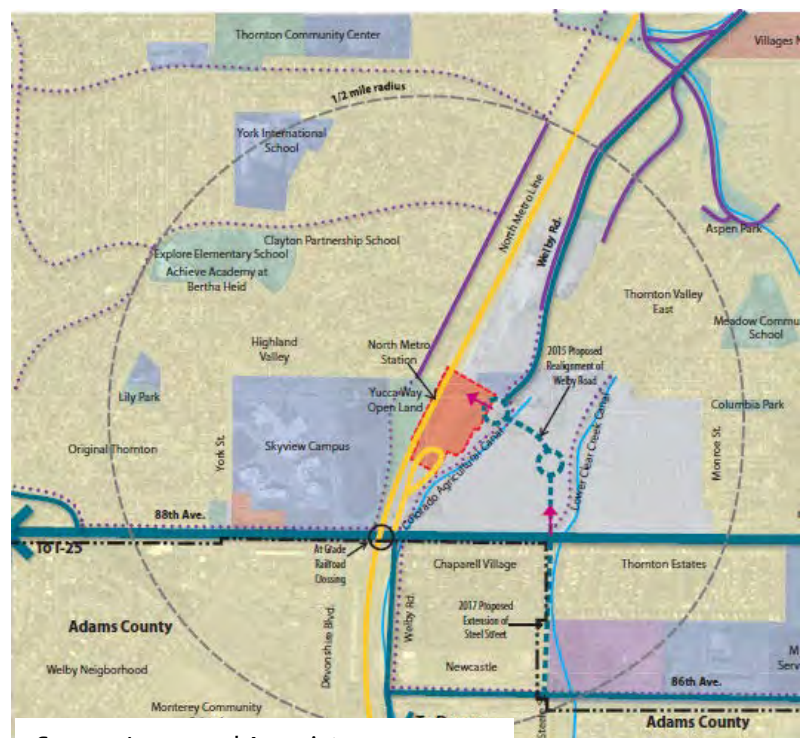
In November of 2013, the RTD Board approved a contract award to Regional Rail Partners (RRP) to design and build the North Metro Rail Line to 124th Avenue. The RRP team has committed to completing construction of the line to 124th by January 2018, with plans to open to the public in mid-2018.

Current Conditions

The station and parking area are shown in red in Figure 1. Mapleton Public School's Skyview Campus is immediately west of the station. There is an approximately 50 acre vacant parcel directly south and east of the proposed station.

The area is surrounded by single-family residential uses to the east and to the north. There are also industrial uses to the north and to the south in Adams County.

Figure 1
Original Thornton at 88th Station Area



Source: Leese and Associates

The station area planning effort and this market study is intended to set the orderly framework for future redevelopment for this area. There have been previous development proposals for the vacant

land area near the station. With the more realistic potential of the commuter rail actually being built in the foreseeable future, there is some urgency in establishing a plan and framework for future development at this station area.

Market Study Scope

The market study's scope examines local and regional economic and demographic trends and projections impacting the Original Thornton at 88th Station Area and assesses the development potential for residential and commercial development. It is organized into the following sections.

- *Economic and Demographic Framework* discusses relevant local, regional and market area population, demographic and employment trends and projections impacting the market potential for the Original Thornton at 88th Station Area.
- *Residential Market Analysis* provides housing unit forecasts and discusses the current and future residential market potential appropriate for the station area.
- *Commercial Market Analysis* examines the retail market and potential retail uses appropriate for the station area. It also discusses the office market.
- *Development Potential* summarizes and discusses overall land use potential.

III. ECONOMIC AND DEMOGRAPHIC FRAMEWORK

Population

The Denver metro region (the 9-county region as defined by DRCOG with the addition of Weld County) reached a population of 3.1 million in 2010, an increase of over 1 million residents in the last twenty years as seen in Table 2. While the increase has slowed in recent years, the region continues to add new residents.

Table 2
Denver Metro Population Trends, 1990-2010

				1990-2000		2000-2010	
	1990	2000	2010	Change	Average Annual Growth Rate	Change	Average Annual Growth Rate
Adams	265,038	363,857	441,603	98,819	3.2%	77,746	2.0%
Arapahoe	391,511	487,967	572,003	96,456	2.2%	84,036	1.6%
Boulder	225,339	291,288	294,567	65,949	2.6%	3,279	0.1%
Broomfield	---	---	55,889	---	---	---	---
Clear Creek	7,619	9,322	9,088	1,703	2.0%	-234	-0.3%
Denver	467,610	554,636	600,158	87,026	1.7%	45,522	0.8%
Douglas	60,391	175,766	285,465	115,375	11.3%	109,699	5.0%
Gilpin	3,070	4,757	5,441	1,687	4.5%	684	1.4%
Jefferson	438,430	527,056	534,543	88,626	1.9%	7,487	0.1%
Weld	131,821	180,936	252,825	49,115	3.2%	71,889	3.4%
Total	1,990,829	2,595,585	3,051,582	604,756	2.7%	455,997	1.6%
Thornton	55,307	82,384	118,796	27,077	4.1%	36,412	3.7%

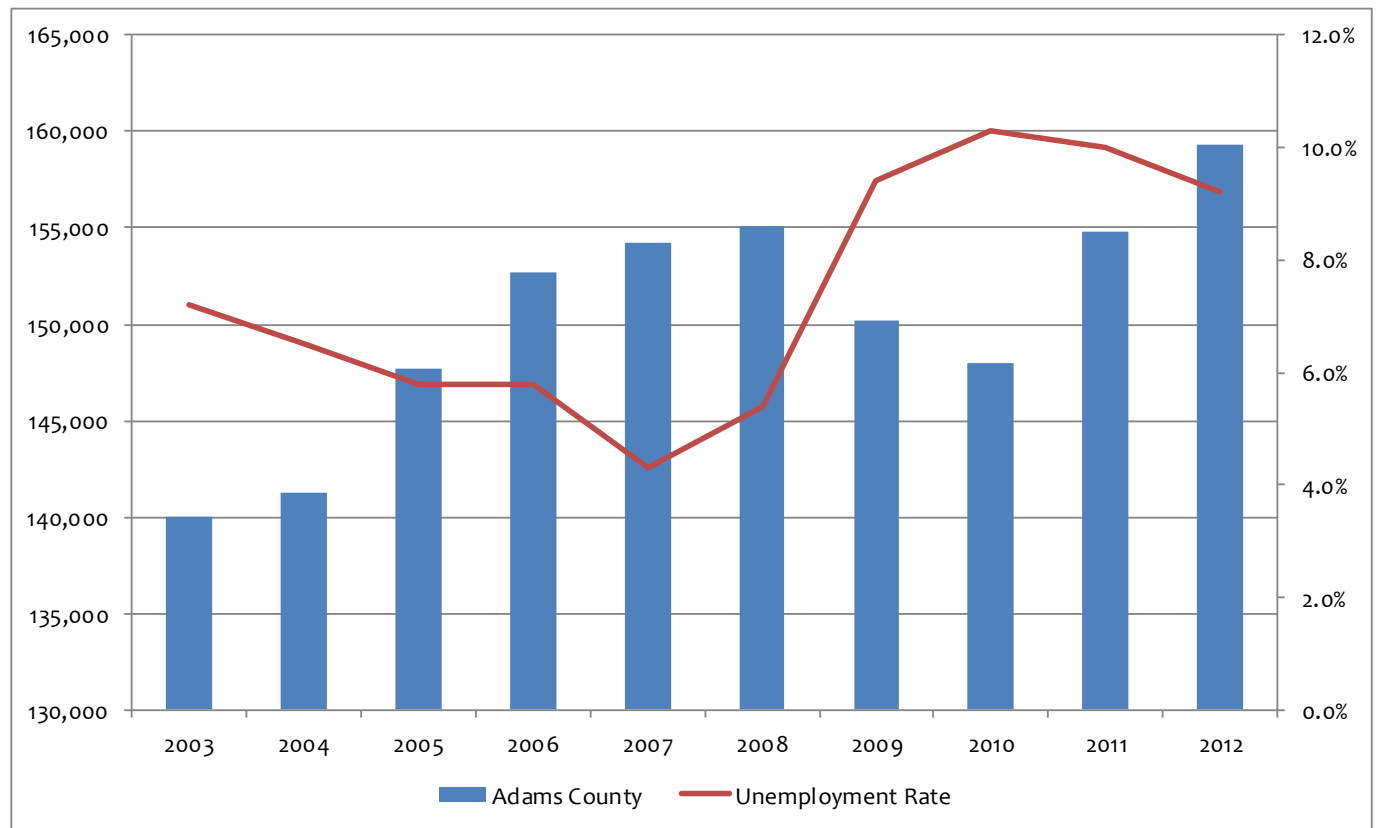
Source: US Census, ArLand

As shown in Table 2, the growth rate in Thornton has consistently outpaced growth in the metro area as well as Adams County. The City has added over 63,000 residents in the last twenty years, many in the northern section of the City.

Regional Employment Trends

There has been a great deal of fluctuation in the overall jobs numbers in the Denver metro region in the past decade. Figure 2 shows employment and the unemployment rate in Adams County from 2003 to 2012.

Figure 2
Adams County Employment, 2003-2012



Source: Colorado Department of Labor & Employment, BLS, ArLand

There had been a decline in jobs earlier in the decade after the terrorist attacks of 2001. Like most of the broader Denver metro region, the Great Recession resulted in a dramatic decline in the number of jobs in 2009 and 2010 in Adams County. Jobs have begun to return to the county, as well as to the region. The unemployment rate has also started to decline.

Table 3 shows employment in Adams County. It shows that there has been an overall net gain of nearly 20,000 jobs from 2003 to 2012. In 2012, the greatest employment concentrations were in the Health Care and Social Assistance, Retail Trade and Construction industries. The greatest jobs increases during the 2003 to 2012 time period were found in the Health Care and Social Assistance Industries.

Table 4 (following page) shows an estimate of employment in Thornton in 2012 compared to an estimate of employment for Adams County and the Denver MSA. Most of the City's jobs were in Retail Trade, followed by Health Care and Social Assistance, Accommodation and Food Services, and Administrative and Waste Services. The Location Quotient for the City, compared to the counties and the MSA indicates that Thornton has a higher proportion of these industries in its economy relative to the Denver MSA. The high Location Quotient for the Retail Trade industry also indicates that the Retail Industry in Thornton, particularly along I-25, serves a broad regional area.

Table 3
Employment in Adams County, 2003-2012

Industry	2003	2008	2012	2012% of Employment	Change 2003- 2012	CAGR 2003- 2012
Agriculture, Forestry, Fishing and Hunting	1,143	1,182	1,053	0.7%	-90	-0.9%
Mining	256	232	339	0.2%	83	3.2%
Utilities	864	817	732	0.5%	-132	-1.8%
Construction	17,602	16,907	14,575	9.1%	-3,027	-2.1%
Manufacturing	13,284	12,518	11,773	7.4%	-1,511	-1.3%
Wholesale Trade	12,986	14,753	13,579	8.5%	593	0.5%
Retail Trade	15,316	17,191	17,657	11.1%	2,341	1.6%
Transportation and Warehousing	15,061	14,385	13,672	8.6%	-1,389	-1.1%
Information	1,903	2,293	2,457	1.5%	554	2.9%
Finance and Insurance	3,307	2,933	2,801	1.8%	-506	-1.8%
Real Estate and Rental and Leasing	2,741	2,899	2,690	1.7%	-51	-0.2%
Professional, Scientific, and Technical Services	3,704	4,804	5,372	3.4%	1,668	4.2%
Management of Companies and Enterprises	1,034	1,267	1,243	0.8%	209	2.1%
Administrative and Support and Waste Management	8,784	10,199	10,596	6.7%	1,812	2.1%
Educational Services	10,758	12,871	13,276	8.3%	2,518	2.4%
Health Care and Social Assistance	8,821	13,590	21,407	13.4%	12,586	10.4%
Arts, Entertainment, and Recreation	1,512	1,532	1,483	0.9%	-29	-0.2%
Accommodation and Food Services	10,172	12,578	12,564	7.9%	2,392	2.4%
Other Services (except Public Administration)	4,148	4,870	4,756	3.0%	608	1.5%
Public Administration	6,583	7,278	7,281	4.6%	698	1.1%
Unclassified	5	16	12	0.0%	7	10.2%
Total	139,981	155,116	159,317	100.0%	19,336	1.4%

Source: Colorado Department of Labor & Employment, BLS, ArLand

Table 4
Employment in the City of Thornton, Adams County, and Denver MSA, 2012

Industry	City of Thornton	% of Total	Adams County	% of Total	Denver MSA	% of Total	Location Quotient vs. County	Location Quotient vs. MSA
Agriculture, Forestry, Fishing and Hunting	7	0.0%	1,053	0.7%	1,827	0.2%	0.1	0.2
Mining	5	0.0%	339	0.2%	10,106	0.8%	0.1	0.0
Utilities	26	0.1%	732	0.5%	7,181	0.6%	0.3	0.2
Construction	919	4.4%	14,575	9.1%	58,361	4.9%	0.5	0.9
Manufacturing	159	0.8%	11,773	7.4%	67,365	5.6%	0.1	0.1
Wholesale Trade	414	2.0%	13,579	8.5%	66,656	5.6%	0.2	0.4
Retail Trade	5,229	24.8%	17,657	11.1%	128,395	10.8%	2.2	2.3
Transportation and Warehousing	169	0.8%	13,672	8.6%	39,892	3.3%	0.1	0.2
Information	591	2.8%	2,457	1.5%	47,152	3.9%	1.8	0.7
Finance and Insurance	443	2.1%	2,801	1.8%	69,421	5.8%	1.2	0.4
Real Estate and Rental and Leasing	365	1.7%	2,690	1.7%	24,643	2.1%	1.0	0.8
Professional, Scientific, and Technical Services	845	4.0%	5,372	3.4%	107,390	9.0%	1.2	0.4
Management of Companies and Enterprises	295	1.4%	1,243	0.8%	27,421	2.3%	1.8	0.6
Administrative and Support and Waste Management	2,625	12.4%	10,596	6.7%	77,876	6.5%	1.9	1.9
Educational Services	417	2.0%	13,276	8.3%	97,827	8.2%	0.2	0.2
Health Care and Social Assistance	3,840	18.2%	21,407	13.4%	141,995	11.9%	1.4	1.5
Arts, Entertainment, and Recreation	179	0.8%	1,483	0.9%	22,284	1.9%	0.9	0.5
Accommodation and Food Services	2,859	13.5%	12,564	7.9%	107,060	9.0%	1.7	1.5
Other Services (except Public Administration)	702	3.3%	4,756	3.0%	36,139	3.0%	1.1	1.1
Public Administration	1,016	4.8%	7,281	4.6%	55,306	4.6%	1.1	1.0
Total	21,105	100.0%	159,317	100.0%	1,194,297	100.0%	1.0	1.0

Source: City of Thornton (Thornton Commercial Real Estate, Demographics and Commerce prepared by Gary Horvath), Colorado Department of Labor & Employment, BLS, ArLand

3.1 Current Demographic Characteristics

The City of Thornton is located in Adams County, approximately 10 miles north of Denver. For purposes of the residential and commercial analysis, a Primary Market Area was designated for the Original Thornton at 88th Station Area (Figure 3).

The market area encompasses much of south Thornton. It is bordered by Pecos to the west, 112th Avenue in Northglenn to the north and most of the developed area along the eastern boundary of Thornton. The entire Primary Market Area for this analysis is in Adams County.

3.2 Market Area Demographic Characteristics

Table 5 shows that there are nearly 89,500 people in the Primary Market Area in over 31,500 households. According to the U.S. Census, the City of Thornton's estimated population in 2013 was 127,359, up from its 2010 population of 122,643.

Figure 3
Primary Market Area for the Original Thornton at 88th Station



Source: ArLand

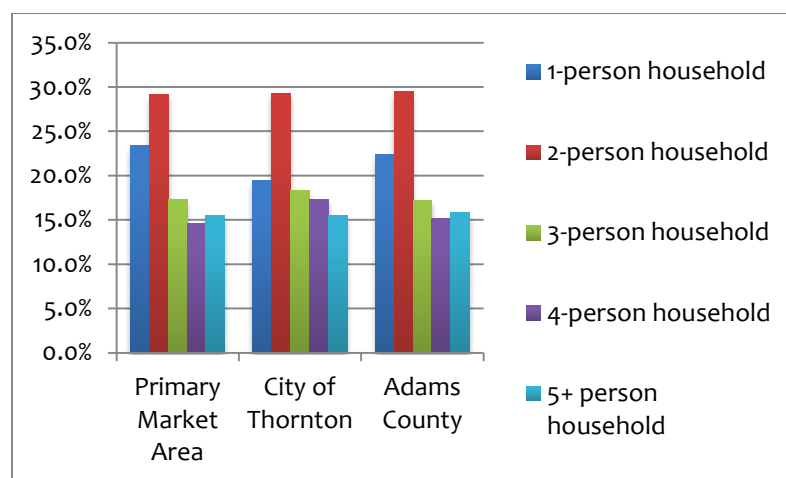
Table 5
Population and Households in Market Areas, 2013

	Primary Market Area	City of Thornton	Adams County
Persons	89,448	127,359	469,193
Households	31,576	43,766	164,053
Persons / Households	2.82	2.91	2.86

Source: Claritas, U.S. Census, ArLand

On average, there are 2.82 persons per household in the Primary Market Area, which is slightly lower than the City of Thornton and Adams County.

Figure 4
Household Sizes in Market Areas, 2013

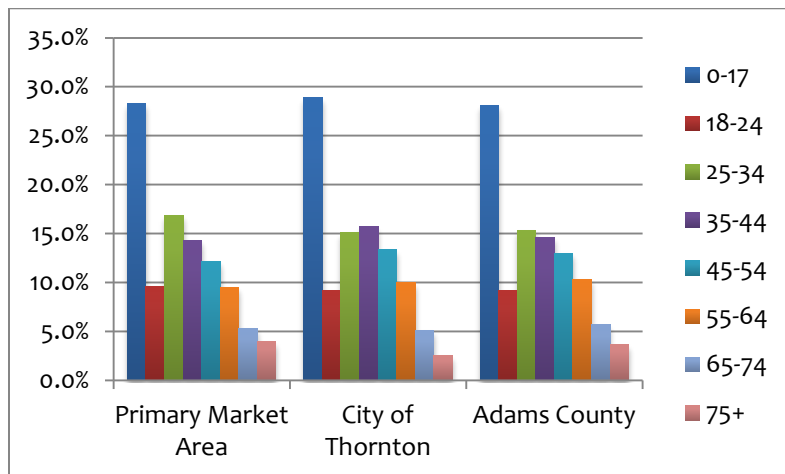


Source: Claritas, ArLand

According to Figure 4, the Primary Market Area has slightly higher percentages of 1-person households (23.4%) and slightly lower percentages of 3-person households (17.3%) and 4-person households (14.6%) than the City of Thornton and Adams County. Households comprised of one or two people account for 52.6% of households in the Primary Market Area, 48.8% in the City of Thornton and 51.9% in Adams County.

As Figure 5 depicts, age breakdowns are very similar across the Primary Market Area, City of Thornton and Adams County. In all the market areas, the greatest percentage of the population—about 28.5%—is below the age of 17. The smallest percentages of the population fall in to the 18-24 and over 55 age categories. Table 6 shows that the median age is between 32.2 and 33.3 for the market areas, with the Primary Market Area having the lowest median age.

Figure 5
Age Breakdowns in Market Areas



Source: Claritas, ArLand

Table 6
Median Ages in Market Areas, 2014

	Median Age
Primary Market Area	32.2
City of Thornton	32.9
Adams County	33.3

Source: Claritas, ArLand

Table 7 indicates that home ownership is higher in the City, when compared to Adams County and the Primary Market Area.

Table 7
Owner vs. Renter Occupied Housing in Market Areas, 2014

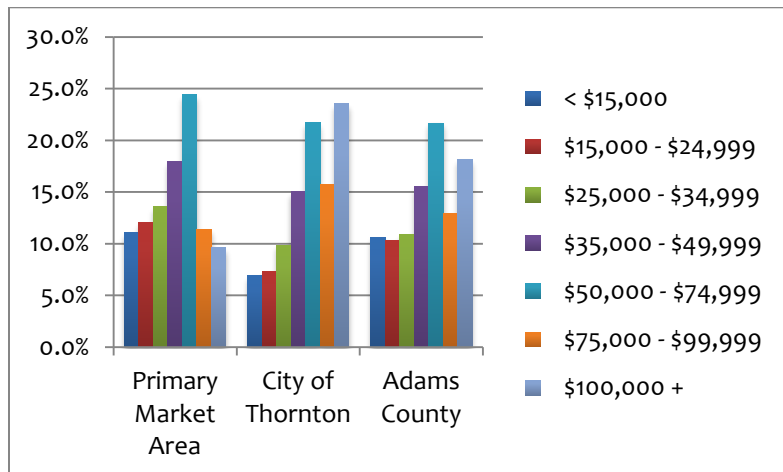
	Primary Market Area	City of Thornton	Adams County
Owner Occupied	61.1%	71.3%	65.8%
Renter Occupied	38.9%	28.7%	34.2%

Source: Claritas, ArLand

Household income breakdowns are shown in Figure 6 and median and average household incomes are shown in Table 8. In general, households outside the Primary Market Area are wealthier than households within the Primary Market Area, with City of Thornton households earning about \$16,500 more annually and Adams County households earning about \$7,000 more annually, when measured by median income. The Primary Market Area has higher percentages of low-income households than the City of Thornton and Adams County. Additionally, less than 10% of households have incomes over \$100,000 in the Primary Market Area, as compared to about twice that in the City of Thornton (23.5%)

and Adams County (18.2%). The highest percentage of incomes for the Primary Market Area and Adams County fall into the \$50,000 to \$74,999 range, while the highest percentage of incomes for the City of Thornton fall into the over \$100,000 category.

Figure 6
Household Income Breakdowns in Market Areas, 2014



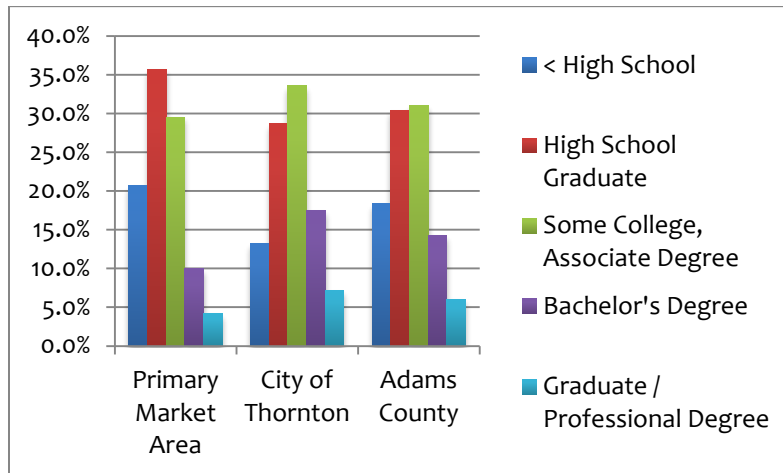
Source: Claritas, ArLand

Table 8
Median Household Incomes in Market Areas, 2014

	Median HH Income	Avg HH Income
Primary Market Area	\$46,153	\$53,189
City of Thornton	\$62,641	\$72,125
Adams County	\$53,117	\$64,107

Source: Claritas, ArLand

Figure 7
Educational Attainment in Market Areas, 2014

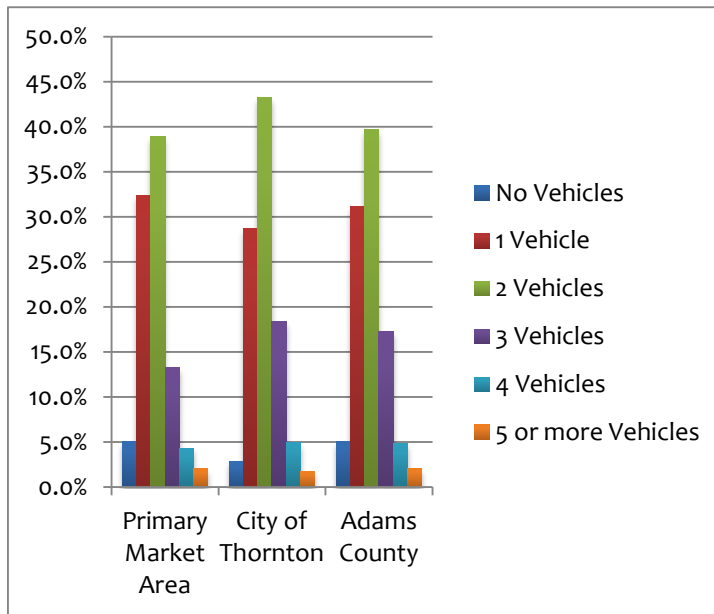


Source: Claritas, ArLand

Figure 7 shows that, within the Primary Market Area, there are higher percentages of people that did not complete high school or did not receive additional education after graduating from high school when compared to the City of Thornton and Adams County. Additionally, lower percentages of people completed some college or associates degrees as well as bachelors and graduate/professional degrees.

79.3% of Primary Market Area residents have a high school diploma at a minimum, compared to 86.9% of City of Thornton residents and 81.6% of Adams County residents. For the City of Thornton and Adams County, the highest percentages of people fall in to the Some College/Associates Degree category—29.5% for the Primary Market Area, 33.6% for the City of Thornton, and 31% for Adams County; for the Primary Market Area, the highest percentages of people fall in to the High School Graduate category (35.7%). 14.2% of Primary Market Area residents have a Bachelor's degree or higher, which is 10.5% lower than City of Thornton residents and 6.1% lower than Adams County residents.

Figure 8
Vehicle Ownership in Market Areas, 2014



Source: Claritas, ArLand

Figure 8 shows that vehicle ownership is similar across all market areas. Around 30% of households own 1 vehicle and 40% own 2 vehicles in all market areas—the categories containing the highest percentages of the populations. 5% of households in both the Primary Market Area and Adams County do not own a vehicle, compared to 3% in City of Thornton. The Primary Market Area has a slightly lower average estimated number of vehicles per household at 1.84, as compared to the City of Thornton at 2.01 and Adams County at 1.94.

Table 9
Population by Occupation in Market Areas, 2014

	Primary Market Area	City of Thornton	Adams County
Office/Admin Support	17.8%	16.9%	16.3%
Sales/Related	10.6%	11.3%	10.8%
Transportation/Moving	8.5%	7.7%	8.4%
Production	7.7%	5.6%	6.1%
Food Prep/Serving	6.3%	4.5%	5.6%
Management	5.4%	9.4%	8.1%
Maintenance Repair	4.8%	3.4%	4.4%
Healthcare Support	3.2%	2.9%	2.6%
Personal Care / Service	3.2%	3.5%	3.3%
Health Practitioner	2.6%	3.5%	3.2%
Protective Svcs	1.9%	2.7%	2.2%
Legal	0.5%	0.7%	0.7%
Life/Physical /Social Scier	0.4%	0.4%	0.4%
Farm/Fish/Forestry	0.4%	0.3%	0.4%

Source: Claritas, ArLand

Table 9 shows that occupation trends are similar across all market areas, with a few minor differences. The top 3 occupation categories in the Primary Market Area are Office/Admin Support, Sales/Related and Transportation/Moving. The Office/Admin Support job category leads across all market areas, ranging between 16.3% in Adams County and 17.8% in the Primary Market Area. There is a higher percentage of Primary Market Area residents in Transportation / Moving, Production, Food Prep, Maintenance Repair, and Health Care Support compared to the City of Thornton and Adams County. The Primary Market Area has a lower percentage of jobs compared to the City and County in Management, Personal Care, Health Practitioner, Protective Services, and Legal categories.

Table 10
Race and Ethnicity in Market Areas, 2014

Race/Ethnicity	Primary Market Area	City of Thornton	Adams County
White	70.3%	76.0%	72.5%
Black	2.2%	1.9%	3.2%
American Indian	1.6%	1.2%	1.4%
Asian/Pacific Islander	3.6%	4.8%	3.7%
Other / Two or more	3.5%	16.1%	19.2%
Hispanic Origin*	22.3%	33.1%	38.6%

Source: Claritas, ArLand

* can be of any race

Table 10 shows the race and ethnicity in the market areas. The population is primarily White (ranging between 70.3% and 76% for all market areas); however, all the areas have a substantial Hispanic population (ranging between 22.3% and 38.6% for all market areas). In general, there is a higher percentage of Hispanic residents in southern Thornton compared to northern Thornton and there is a lower percentage of Hispanic residents in Northglenn which the Primary Market Area encompasses.

IV. RESIDENTIAL MARKET ANALYSIS

This section forecasts potential housing demand for the station area based on projections for growth in the area. While the residential focus of TOD market studies is typically higher density multifamily units close to the station area, the single family residential market is also examined for the Original Thornton at 88th Station Area because of the neighborhood context and past popular development proposals that have incorporated higher density, small lot single family residential in the neighborhood.

While owner-occupancy is very high in the Primary Market Area, there are challenges presented by the age of the existing housing stock in the immediate station area and the state of the current infrastructure. According to the Adams County assessor's records, in the half mile radius around the station,

- The single-family residences built in the area average 1,000 square feet, were built in about 1962, and have low average values of \$130,000.
- The townhouses in the area are newer, having been built in 1984, but have average values of \$65,000 and are larger than some of the single family residences in the area at 1,100 square feet.
- There are several mobile home communities close to the future station which provide affordable housing to area residents. They include Thornton Estates, at approximately 200 units, and Chaparall Village with just over 100 units.

While Thornton has seen significant residential development in the last five years, much of it has been in the northern Thornton neighborhoods, which don't have the aging infrastructure and other challenges of the Original Thornton at 88th Station Area. The Original Thornton at 88th Station represents an opportunity to introduce newer stock into the neighborhood and offer greater housing choices for future Thornton residents who may wish to benefit from proximity to transit.

Table 11
Residential Building Permits, 2007-2012

Area	2006	2007	2008	2009	2010	2011	2012	Total	Average	% 5+Units Multifamily	Other Multifamily
All Permits											
Thornton	1,045	826	344	240	260	260	527	3,502	500	17.4%	3.9%
Westminster	320	168	88	44	48	96	148	912	130	8.7%	7.2%
Northglenn	1	0	0	0	0	0	0	1	0	0.0%	0.0%
Federal Heights	2	20	5	3	5	3	4	42	6	0.0%	0.0%
Commerce City	818	480	248	132	240	116	192	2,226	318	2.6%	0.8%
Broomfield	1,082	1,060	827	160	232	229	2,010	5,600	800	55.7%	0.1%

Source: HUD SOCDs, ArLand

Although homebuilding in Thornton slowed during the Great Recession, the residential economy appears to be returning. In 2012, 527 residential building permits were issued in Thornton (Table 11). Since 2006, about 22% of the residential permits issued were for multifamily units. In the broader regional area, Broomfield has seen a greater number of residential units built and has seen a strong rebound in their residential economy. Over 50% of their residential units are in larger multifamily apartment projects. Most of Thornton's recent development has been in the north Thornton area.

4.1 Planned Residential Projects

Figure 9 and Table 12 on the following page describe the residential projects in the planning pipeline. Currently, there are 944 single family units and 460 multifamily units. The 220 unit HighPointe Park multifamily project was recently completed in south Thornton on Washington Street. There is a clustering of planned projects at approximately 92nd near Colorado and the new North Metro rail line. The Original Thornton Station at 88th area is currently approved for 604 multifamily units and 179 single family units. However, those approvals were received under a previous development proposal which subsequently stalled because of the Great Recession.

Figure 9
Projects in the Planning Pipeline

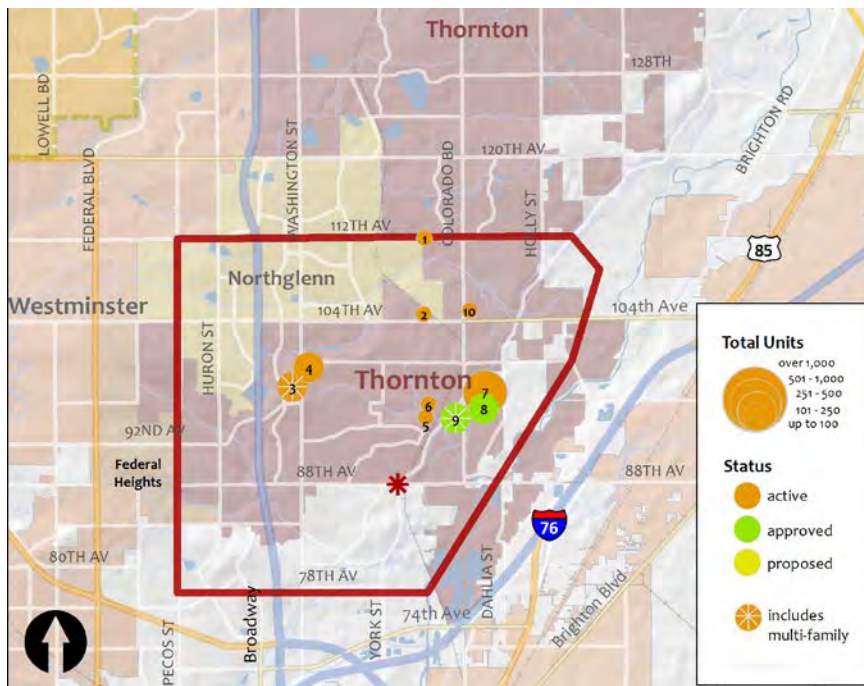


Table 12
Planned Residential Projects Key

Map No.	Name	SF Units	MF Units
1	Woodglen	10	
2	Sage Valley	72	
3	Highpointe Park		220
4	Sundance Condos	176	
5	Villages North #5	26	
6	Villages North #6	38	
7	River Valley Village	475	
8	Cherrylane	141	
9	Thornton Valley		240
10	Wyndemere	6	
Total		944	460

Source: City of Thornton, ArLand

It is important to note that the City of Thornton has undertaken planning processes at its Eastlake Station and its North End station and is concurrently planning for its 104th Avenue Station. Both the North End and Eastlake stations have thousands of residential units planned, however, these projects, because of infrastructure, market, and other considerations, will take many years to develop. Because the Original Thornton at 88th Station has immediate development interest, the focus is on planned residential projects that are active and imminent, and likely to be near term competition.

Developing a community which takes advantage of proximity to transit will help the station area be competitive when compared to other future residential offerings. Based on current development interest, it may be the first station area potentially developed in the City of Thornton and presents a strong development and community building opportunity.

4.2 Market Area Forecasts

Table 13
Population & Households Forecasts for Original Thornton at 88th Station Market Area

	2014	2015	2020	2025	2035	Change 2014- 2035	Average Annual Growth Rate 2014-2035
Primary Market Area							
Population	89,448	90,902	98,942	107,250	125,475	36,027	1.4%
Households	31,576	32,079	34,874	37,897	45,409	13,833	1.5%
Persons / HH	2.83	2.83	2.84	2.83	2.76	2.60	

Source: DRCOG, ArLand, Claritas

The Original Thornton Station at 88th Market Area is forecast to grow by an additional 13,833 households between 2014 and 2035 based on growth forecasts developed by DRCOG as seen in Table 13.

4.3 Activity in the Thornton Residential Marketplace

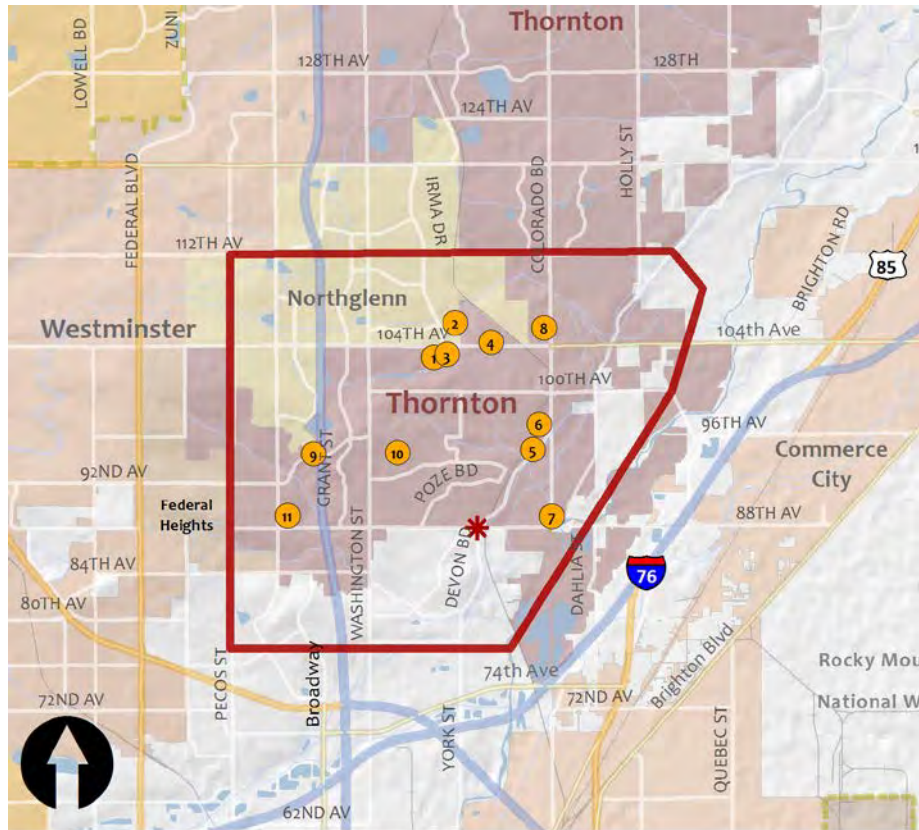
Most TOD residential development focuses on higher density multifamily product types. Given the single-family nature of much of the area adjacent to the station area as well as land availability and recent development proposals, potential residential development at the station area could accommodate some single-family residential closer to the adjacent neighborhoods, while transitioning to higher density development closer to the station.

The apartment market has been particularly active in the Denver metro area. The metro Denver rental market occupancy reached a record level of 95.8% in 2013. In-migration, particularly by younger people in the 25-34 age group, lack of new supply have all been contributing factors to recent market trends. Most of the development interest has been in downtown Denver or in neighborhoods close to downtown which have been particularly enticing to residents in the 25-34 age range, attracted by the jobs, entertainment, and other amenities that downtown has to offer. Rental ranges are high (over \$2 per square foot) for recently built projects and many of the residents are young professionals.

There are a fair number of apartment units in the Thornton market and the Original Thornton at 88th Station Market Area. A representative sampling of some of the more recently built and potentially most competitive apartment units are shown in Figure 10 and described in Table 14. Most of the

units in the market area were built in the 1990s and 2000s. They tend to be in large complexes at 2-3 stories.

Figure 10
Rental Apartments in the Original Thornton at 88th Station Area



Source: CAI, ArLand

Table 14
Rental Apartments

Map #	Property Name	Number of Units	Year Built	Stories	# of Bldgs	Acres	Density (DU/ac)
1	Avena	385	2008	3	18	26.3	14.64
2	Regatta	352	2000	2	22	22.8	15.44
3	Village of Yorkshire	200	1972	3	8	9.45	21.17
4	Champions Park	480	2001	3	20	28.4	16.92
5	Indigo Creek	304	2004	3	14	16.9	18.01
6	Reserve at Thornton	276	2005	3	10	22.3	12.39
7	Newport Village	220	1988	2	25	6.59	21.5
8	Covington Ridge	216	1996	3	9	11.1	19.4
9	Promenade at Hunters Glen	264	1998	3	12	13.2	20.0
10	Red Hawk Ranch	384	2001	3	15	22.4	17.2
11	Fox Creek	287	1992	3	19	19.6	14.7

Source: Colorado Apartment Insights, ArLand

The units tend to be clustered along 104th Avenue as well as along Colorado Boulevard.

Table 15
Unit Mixes at Representative Apartments

		Unit Mixes	Number of Units
	Studio	0.0%	0
	1 BR / 1 BA	37.4%	1,258
	2 BR / 1 BA	14.8%	500
-- Flats --	2 BR / 2 BA	32.4%	1,091
	3 BR / 1 BA	0.9%	31
	3 BR / 2 BA	8.9%	300
	1 BR / 1 BA	0.6%	20
Loft / Townhome	1 BR / 1.5 BA	0.7%	22
	2 BR / 1 BA	0.6%	20
	2 BR / 1.5 BA	1.3%	44
	2 BR / 1.75 BA	1.0%	34
	2 BR / 2 BA	1.4%	48
Total			3,368

Source: Colorado Apartment Insights, ArLand

Of the 3,368 units in the representative sample, the majority tend to be in traditional flat layouts in 1 bedroom / 1 bath or 2 bedroom / 2 bath configurations. There are no studio units. However, 188 of the units or about 5.5% of them are in loft / townhome configurations (Table 15).

Table 16
Unit Sizes at Representative Apartments

Unit Sizes		
	Studio	--
	1 BR / 1 BA	720
	2 BR / 1 BA	892
-- Flats --	2 BR / 2 BA	1,081
	3 BR / 1 BA	937
	3 BR / 2 BA	1,234
Loft / Townhome		919
Average		915

Source: Colorado Apartment Insights, ArLand

Units tend to be relatively spacious at an average of 915 square feet ranging from an average of 720 square feet for 1 bedroom / 1 bath units up to 1,234 square feet (Table 16).

Table 17
Unit Rent Ranges

Unit Rent Ranges			
		Market Rate	Affordable / ACHA
	Studio	--	--
	1 BR / 1 BA	\$759-\$1,260	\$680-\$785
	2 BR / 1 BA	\$1,010-\$1,240	\$710-\$885
-- Flats --	2 BR / 2 BA	\$1,009-\$1,456	\$908
	3 BR / 1 BA	--	\$855
	3 BR / 2 BA	\$1,139-\$1,807	\$960-\$1,050
Loft / Townhome		\$1,104	\$1,029
Average		\$987-\$1,124	\$771-\$937

Source: Colorado Apartment Insights, ArLand

The average rent ranges in the market area for market rate units tend to average from \$987 to \$1,124 while affordable units and units operated by the Housing Authority tend to range lower at \$771-\$937 (Table 17). The Adams County Housing Authority owns and operates the Village at Yorkshire. The Reserve at Thornton is a rent restricted property and the Newport Village project is also partially affordable.

In addition to total rent, a more critical metric to evaluate is the dollar per square foot rent shown in Table 18. Most of the market area rents average in the \$1.22 per square foot range in the market area, while the affordable / subsidized units are \$0.92 per square foot.

It is important to note that current rents in downtown Denver for newer apartment buildings are currently above \$2 per square foot, meaning that an 800 square foot apartment would rent for \$1,600 per month. Market rate units in the Original Thornton at 88th Station Area are much less expensive than newer apartments in downtown Denver so affordability is a potentially important competitive advantage for the Original Thornton at 88th Station Area.

Table 18
Average Rents per Square Foot

		Unit Rent/SF Ranges	
		<i>Market Rate</i>	<i>Affordable / ACHA</i>
-- Flats --	Studio	--	--
	1 BR / 1 BA	\$1.32	\$0.92
	2 BR / 1 BA	\$1.21	\$1.01
	2 BR / 2 BA	\$1.12	\$0.88
	3 BR / 1 BA	--	\$0.91
	3 BR / 2 BA	\$1.21	\$0.87
Loft / Townhome		\$1.22	--
Average		\$1.22	\$0.92

Source: Colorado Apartment Insights, ArLand

4.4 Residential Rental Demand

In order to estimate the level of residential rental demand in the station area, growth assumptions for the market area are estimated from DRCOG forecasts. We incorporate vacancy rate and other development assumptions to provide for development flexibility and to calculate total unit requirements as seen in Table 19. An estimated 15,251 residential units will be needed to accommodate future growth in the market area. An estimated 35% of those units, or approximately 5,338 units, would be needed for rental housing based on an extrapolation of current rental unit breakdowns in the market area.

Table 19
Residential Rental Demand

Market Area Households 2014	31,576
Market Area Households 2035	45,409
HH Growth (14-35)	13,833
Vacancy Rate	5.00%
Demolition Rate/yr.	5.00%
Total Unit Requirement	15,251
Pct. Renters	35%
Market Area Rental Demand	5,338

Source: DRCOG, Claritas, ArLand

Table 20
Original Thornton at 88th Station Area Multifamily Rental Demand

Annual Income Range	Approx. Rent Range	HHs in Income Ranges	Market Area Rental Demand	Rental by Income Levels by Overall % Renters	Potential Renters in Market Area	Attainable Capture Rate (within Rentals)	Attainable Subject Capture (units)
up to \$15K	Affordable	11%	591	47%	277	10.0%	28
\$15-25K	\$375 - \$625	12%	641	35%	224	10.0%	22
\$25-35K	\$625 - \$875	14%	723	33%	240	15.0%	36
\$35-50K	\$875 - \$1,000	18%	960	38%	365	15.0%	55
\$50-75K	\$1,000+	24%	1,304	41%	536	15.0%	80
\$75-100K	\$1,000+	11%	607	20%	120	10.0%	12
\$100-150K	\$1,000+	10%	511	14%	69	0.0%	0
\$150K and up	\$1,000+	0%	0	6%	0	0.0%	0
Total		100%	5,338	34%	1,831	12.7%	233
Range of Supportable Rental Housing Units (low)							175
Range of Supportable Rental Housing Units (high)							292

Source: ArLand, DRCOG, Claritas, American Community Survey

Table 20 shows the estimated demand for rental housing in the market based forecast growth in the population. Assuming capture rates by price point ranging from 10% to 15% in the low, moderate, and middle income ranges, the project site could accommodate a range of 175 to 300 rental units (based on market demand).

The success of a development program will depend on identifying and marketing to a new niche (renters in the middle income ranges of \$50,000 to \$75,000 at about \$1.20 per square foot rents) that has been popular in Thornton, but not necessarily in this immediate area. Its success will be incumbent on creating a residential environment conducive to households that are smaller – typically singles and couples (or roommates) that are either childless adults or couples with part-time kids, seniors, and new empty nests. These household types may like the easy transit proximity to downtown, like the flexibility and low maintenance associated with smaller properties and pooled property management. One of the advantages a Thornton rental location could potentially provide is relative affordability and a high level of amenities. Potentially larger unit sizes could be attractive relative to what is being offered in downtown Denver.

There is also market demand for a more affordable rental product, either a tax credit or a housing authority property at about \$1.00/ square foot rents or less. It is important to note that all rental projects must include a high level of design and proactive management in order to mix in and be attractive within a predominantly single family detached environment.

4.5 Single Family Residential

There are a number of active single family housing developments in the Thornton market, although none are in the immediate Original Thornton at 88th station market area. Although most of the area close to the Original Thornton at 88th Station Area is built out, it is useful to examine recent single family residential development in the broader regional area to better understand what new residents to the area are buying and the competitive niche for the station area. They are shown in Figure 11 and Table 21.

Figure 11
Active Residential Subdivisions in the Original Thornton at 88th Station Market Area, 2014

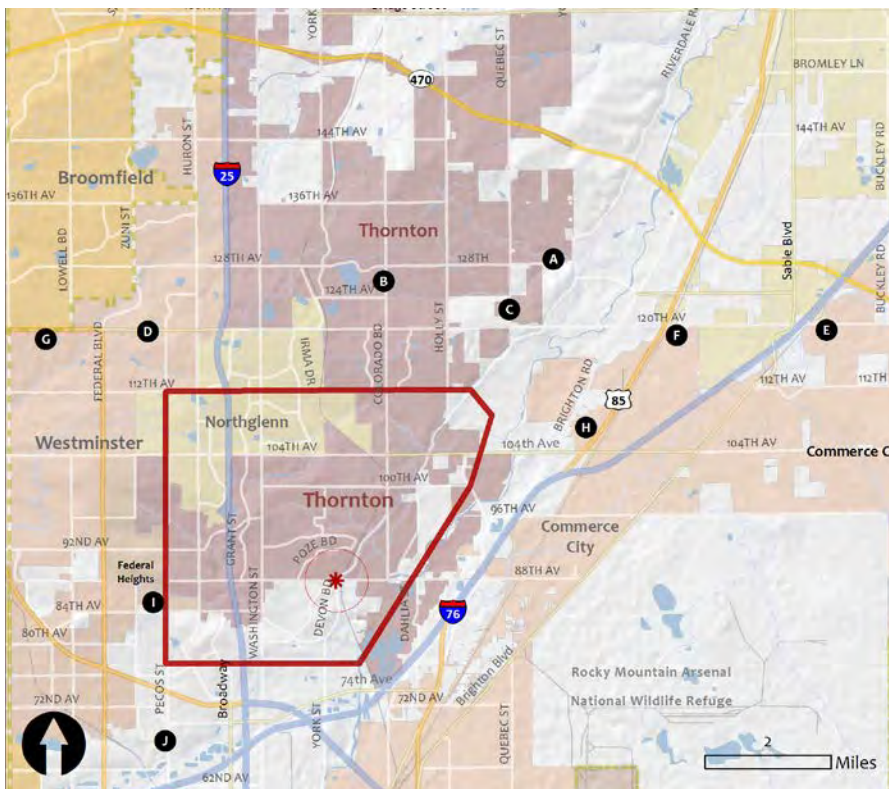


Table 21
Key for Residential Subdivisions

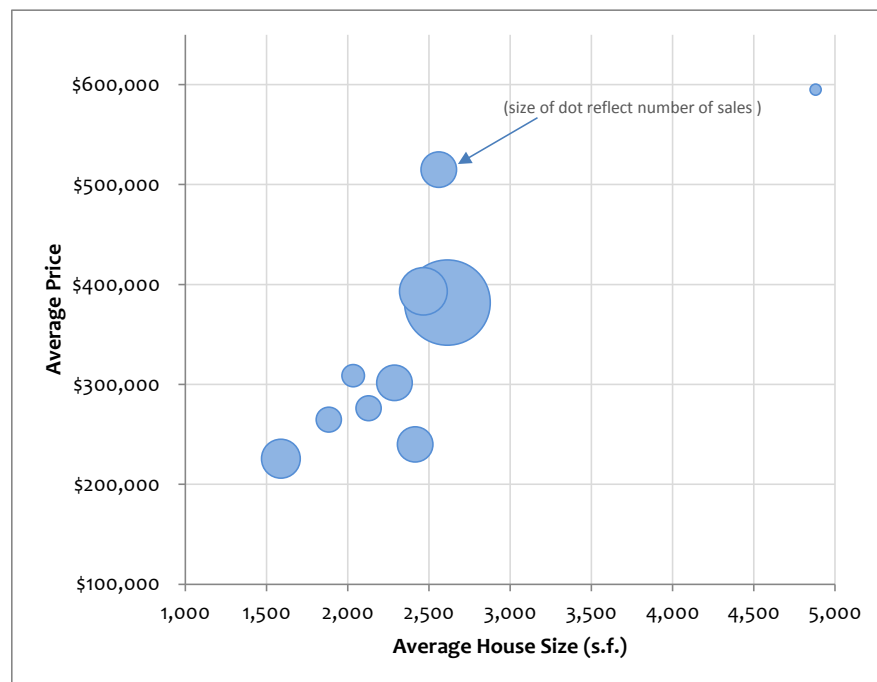
Map ID	Project Name
A	Riverdale Crossing
B	Terra Lago / Villas (DU)
C	King Ranch
D	Country Club Highlands
E	Buffalo Run
F	Stillwater
G	Bradburn
H	Belle Creek
I	Hyland Park Heights
J	Midtown at Clear Creek

Source: Hanley Wood, ArLand

Most of the projects are in suburban residential subdivision configurations, although there are a few notable exceptions. Bradburn represents Westminster's first implementation of New Urbanist zoning to create a compact, walkable mixed-use community. Belle Creek is a New Urbanist community in Commerce City as is Midtown in Clear Creek. Belle Creek and Midtown are more moderately priced communities, similar to the Original Thornton at 88th Station Area. Potential residents to these communities are attracted by the easy access to a number of different employment centers around the Metro area, accessibility to I-25 and E-470 with easy access to the Boulder corridor and DIA. Many of the communities highlight open space, outdoor living, and regional trails.

Figure 12 shows the range of residential sales prices within the communities in these areas. Most were clustered in the \$380,000 price range. However, there were a significant number of sales at about \$300,000 and below. Table 14, on the following page, shows the actual subdivision statistics, the price ranges, the size of houses and lots.

Figure 12
2013 Single Family Residential Sales Prices



Source: Hanley Wood, ArLand

Table 22
2013 Sales in Residential Subdivisions

Map ID	Project Name	Product Type	Builder	Closings 2013	Average Closing Price	Closing Price Range	Average Living SF	Living SF Range	Average Lot Size	Price per SF (Living)
A	Riverdale Crossing	Crossing Villages	Capital Pacific Homes	5	\$264,810	\$250,355 - \$282,000	1,883	1,337 - 2,287	7,917	\$140.66
		Villages	Lennar	10	\$301,530	\$271,300 - \$345,000	2,287	1,647 - 2,489	8,410	\$131.83
B	Terra Lago / Villas (DU)	Villages	Richmond American Homes - MDC	4	\$308,725	\$280,300 - \$335,100	2,033	1,477 - 2,510	7,403	\$151.84
C	King Ranch	Attached	Terralago Villas	5	\$276,169	\$259,900 - \$292,000	2,128	1,969 - 2,297	4,334	\$129.79
		Estates	DR Horton	58	\$381,858	\$294,677 - \$490,119	2,613	1,605 - 4,167	7,980	\$146.13
			DR Horton	1	\$387,987	\$387,987		--	10,263	--
D	Country Club Highlands		Century Communities, Inc.	10	\$515,021	\$439,349 - \$590,000	2,560	1,948 - 3,022	10,823	\$201.16
E	Buffalo Run	Villages	Richmond American Homes - MDC	4	\$305,600	\$287,600 - \$322,800		--	6,245	--
		East Highlands	Richmond American Homes - MDC	3	\$303,133	\$291,200 - \$312,400		--	6,228	--
F	Stillwater		Oakwood Homes LLC	23	\$326,152	\$281,400 - \$418,200		--	7,230	--
G	Bradburn		Century Communities, Inc.	18	\$393,190	\$326,250 - \$470,149	2,465	2,004 - 2,672	5,516	\$159.52
			Pacific West Dev LLC	1	\$595,000	\$595,000	4,880	4,880	6,142	\$121.93
H	Belle Creek		Oakwood Homes LLC	10	\$239,990	\$204,800 - \$279,000	2,415	1,576 - 2,834	3,399	\$99.39
I	Hyland Park Heights		Foothills Development LLC	12	\$225,626	\$209,950 - \$255,321	1,588	1,162 - 2,007	3,615	\$142.13
J	Midtown at Clear Creek		Brookfield Homes	10	\$417,111	\$389,603 - \$468,361		--	3,916	--
			David Weekley homes	15	\$364,757	\$304,925 - \$437,940		--	3,568	--
			Brookfield Homes	1	\$374,050	\$374,050		--	3,413	--
Total				190						
Weighted Average					\$353,003	\$204,800 - \$595,000	2,411	1,162 - 4,880	6,553	\$146.67

Source: Hanley Wood, ArLand

Table 22 depicts the residential subdivision sales in the past year (2013) in these select subdivisions. There were 190 total estimated closings in 2013, with the greatest number of closings at King Ranch. King Ranch's average sales price was about \$380,000. The overall average of single family residential closings in the area was about \$350,000, although prices ranged from \$200,000 to \$600,000. House sizes averaged 2,411 square feet with average lot sizes of 6,500 square feet. Sales price per square foot averaged \$147.

4.6 For Sale Residential Demand

In order to estimate the level of residential ownership demand in the station area, growth assumptions for the market area are estimated from DRCOG forecasts. We incorporate vacancy rate and other assumptions to provide development flexibility and to calculate total unit requirements. An estimated 15,251 residential units will be needed to accommodate future growth in the market area. An estimated 65% of those units would be needed for ownership housing based on an extrapolation of current housing tenure in the market area (Table 23).

Table 23
Residential Owner Demand Assumptions

Market Area Households 2014	31,576
Market Area Households 2035	45,409
HH Growth (14-35)	13,833
Vacancy Rate	5.00%
Demolition Rate/yr.	5.00%
Total Unit Requirement	15,251
Pct. Owners	65%
Market Area Residential Owner Demand	9,913

Source: DRCOG, Claritas, ArLand

Table 24 shows the estimated demand for ownership housing in the market based forecast growth in the population. Assuming capture rates by price point ranging from 2% to 9% in the low, moderate, and middle income ranges, the project site could accommodate 335 to 560 residential ownership units (based on market demand). Currently an estimated 10% of projects sold in the market area were attached last year. However, assuming a greater share of units as attached (assuming that the construction defects issue is resolved), yields an estimate of 120-200 attached unit including townhomes, plex units and condos.

Table 24
Original Thornton at 88th Station Area Residential Owner Demand

Annual Income Range	Approx. Home Price Range	HHs in Income Ranges	Market Area For Sale Demand	Owner by Income Levels by Overall % Owners	Potential Owners in Market Area	Attainable Capture Rate (within Owners)	Attainable Subject Capture (units)
up to \$15K	<\$75K	11%	1,098	53%	583	2.0%	12
\$15-25K	\$75 to \$100K	12%	1,190	65%	773	4.0%	31
\$25-35K	\$100 to \$150K	14%	1,343	67%	898	6.0%	54
\$35-50K	\$150 to \$200K	18%	1,782	62%	1,104	9.0%	99
\$50-75K	\$200 to \$250K	24%	2,422	59%	1,427	9.0%	128
\$75-100K	\$250 to \$350K	11%	1,128	80%	904	9.0%	81
\$100-150K	\$350 to \$500K	10%	950	86%	821	5.0%	41
\$150K and up	\$500K and up	0%	0	94%	0	0.0%	0
Total		100%	9,913	66%	6,512	6.9%	447
Range of Supportable Ownership Housing Units (low)							335
Range of Supportable Ownership Housing Units (high)							558
Attached Ownership Units (Townhomes, Plex Units)							120-200

Source: ArLand, DRCOG, Claritas, American Community Survey

As mentioned, one of the challenges currently inhibiting the development of attached residential ownership units is the current construction defects law. While condo and attached housing units were formerly 20% of all new ownership units built, their current share has shrunk to less than 5% of ownership units constructed. Currently, there is a liability risk for builders, developers and subcontractors posed by current laws that make it easy for homeowners' associations to file large, class-action lawsuits against builders for construction problems associated with new, for-sale housing units, such as condominiums. The resulting slowdown in condo construction has had serious implications for development around new transit stations and for new housing options for lower-income homebuyers.

The success of a development program will depend on identifying and marketing to a niche that has been popular in Thornton, but not necessarily in this immediate area.

4.7 Original Thornton at 88th Station Area Opportunities

One of the challenges with new residential development in this station area is the need and desire to attract a varied residential market segment to the area. As noted, single family residences built in the area average 1,000 square feet, were built in about 1962, and have low average values of \$130,000. Most of the newer single family residential products at higher average price points are

In order for the mixed income residential subdivision to take hold, it would be imperative to develop a new residential environment. Price is also important. While most of the new single family housing sold in the last year was in the \$350,000 + price range in the market area, this station area is likely to be strongest offering housing products in the more affordable price ranges starting in the \$200,000 price range initially (or below). However, it would be important to attract a mix of incomes to the development, and in order to do that, differentiating the area from other competitive offerings in the marketplace and taking advantage of the presence of transit, would be critical.

This detailed site plan illustrates the proposed development at 10000 10th Avenue. The plan features a central cluster of buildings, including a large red building labeled 'Building 1' and several smaller red buildings. A prominent blue building is labeled 'Building 2'. The site is surrounded by extensive parking areas, with specific sections labeled 'P1 Parking Lots', 'P2 Parking Lots', and 'P3 Parking Lots'. Landscaping is indicated by green areas and numerous tree symbols. A large green area in the upper right is labeled 'Landscape'. The plan also shows a 'Main Entrance' and a 'Service Entrance'. The surrounding streets are labeled '10th Avenue' and '10th Avenue Extension'. A scale bar and north arrow are located in the bottom right corner.

Highlands' Garden Village is an award winning 27-acre mixed-use, transit oriented development. A planned unit development master plan was prepared to accommodate the project as envisioned, and the neighborhood's construction was completed in 2007 on the former Elitch Gardens amusement park site.

The development incorporates diverse community amenities, new open spaces, and a variety of housing and commercial components. Socioeconomically diverse residents are housed in 306 residential units representing a wide range of rental and for sale housing types; 254 units are multifamily and 52 are single family. There are townhouses, affordable and market-rate rental apartments, cohousing developments, live/work units, single-family homes and residences for

seniors varying in both design and price to incorporate a mix of different income groups and family structures. Forty percent of the apartments were designed as affordable units, and nearly half of the single-family homes have a carriage house that provides an additional affordable rental option. Housing densities range from 13 to 54 units/acre, with lower densities on the edges of the site to match the density of adjacent neighborhoods, with higher densities at the center.

The community features many green building techniques. All homes exceed Colorado's Built Green and EnergyStar program requirements and all buildings incorporate recycled materials, LOW-VOC products and energy efficient windows.

The walkable village contains 11,000 square feet of office space and 65,000 square feet of commercial space that is anchored by a grocery store and a health club. A school and cultural amenities such as a renovated historic theater are also part of the community fabric and carefully programmed events foster neighborhood cohesion. Neighborhood parks, plazas and gardens create a 3.2-acre network of outdoor and recreational opportunities. The entirety of the development has a pedestrian-friendly design that provides safe and convenient walking paths connecting areas of interest, and downtown Denver is easily accessible via a short bus ride—both encouraging the use of alternative methods of transportation.

Aria Denver

West 52nd Avenue & Federal Boulevard, Denver, Colorado



Aria Denver is being constructed eight blocks from the Gold Line light rail and one block from Regis University. The former Sisters of Saint Francis Marycrest convent and campus in Northwest Denver is being redeveloped into a 17-acre mixed-use, mixed-income, intergenerational community with a

focus on community, affordable housing, urban agricultural and environmental responsibility—all elements honoring the sisters' mission and values.

Aria Denver is scheduled to open in 2016 and will be a careful blend of existing uses and buildings as well as new mixed-income residential components. Two existing assisted living buildings will continue to house low income seniors, an historic homestead will likely continue to serve as traditional housing for homeless women and children, and the Sisters will continue to live and work in a newly constructed building designed to meet their needs. Residential uses will be introduced to the site to include 81 market rate and affordable for-sale townhomes and live/work lofts, 28 market rate and affordable condominiums, a 40+ unit co-housing community, a 70-unit mixed-income apartment complex and a 50-unit market rate apartment complex. Additionally, approximately 30,000 sq. ft. of retail space will front Federal Boulevard and provide new commercial assets to Aria Denver residents and the surrounding neighborhood.

The community has high aesthetic and sustainability standards. Its homes are being constructed with the most advanced building techniques and equipped with innovative technology and modern appliances. All residential uses follow the Enterprise Green Communities Criteria, utilizing recycled materials throughout, equipping units with low VOC products, sourcing alternative energy, and installing energy and water conserving appliances. Community garden plots will be offered for residential and retail uses.

The Denver Urban Renewal Authority (DURA) is underwriting the financing gap for the project. The Office of Economic Development (OED) is providing approximately \$4.9 million through two loans to DURA; \$2.1 million from Skyline and \$2.8 million from the Neighborhood Stabilization Program (NSP 2). The Skyline funds are intended to fund infrastructure and associated soft costs for Phase I, and the NSP 2 funds for land acquisition. This funding was contingent upon the developer receiving an allocation of Low Income Housing Tax Credits (LIHTC) from Colorado Housing and Finance Authority (CHFA). Tax Increment Financing (TIF) generated by the development is to be paid to DURA and act as the only source of repayment for the City's loans.

Midtown at Clear Creek Adams County, Colorado

The master planned 187-acre community of Midtown is springing up from two large plots of formerly vacant land in unincorporated Adams County, minutes from some of Denver's most popular neighborhoods such as Highland, Sunnyside and Berkeley. Midtown is positioned to



have easy access to the major highways I-70, I-25, I-76 and U.S. 36. Downtown Denver is a quick 10-minute drive and Boulder is 20 minutes. Additionally, two future commuter rail stops for the Gold and Northwest Lines slated for completion in 2014 will be in walking distance, providing another convenient mode of transportation to residents.

When complete, Midtown will feature about 1,300 Energy Star® certified single-family homes priced from the high \$200s—a much lower price point than the trendy nearby Highland, Sunnyside and Berkeley neighborhoods—and ranging from 1,797 to 2,228 square feet. Additionally, about 300 energy efficient apartment units, as well as some attached homes and condos will be offered. Approximately five acres will be devoted to retail and commercial space.

Other amenities will include a community center called the Garden Shed that will have the capacity to hold events, ornamental and edible community gardens and a 47-acre park complete with a fenced, off-leash dog park. The 21-mile Clear Creek Bike Path passes along the south border of the community, offering recreational opportunities to go west to Golden or east where it connects to the Platte River Trail and Downtown Denver.

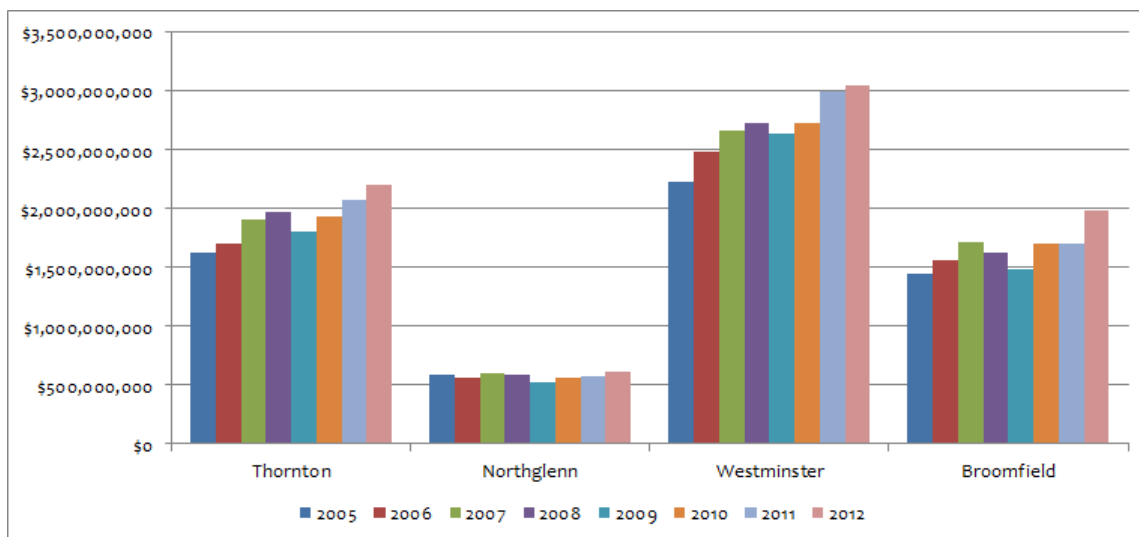
V. COMMERCIAL MARKET ANALYSIS

This section discusses the commercial market potential for the Original Thornton at 88th Station Area. It examines current and future retail demand and supply in the market areas as well as small office demand. Future retail demand based on current and future households and incomes is estimated. One of the challenges (and opportunities) with respect to commercial services in the area is the fairly significant amount of commercial services available in the Thornton market already. However with much of these services located along I-25 and other major arterials, there would be the potential to provide some neighborhood serving uses.

5.1 Retail Conditions

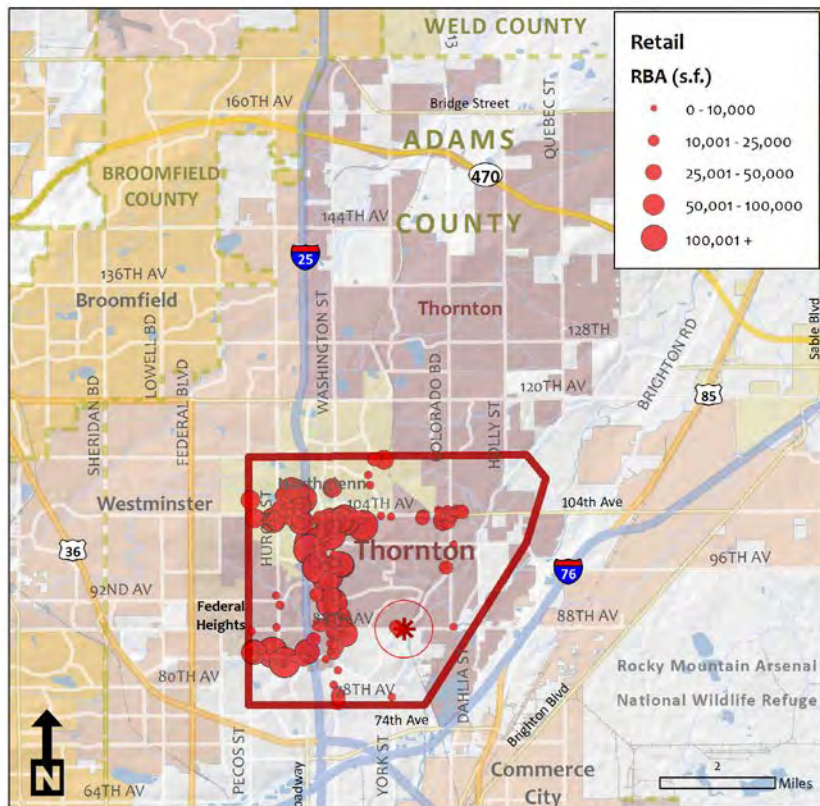
Figure 13 shows that in Thornton, retail sales have increased in the last seven years from \$1.6 billion to approximately \$2.2 billion annually. This gradual upward trend is in line with cities such as Northglenn, Westminster, and Broomfield.

Figure 13
Regional Sales Trends, 2005-2012



Source: Department of Revenue, ArLand

Figure 14
Retail in the Original Thornton at 88th Station Market Area



Source: CoStar, ArLand

Figure 14 shows the location of retail within the market area in the City of Thornton. Thornton's primary retail concentrations are in the western portion of the City along I-25, with little located in close proximity to the Original Thornton at 88th Station Area.

5.2 Retail Demand Analysis

Retail demand is calculated by:

- Estimating households and incomes in the market area in order to derive total incomes potentially available for retail expenditures; and
- Based on current expenditure patterns, calculating the income percentage spent in retail categories by residents within the market area. This results in estimated demand by retail category.

By comparing estimated demand (both current and future) to an estimate of supply or sales by retail category, an estimate of unmet retail demand can be calculated by:

- Subtracting supply from demand to obtain an estimate of unmet demand; and
- Incorporating sales per square foot averages by retail category in order to arrive at the approximate square footage of unmet retail demand.

The estimate of unmet retail demand is considered by retailers along with other criteria in making location decisions. Retailers also consider other factors including the overall retail project format, synergy with other tenants, and location relative to other stores. Retailers locate in different types of centers, and each retailer has its own location criteria.

Current and Future Demand

Table 25 shows the estimated household incomes in the market area currently, in 2015, 2020, 2025 and 2035, based on estimated potential growth in households. The analysis conservatively estimates that average household incomes will remain constant at the household incomes shown. Total incomes potentially available, a portion of which will be available for retail expenditures, is currently \$1.6 billion increasing to \$2.4 billion (in today's dollars) by 2035.

Table 25
Total Household Incomes, 2014-2035

	2014	2015	2020	2025	2035	2014-2035	Average Annual Growth Rate 2014-2035
<i>Original Thornton at 88th Station Market Area</i>							
Households	31,576	32,079	34,874	37,897	45,409	13,833	1.7%
Average Household Income	\$53,189	\$53,189	\$53,189	\$53,189	\$53,189		--
Total Household Income (\$000s)	\$1,679,496	\$1,706,241	\$1,854,900	\$2,015,728	\$2,415,272	\$735,776	1.7%

Source: DRCOG, ArLand

Table 26 compares expenditure potential to retail capture by existing retailers to estimate unmet retail demand by retail category. Demand is calculated by multiplying total household incomes by potential household expenditures in each retail category shown.

Tables 26 and 27 summarize unmet retail demand currently in the Market Area. There is currently an estimated 335,000 square feet of overall unmet demand, which is expected to more than double to 836,000 square feet of overall unmet demand by 2035. Currently, the categories with the greatest unmet demand are Clothing & Clothing Accessories, Limited-Service Eating Places, and Health & Personal Care stores. By 2035, the top three categories with unmet demand will be Clothing & Clothing Accessories, Building Materials, Garden Equipment & Supply, and Limited-Service Eating Places. One of the challenges, however, would be the location criteria for all of these store types. Although there may be demand for Clothing or Building Materials, these store types are more viable along major arterials, highways, and/or in close proximity to other retail.

Table 26

Estimate of 2014 and 2035 Retail Opportunities

2014 Households 31,576
 Avg Household Income \$53,189
 Total Household Income \$1,679,495,864
 Annual HH Growth Rate 1.7%

Category	% Retail Expenditures [1]	Demand (retail potential)	Est. Sales	Current Retail Void (\$)	Est. Sales [2]	Current Retail Void (s.f.)	Additional Demand from Household Growth (s.f.) (21-yr)	Total Demand 2035
Convenience Goods								
Grocery Stores	6.32%	\$106,140,181	\$139,486,349	-\$33,346,168	\$400	–	129,683	–
Specialty Food Stores	0.45%	\$7,592,803	\$516,577	\$7,076,226	\$350	20,218	10,602	30,820
Beer, Wine, and Liquor Stores	0.58%	\$9,767,444	\$17,651,321	-\$7,883,877	\$300	–	15,912	–
Health & Personal Care Stores	2.58%	\$43,327,173	\$22,726,560	\$20,600,613	\$350	58,859	60,500	119,359
Shopper's Goods								
General Merchandise Stores	7.29%	\$122,433,608	\$358,104,978	-\$235,681,370	\$400	–	149,579	–
Furniture & Home Furnishings Stores	1.24%	\$20,789,789	\$68,593,062	-\$47,803,273	\$250	–	40,642	–
Clothing and Clothing Accessories	2.62%	\$43,996,981	\$18,426,724	\$25,570,257	\$250	102,281	86,010	188,291
Sport. Goods, Hobby, Book, & Music	1.17%	\$19,677,045	\$15,288,605	\$4,388,440	\$250	17,554	38,467	56,020
Miscellaneous Store Retailers	1.47%	\$24,760,202	\$22,288,328	\$2,471,874	\$250	9,887	48,404	58,291
Food Services & Drinking Places								
Full-Service Restaurants	2.80%	\$46,947,708	\$47,210,952	-\$263,244	\$350	–	65,556	–
Limited-Service Eating Places	2.45%	\$41,073,252	\$21,525,494	\$19,547,758	\$325	60,147	61,765	121,912
Special Food Services	0.46%	\$7,744,573	\$953,201	\$6,791,372	\$250	27,165	15,140	42,305
Drinking Places (Alcoholic Bevs.)	0.28%	\$4,710,869	\$5,776,805	-\$1,065,936	\$250	–	9,209	–
Durable Goods								
Auto Parts, Accessories, and Tires	0.85%	\$14,262,095	\$23,809,085	-\$9,546,990	\$250	–	27,881	–
Bldg Mater., Garden Equip. & Supply	5.11%	\$85,847,997	\$75,186,091	\$10,661,906	\$300	35,540	139,853	175,393
Electronics & Appliance Stores	1.21%	\$20,385,898	\$19,197,949	\$1,187,949	\$250	4,752	39,852	44,604
	36.88%	\$619,447,617	\$856,742,081	-\$237,294,464		336,403		836,996

Source: Claritas, Census of Retail Trade for CO, ULI, ArLand

[1] Demand percentages based on national and state averages

[2] National averages per Urban Land Institute, research and retailer interviews

Table 27
Unmet Retail Demand by 2035

	Retail Market Area (s.f.) 2014	Retail Market Area (s.f.) 2035
<i>Convenience Goods</i>		
Grocery Stores	--	--
Specialty Food Stores	20,218	30,820
Beer, Wine, and Liquor Stores	--	--
Health & Personal Care Stores	58,859	119,359
<i>Shopper's Goods</i>		
General Merchandise Stores	--	--
Furniture & Home Furnishings Stores	--	--
Clothing and Clothing Accessories	102,281	188,291
Sport. Goods, Hobby, Book, & Music	17,554	56,020
Miscellaneous Store Retailers	9,887	58,291
<i>Food Services & Drinking Places</i>		
Full-Service Restaurants	--	--
Limited-Service Eating Places	60,147	121,912
Special Food Services	27,165	42,305
Drinking Places (Alcoholic Bevs.)	--	--
<i>Durable Goods</i>		
Auto Parts, Accessories, and Tires	--	--
Bldg Mater., Garden Equip. & Supply	35,540	175,393
Electronics & Appliance Stores	4,752	44,604
Total	336,403	836,996

Source: Claritas, Census of Retail Trade for CO, ULI, ArLand

Table 28 indicates the three most promising retail categories for the Original Thornton at 88th Station Area—Specialty Food, Limited Service Eating Places and Miscellaneous Store Retailers. It’s projected that the Station Area could currently support about 10%, or nearly 10,000 square feet, of unmet retail demand. The supportable square footage is projected to more than double by 2035 to nearly 20,000 square feet.

Table 28
Original Thornton at 88th Station Area Retail Demand, 2014-2035

Category	2014 (s.f.)	2035 (s.f.)
Specialty Food	20,218	30,820
Limited Service Eating Places	60,147	121,912
Miscellaneous Store Retailers	9,887	42,305
Total	90,252	195,037
Potentially Supportable in Station Area (10%)	9,025	19,504
Other Misc. Commercial Services (50%)	4,513	9,752
Total	13,538	29,256

Source: Claritas, Census of Retail Trade for CO, ULI, ArLand

While most traditional TODs include office as a very desirable, high value use, it’s not appropriate at every station. Most of the significant office uses in the Thornton regional area tend to be along I-25. Given the neighborhood orientation at the Original Thornton at 88th Station, the market for office may primarily be more of the neighborhood service variety (i.e. insurance agents, small offices, etc.) and somewhat limited. A planning level estimate for office related uses is 5,000 square feet up to 10,000 square feet by 2035. Total demand for commercial space (retail and office) is estimated at 13,500 square feet currently increasing to 30,000 square feet by 2035. Conversations with the Skyview Campus indicate that there may be a desire to share office “professional” space for job training and other activities, increasing potential demand up to 50,000 square feet of commercial space.

VI. DEVELOPMENT CONSIDERATIONS

While transit helps transform the environment, transit on its own does not fundamentally “shift” the market without the presence of other activities and tools. The presence of the Skyview Campus / Mapleton Public Schools is an attractive boon to the area and in the marketing, land use, and other activities, should ideally be a partner in helping create an Original Thornton at 88th Station Area neighborhood.

Another significant development consideration is the potential cost of infrastructure, particularly storm drainage. An opinion of probable infrastructure cost associated with a previous development proposal on the site identified approximately \$6.6 million in infrastructure costs. While some of that cost should be borne by the master developer of the site, the costs identified, particularly storm drainage, have been identified as an impediment to development. Costs in 2005 were identified in Table 29, as follows:

Table 29
Potential Infrastructure Costs at Original Thornton at 88th Station Area

Infrastructure Item	Costs in \$2005
Storm and Traffic Safety Costs	\$2,285,500
Water Distribution System Costs	\$185,400
Sanitary Sewer Costs	\$137,800
Storm Drainage Costs	\$3,076,800
Park Areas and Improvement Costs	\$996,900

Source: Welby Metropolitan District Service Plan (August 2005)

There have reportedly been three development proposals that have fallen through because of the costs of addressing the storm drainage on the site as well as impacts from the recession. The 2005 Welby Metropolitan District Service Plan identified the following primary revenue sources to help pay for infrastructure:

- 50 mills on property taxes
- Facility fee of \$5,000 per Single Family Dwelling unit
- \$3,000 per townhome unit
- \$2,000 per apartment / condo unit
- Ownership tax receipts equal to 8% of the District taxes levied

These costs ultimately are passed down to future residents and renters, as well as other commercial businesses. There are a number of potential financial mechanisms to address these costs including urban renewal, metropolitan districts, funding from Urban Drainage, CDBG grants and other local sources. Potential financial tools will be discussed in the Original Thornton at 88th Station Area Plan.

VII. DEVELOPMENT POTENTIAL

The potential demand for residential and commercial uses near the station area has been described taking into consideration local and regional market trends, and feedback from stakeholders in the planning process. Competitive development projects and trends have been examined. As with any plan and ultimate development project, the actual mix and timing of development is going to vary based upon a variety of factors including the needs of the property owners, the development and financial markets, the timing and cost of public sector improvements and assistance, and level of private sector investment

One variable that has changed is the decision by RTD to construct the North Metro corridor by 2018. While market fundamentals are still in place, the presence of commuter rail shapes the environment and creates a focal point for future development opportunities. There is also the potential need for public improvements. Storm drainage has been identified as a significant factor impeding past development; the timing of these public improvements and which entity will fund them will also help shape the timing of development.

Based on the market analysis, the future development potentials near the station area include the following shown in Table 30:

Table 30
Original Thornton at 88th Station Area Development Potentials

Land Use Type	Market Forecast
Total Units	400-850 Units
Single-Family Detached and Attached	40%
Multifamily	60%
	The residential portion of the development should ideally include residences accommodating a mix of incomes, ranging from affordable to market rate. The community should be a mix of for-sale and rental housing. It would be imperative to create a "community and sense of place" to attract a mix of incomes. Different housing types, including senior housing, should be included in the mix. The area could support a mix of heights and densities.
Commercial	Up to 50,000 square feet of neighborhood commercial services including office space for Mapleton student training and presentations.

Source: ArLand