



Acknowledgments

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.

Mayor and City Council Members

Mayor	Heidi K. Williams
Ward I	Jenice "JJ" Dove Mack Goodman
Ward II	Eric Montoya Val Vigil, Mayor Pro Tem
Ward III	Beth Martinez Humenik Sam Nizam
Ward IV	Eric Tade Jan Kulmann

City of Thornton Project Management Team

Jack Ethredge	City Manager
Jeff Coder, AICP	Deputy City Manager, City Development
Glenda Lainis, AICP	Policy Planning Manager
Robert Larsen, AICP	Senior Planner

Technical Advisory Committee

Pete Brezall	City of Thornton
Dante Carbone	City of Thornton
Tyler Dunn	City of Thornton
Buz Hedglin	City of Thornton
Mark Heller, AICP, JD	City of Thornton

Lori Hight, AICP	City of Thornton
Julie Jacoby	City of Thornton
Nicole Jeffers	City of Thornton
Jim Kaiser, P.E.	City of Thornton
Heath Klein, P.E.	City of Thornton
Adam Krueger	City of Thornton
Karen Widomski	City of Thornton
Mike Mallon, AICP	City of Thornton
Chad McCollum , P.E.	City of Thornton
Allison Moe	City of Thornton
Martin Postma, CEcD	City of Thornton
Gene Putman, P.E., PTOE	City of Thornton
Paula Schulte	City of Thornton
Alan Sielaff	City of Thornton
Deb Turner, P.E.	City of Thornton
Diane VanFossen	City of Thornton
Lee Vitgenos	City of Thornton
Rebecca Smith, AICP	City of Northglenn
Christy Horber	City of Northglenn
Travis Reynolds, AICP	City of Northglenn
Joelle Greenland, AICP	Adams County
Jay Garcia, AICP	Adams County
Patrick McLaughlin	Regional Transportation District
Bob Boot	Regional Transportation District
Brenda Tierney	Regional Transportation District
Ron Enserro	Regional Transportation District
Shawn Plichta	Regional Rail Partners
Jacki Kapushion	Mapleton School District

Damon Brown	Mapleton School District
Chris Auxier	Adams County Housing Authority
Sheila Lynch, AICP	Tri-County Health Department
Ashley Kaade	Denver Regional Council of Governments

Developer Forum Participants

Clarke Carlson	Carlson Associates, Inc.
Dan Cohen	Urban Investment Group
Mark Goldberg	Goldberg Properties, Inc.
Jim Leach	Wonderland Hill Development Co.
Chuck Perry	Perry Rose LLC
Chris Waggett	D4 Urban LLC

Consultant Team

Jean Sanson, AICP	Steer Davies Gleave
Tim Baldwin, AICP	Steer Davies Gleave
Shari Frank, AICP	Steer Davies Gleave
Hannah Polow, AICP	Steer Davies Gleave
Mark Leese	Leese & Associates
Andrea Meneghel	CDR Associates
Arleen Taniwaki	Arland Land Use Economics
Francisco Miraval	Project Vision 21



RESOLUTION

A RESOLUTION ADOPTING THE THORNTON CROSSROADS AT 104TH STATION AREA MASTER PLAN AS A PART OF THE COMPREHENSIVE PLAN.

WHEREAS, the Thornton Crossroads at 104th Station, located at 104th Avenue and Colorado Boulevard, has been identified by RTD as a transit station along 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 Thornton Crossroads at 104th Station; and

WHEREAS, the Thornton Crossroads at 104th Station Area Master Plan was prepared to guide development in the vicinity of the Thornton Crossroads at 104th Station; and

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

WHEREAS, the Thornton Crossroads at 104th Station Area Master Plan 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

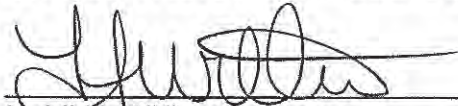
WHEREAS, the Thornton Crossroads at 104th Station Area Master Plan will be used by City Council, City Boards and Commissions, other City officials, residents, developers and City staff to ensure a well-planned neighborhood around the future Thornton Crossroads at 104th Station.

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

The Thornton Crossroads at 104th Station Area Master Plan, 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

Table of Contents

Chapter 1.0	Introduction	1-1
1.1	Context	1-1
1.2	TOD Defined	1-3
1.3	Station Area Vision	1-4
1.4	Purpose of the Plan	1-4
1.5	Planning Process	1-5
1.6	Community Engagement	1-6
1.7	Organization of the Plan	1-9
Chapter 2.0	Existing Conditions Analysis	2-1
2.1	Land Use	2-1
2.2	Zoning and Planned Land Use	2-5
2.3	Community Facilities	2-6
2.4	Demographics	2-7
2.5	Development	2-11
2.6	Infrastructure	2-11
Chapter 3.0	Station Area Market Potential	3-1
3.1	Primary and Regional Market Areas	3-1
3.2	Residential Market Demand	3-2
3.3	Commercial Market Demand	3-4
3.4	Office Market Demand	3-4
3.5	Summary of Station Area Market Potential	3-5
Chapter 4.0	Land Use Concepts	4-1
4.1	Opportunity Site A	4-2
4.2	Opportunity Site B	4-10
4.3	Opportunity Site C	4-13
4.4	Opportunity Site D	4-16
4.5	Summary of Planned Land Uses	4-18
Chapter 5.0	Guiding Principles	5-1
5.1	Land Use	5-2
5.2	Urban Design	5-5
5.3	Mobility and Circulation	5-7
5.4	Parking Management Strategies	5-9
5.5	Summary of Guiding Principles	5-11
5.6	Case Studies	5-13
Chapter 6.0	Implementation	6-1
Appendix A:	Market Study for the Thornton Crossroads at 104th Station Area Master Plan	

Figures

Figure 1.1:	RTD FasTracks North Metro Rail Line	1-1
Figure 1.2:	Thornton Crossroads at 104th Station Area and Opportunity Sites	1-3
Figure 1.3:	Planning Process and Timeline.	1-6
Figure 2.1:	City of Thornton Jurisdiction Boundaries	2-2
Figure 2.2:	Station Area Planned Land Uses	2-5
Figure 2.3:	Station Area Parks and Open Space.	2-7
Figure 2.4:	Number of Jobs Within One Mile of the Station.	2-10
Figure 2.5:	August 2014 RTD Station Concept Plan (Subject to Change)	2-12
Figure 2.6:	Station Area Pedestrian and Bicycle Infrastructure	2-14
Figure 3.1:	Thornton Crossroads at 104th Station Market Areas	3-2
Figure 4.1:	Thornton Crossroads at 104th Station Opportunity Sites	4-2
Figure 4.2:	Opportunity Site A	4-3
Figure 4.3:	Opportunity Site A - Infill Area	4-4
Figure 4.4:	Opportunity Site A - Infill Concept	4-5
Figure 4.5:	Opportunity Site A - Infill and Redevelopment Area	4-8
Figure 4.6:	Opportunity Site A - Infill and Redevelopment Concept	4-9
Figure 4.7:	Opportunity Site B	4-10
Figure 4.8:	Opportunity Site B - Mixed-Use Concept	4-11
Figure 4.9:	Opportunity Site B - Mixed-Use + School Campus Concept	4-13
Figure 4.10:	Opportunity Site C	4-14
Figure 4.11:	Opportunity Site C - Land Use Concept	4-15
Figure 4.12:	Opportunity Site D	4-16
Figure 4.13:	Opportunity Site D - Land Use Concept	4-17
Figure 5.1:	Arvada Ridge Station Area Plan Concept.	5-14
Figure 5.2:	Tyvola Station Land Use Concept Plan.	5-16
Figure 5.3:	Archdale Station Land Use Concept Plan.	5-16

Tables

Table 1.1: Community Engagement Activities	1-6
Table 2.1: Station Area Zoning	2-5
Table 2.2: Station Area Parks	2-6
Table 2.3: Demographic Summary Table	2-8
Table 3.1: Summary of Station Area Developmental Potential	3-5
Table 4.1: Opportunity Site A - Proposed Land Uses	4-10
Table 4.2: Opportunity Site B - Proposed Land Uses	4-13
Table 4.3: Opportunity Site C - Proposed Land Uses	4-16
Table 4.4: Opportunity Site D - Proposed Land Uses	4-18
Table 4.5: Summary of Proposed Land Uses	4-18
Table 5.1: Summary of Guiding Principles	5-11
Table 6.1: Plan Administration Implementation Strategies	6-2
Table 6.2: Land Use and Design Implementation Strategies	6-4
Table 6.3: Transportation Implementation Strategies	6-6
Table 6.4: Infrastructure Implementation Strategies	6-7
Table 6.5: Financing Implementation Strategies	6-8
Table 6.6: Community Implementation Strategies	6-9

Chapter 1.0 Introduction

1.1 Context

The North Metro commuter rail line is part of the 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. Heading north, the Thornton Crossroads at 104th Station will be the second 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



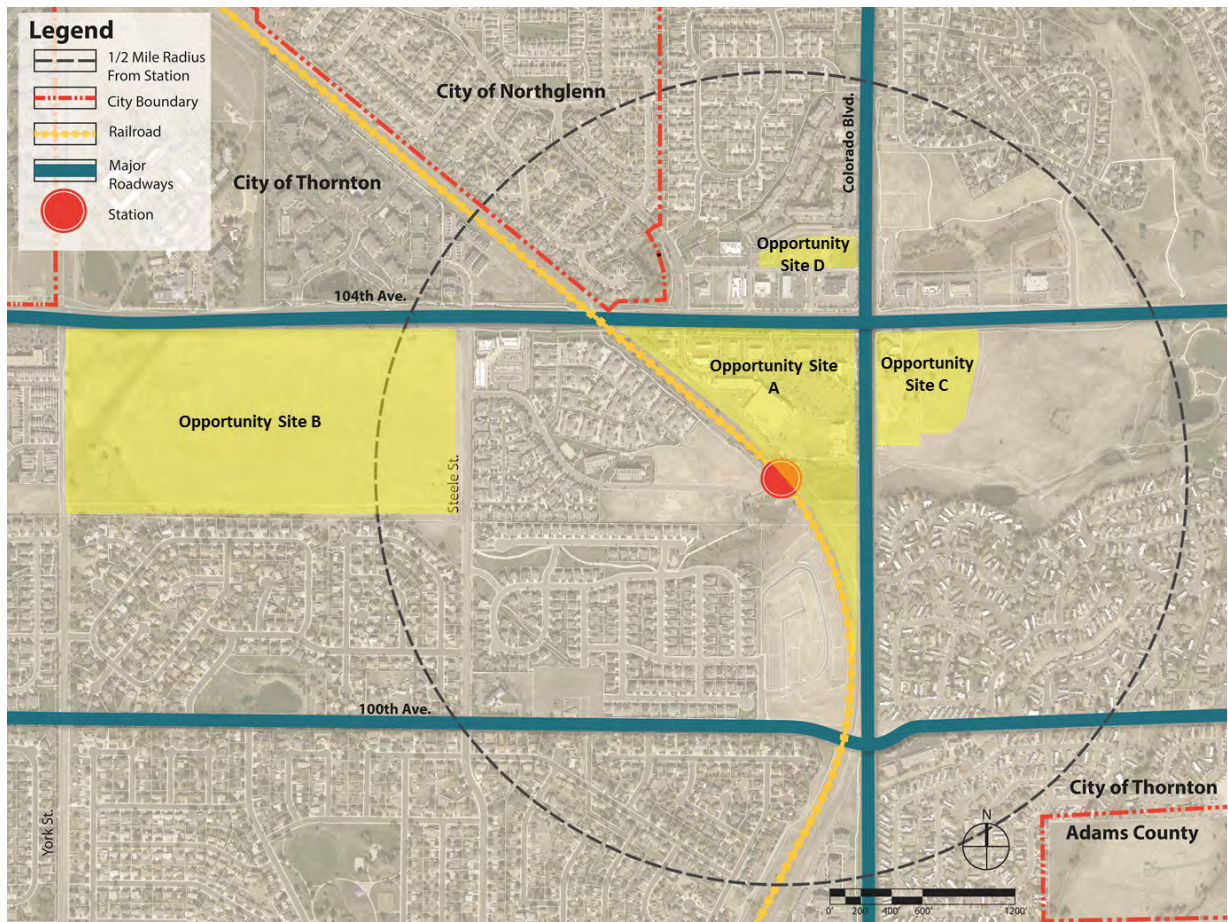
It is with this backdrop that the City of Thornton initiated development of the Thornton Crossroads at 104th Station Area Master Plan to capitalize on opportunities that commuter rail service will bring to the community and potentially help to facilitate infill and redevelopment opportunities in areas that will soon have convenient access to the train.

Station Area and Opportunity Sites

The Thornton Crossroads at 104th commuter rail station and Park-n-Ride will be located south of 104th Avenue and east of the Union Pacific railroad tracks, which are now owned by the Regional Transportation District (RTD). The Project Team, which included the consultants and city-appointed staff, assessed conditions within approximately one-half mile of the station, termed the Station 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 and surrounding neighborhoods within one-half mile of the station.

The four sites highlighted in yellow in Figure 1.2 incorporate the station itself and properties within close proximity to the station that may develop and/or redevelop over time. These four areas are termed “Opportunity Sites” and are the areas of focus for the Land Use Concepts presented in Chapter 4 of this Plan. Figure 1.2 shows the Opportunity Sites and half-mile Station Area.

Figure 1.2: Thornton Crossroads at 104th Station Area and Opportunity Sites



1.2 TOD Defined

Transit Oriented Development (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.

A well-connected street network that makes it easy and convenient to get around on foot, by bicycle, car & 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 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 Thornton Crossroads at 104th 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: A mixed-use regional transit hub which enhances existing development by expanding commercial services and housing opportunities; while balancing multimodal connectivity.

1.4 Purpose of the Plan

The Thornton Crossroads at 104th 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 transit-oriented development (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 Concepts would meet the community’s articulation of what it envisions for the area.
- **Phase 3: Generation of Draft Land Use Concepts.** The third phase of the planning process involved working with City staff and stakeholders to develop conceptual level Land Use Concepts for each of the Opportunity Sites within the station area. The Project Team developed distinct concepts that varied by their land use configurations and degree of infill and redevelopment. Each of the concepts 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 Concepts.** In the fourth phase of the planning process, the Project Team, with guidance from elected officials and public input, carried forward and further refined the Land Use Concepts that best met the station area vision, market realities and desired land uses for each of the Opportunity Sites. The Preferred Land Use Concepts are intended to be flexible blueprints that illustrate concepts 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 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	<ul style="list-style-type: none"> Project Overview Funding Overview Intergovernmental Agreement with RTD
Thornton Harvestfest	September 7, 2013	<ul style="list-style-type: none"> Project Overview Issues & Opportunities

Meeting/Activity	Date	Topic
Key Informant Interviews (8)	September 24 & 26, 2013	<ul style="list-style-type: none"> • Station Area Interests & Plan Goals • Issues & Opportunities
Technical Advisory Committee (TAC) #1	October 1, 2013	<ul style="list-style-type: none"> • Site Audit • TAC Roles & Responsibilities • Project Overview • Strengths, Weaknesses, Opportunities, Constraints (SWOC)
Technical Advisory Committee #2	November 12, 2013	<ul style="list-style-type: none"> • Existing Conditions • SWOC Results • Market Conditions & Potential Barriers • Draft Vision
Community Meeting #1	December 4, 2013	<ul style="list-style-type: none"> • Project Overview • Station Area Opportunities & Constraints • TOD Concepts • Draft Vision
City Council Update #2	January 28, 2014	<ul style="list-style-type: none"> • Project Introduction & Outreach Activities • Station Area Conditions • Draft Vision
Technical Advisory Committee #3	February 11, 2014	<ul style="list-style-type: none"> • Market Assessment & Forecast • Initial Land Use Concepts
Thorntonfest	May 17, 2014	<ul style="list-style-type: none"> • Project Update • Draft Land Use Concepts
Technical Advisory Committee #4	May 22, 2014	<ul style="list-style-type: none"> • RTD Station Design Update
Developer Panel	June 25, 2014	<ul style="list-style-type: none"> • Station Area Overview • Draft Land Use Concepts • Developer Perspective & Input
City Council Update #3	August 12, 2014	<ul style="list-style-type: none"> • RTD Station Design Update • Market Forecast • Developer Input • Revised Draft Land Use Concepts
Technical Advisory Committee #5	August 21, 2014	<ul style="list-style-type: none"> • Revised Draft Land Use Concepts
Community Meeting #2	September 4, 2014	<ul style="list-style-type: none"> • Revised Draft Land Use Concepts
City Council Update #4	October 14, 2014	<ul style="list-style-type: none"> • Final Land Use Concepts
Community Meeting #3	November 20, 2014	<ul style="list-style-type: none"> • Final Land Use Concepts
City Council Update #5	December 16, 2014	<ul style="list-style-type: none"> • Draft Plan
City Council Meeting	January 13, 2015	<ul style="list-style-type: none"> • Plan Adoption

City Council Updates

The Project Team provided periodic updates and briefings to City Council throughout the duration of the planning process. City Council provided input and guidance related to the vision for the station area, draft Land Use

Concepts, the Preferred Land Use Concepts 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 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 providing 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 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 Land Use Concepts 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 Preferred Land Use Concepts.



Local developers provided their perspective and experience as they related to the Thornton Crossroads at 104th 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 - Land Use Concepts. Using information from the existing conditions and market analysis, the Project Team developed distinct Land Use Concepts for each Opportunity Site. This chapter presents the Preferred Land Use Concepts which best meet the Station Area vision. The Preferred Land Use Concepts provide 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 at each of the Opportunity Sites.

Chapter 5 - Guiding Principles. Details a number of principles used by the Project Team to develop the Preferred Land Use Concepts. These are guidelines the City can expect to see incorporated into future infill and redevelopment 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 6 - 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 Concepts. It identifies implementation timeframes, roles and responsibilities, and takes into account projected City 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 Area, as well as any future plans for this area.

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

- Existing land use;
- Community facilities;
- Demographics;
- Development; and
- Infrastructure.

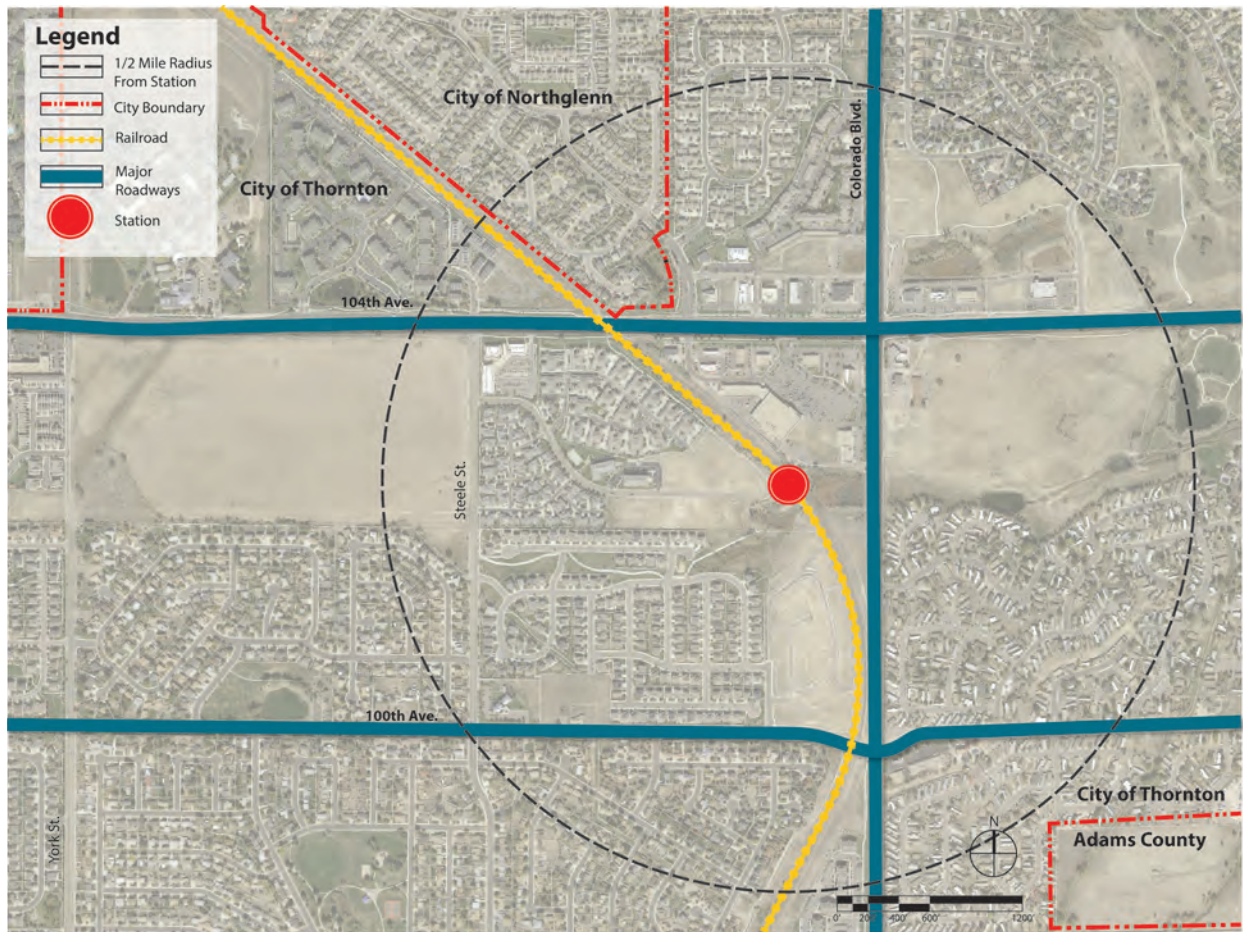
2.1 Land Use

Jurisdiction

The Thornton Crossroads at 104th Station is located within Thornton city limits approximately 0.2 miles southwest of the intersection of 104th Avenue and Colorado Boulevard, as shown in Figure 2.1. The Station Area is predominantly within the City of Thornton, however, the City of Northglenn boundary intersects 104th Avenue at Fox Run Parkway and then follows the rail alignment to the northwest. This means that a portion of the station area falls within the jurisdiction of the City of Northglenn.

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.

Figure 2.1: City of Thornton Jurisdiction Boundaries



Existing Land Uses and Character

The Station Area is predominantly characterized as a community retail shopping area, with commercial uses on all four sides of the 104th Avenue/ Colorado Boulevard intersection. These commercial centers are surrounded by well-established residential neighborhoods, open space, and a handful of large vacant lots.

The future station is located immediately behind the Colorado Marketplace shopping center. Colorado Marketplace is a community retail center currently anchored by an Albertsons grocery store and includes a number of in-line retail establishments as well as retail pad sites fronting Colorado Boulevard and 104th Avenue. The southeast corner of 104th Avenue/ Colorado Boulevard includes a gas station on the corner and a smaller commercial center, with both retail and service establishments. The north side of 104th Avenue between Birch Street and Fox Run Parkway is fronted by retail uses, many of which offer drive-thru services. The Shoppes at Settlers Chase, located at the southeast corner of 104th Avenue and Steele Street, also offers retail amenities to the surrounding neighborhoods.

Beyond these commercial centers, the area east of Colorado Boulevard and north of 104th Avenue, is comprised of the Riverdale Open Space and the Wyndmere residential community of single-family residences developed in the 1990's. The area east of Colorado Boulevard and south of 104th Avenue is comprised of the Grandview Ponds Open Space and Prairie Dog Habitat and Pine Lakes Ranch, a manufactured home community with 764 home sites.

The area west of Colorado Boulevard and north of 104th Avenue is comprised of a mix of multifamily and single-family uses. Covington Ridge apartments and the Colony Glen and Colony Square single-family residential neighborhoods were developed in the 1990s and 2000s, respectively. Further west, Sage Valley, a multifamily neighborhood, and the Village at Sunny Acres, a senior citizen housing complex, round out the rest of the Station Area north of 104th Avenue.

The southwest quadrant of the Station Area is primarily occupied by well-established residential uses, including Settlers Chase, which is comprised of a mix of townhouse, multifamily attached and single-family detached units. Single-family development extends south of Settlers Chase, with Riverdale Heights, developed in the 2000's and the single-family neighborhood of Sherwood Hills, developed in the 1970's. The southwest quadrant of the Station Area also contains several large undeveloped parcels, including an undeveloped area south of 104th Avenue between Steele and York Streets and large two vacant parcels immediately west of the rail line.



Typical single-family residence in the Station Area.



View across the tracks toward the station site looking northeast.



Trail through Grandview Ponds Open Space.



View looking north toward Colorado Marketplace.

These pictures of the station area show the current land uses and character of the surrounding land.



Intersection at Colorado Boulevard and 104th Avenue.



Albertsons at Colorado Marketplace.



Covington Ridge Apartments.



Traffic heading south on Colorado Boulevard.



Pine Lakes Ranch manufactured home community.



New multifamily residences at Settler's Chase.



Settler's Chase apartments.

2.2 Zoning and Planned Land Use

Approximately 70 percent of the zoning in the Station Area is residential. Most of the zoning in the Station Area is consistent with existing and planned land uses, as shown in Figure 2.2.

Figure 2.2: Station Area Planned Land Uses

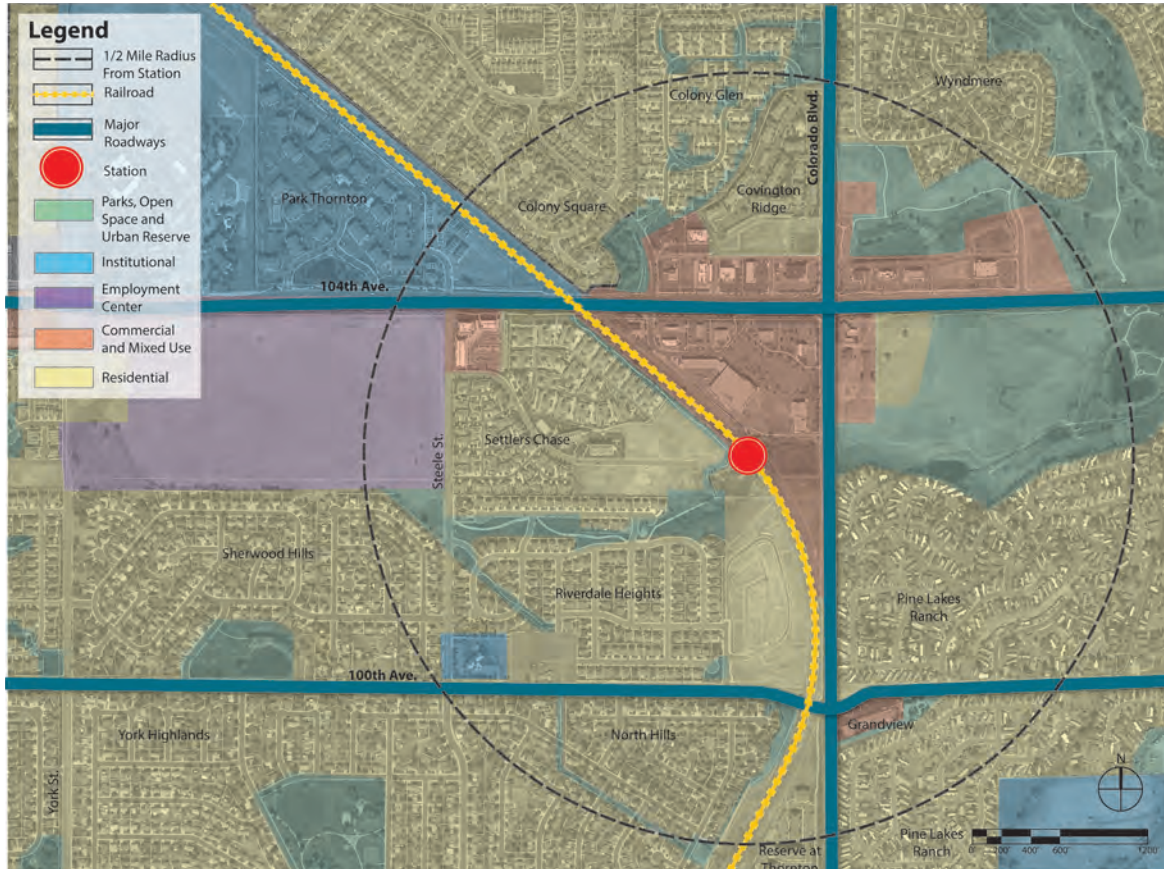


Table 2.1 illustrates current zoning within one-half mile of the station.

Table 2.1: Station Area Zoning

Zoning	Percent
Single-Family Detached	33.5%
Parks and Open Space	19.0%
Multifamily	11.9%
Planned Development (residential)	10.4%
Single-Family Attached	7.5%
Manufactured Home	6.6%
Community Retail	4.7%
Business Park	3.3%
Agriculture	2.6%

Source: City of Thornton, City of Northglenn

Land Ownership Patterns

Much of the land ownership pattern in the Station Area is typical of well-established single-family residential neighborhoods, with individual small lot (<1/4 acre) ownership patterns. The Station Area, however, is also characterized by a handful of larger lots in the immediate vicinity of the station. These include parcels immediately west of the rail line as well as a 72-acre parcel south of 104th Avenue between Steele and York Streets. A number of scattered undeveloped parcels are located behind the commercial sites along both 104th Avenue and Colorado Boulevard. Land ownership within the Colorado Marketplace shopping center is fractured, with pad sites being individually owned.

2.3 Community Facilities

Schools

There is one school located on the outskirts of the Station Area. Riverdale Elementary, located on 108th Avenue and east of Colorado Boulevard, is administered by the Adams 12 Five Star School District and enrolls children in Preschool through Grade 5.

Parks, Open Space and Community Facilities

As shown in Figure 2.3, there are several parks and open spaces within the vicinity of the station. Though located just outside of the Station Area, Carpenter Park has been included in this inventory because of the significant recreational resources it provides to the community. The Riverdale Open Space and Grandview Ponds Open Space and Prairie Dog Habitat transect the east side of the Station Area. These open space areas are part of a larger 120-acre open space network that provides wildlife habitat, recreational amenities and neighborhood trail access. Table 2.2 details the parks in the area.

Table 2.2: Station Area Parks

Name	Grades	Amenities
Riverdale Open Space and Prairie Dog Habitat	Open space, prairie dog habitat	Trails, open space
Grandview Ponds Open Space and Prairie Dog Habitat	Open space, prairie dog habitat	Trails, open space, fishing
Sherwood Hills Park	Park	Playground, shelter, pond
Yorkborough Park	Park	Playground, shelter, tennis courts, open space
Margaret W. Carpenter Park and Open Space (north of Station Area)	Park, community center	Pool, gym, sport courts, playing fields, lake, open space, carousel, skatepark, group shelters

Source: City of Thornton

Figure 2.3: Station Area Parks and Open Space



2.4 Demographics

Demographic indicators from 2010 Census Block Data and the Denver Regional Council of Government’s (DRCOG) Transportation Analysis Zones (TAZs) have been assessed for the Thornton Crossroads at 104th Station Area and compared to overall values for the City of Thornton. For the purposes of this analysis, the Project Team has included Census block and TAZ data for an area that is approximately 1-mile from the proposed station. A summary table is presented in Table 2.3, while detailed descriptions are provided in the sections which follow.

For the purposes of this analysis, the Project Team has included Census block and TAZ data for an area that is within 1-mile from the commuter rail station.

Table 2.3: Demographic Summary Table

	Within one mile of 104th Station	City of Thornton
General (TAZ)		
Population (2010)	21,270	118,800
Population (2035)	25,195	232,940
Employment (2010)	1,905	36,770
Employment (2035)	1,975	71,230
Race and Ethnicity (Census)		
White	54%	62%
Hispanic	41%	29%
Black/African American	1%	3%
Asian	3%	5%
Other	1%	2%
Language (Census and ACS)		
English Primary	85.7%	78.9%
Spanish Primary, English Fluent	10.3%	15.1%
Spanish Primary	4.0%	6.5%
Income (Census)		
Median Household Income	\$63,748	\$62,512
Housing (Census)		
Housing Units	6,870	43,939
Median Housing Value	\$169,000	\$203,000
Home Owners	62%	69%
Transportation (Census)		
Households without a Vehicle	0.43%	3.5%
Average Commute Time	30.8 minutes	28 minutes

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

General

The area within 1-mile of the Thornton Crossroads at 104th Station has a population of 21,270, approximately 18 percent of Thornton’s total population. The population of this particular area is expected to grow by 18 percent to 25,195 residents by 2035, based on DRCOG data.

Race, Ethnicity, and Language

The ethnic makeup of the area is 54 percent White and 41 percent Hispanic. This differs from the city as a whole which is predominantly White (62%) and only 29 percent Hispanic.

Income

The median household income in the 1-mile radius around the Thornton Crossroads at 104th Station is \$63,748, approximately equal to the City’s median income. Additionally, approximately seven percent of households found within this 1-mile radius have incomes below the poverty line.

Housing

Sixty-two percent of residents are homeowners which is slightly less than the average for the City as a whole (69%). However, the median housing value (\$169,000) is 20 percent less than the median value for Thornton. This is partially explained by a large concentration of multifamily and single-family attached residences within 1-mile of the station which are generally less expensive than single-family detached housing.

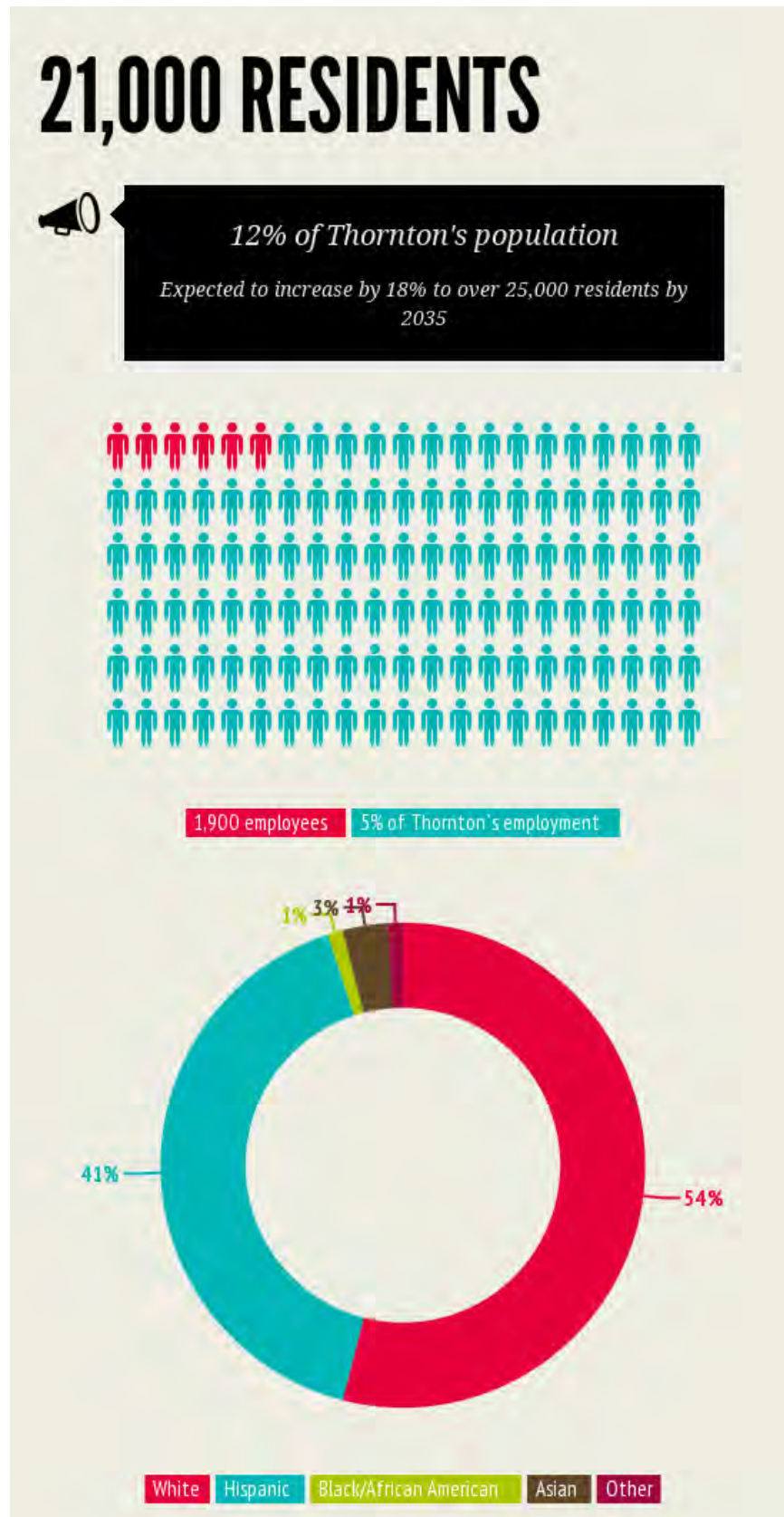
Transportation

The vast majority of residents living in the vicinity of the station have access to a vehicle, with only 0.4 percent reporting that they did not. The average commute time is approximately 30.8 minutes, just slightly over the median commute time for Thornton residents of 28 minutes.

Figure 2.4: Number of Jobs Within One Mile of the Station

The number of jobs located within close proximity to the station is much lower than the number of people who reside in the area: there are approximately 1,900 jobs located within 1-mile of the station, comprising about five percent of Thornton's total jobs. This number is not expected to increase significantly.

Of those with Hispanic background living within close proximity of the station, the majority, around 86 percent, are primary English speakers. Of those who are primary Spanish speakers, ten percent speak English fluently, while four percent have limited English speaking ability.



2.5 Development

Pending Development & Entitlements

There are several undeveloped parcels with underlying entitlements within the Station Area. The following is a description of each:

- Sage Valley: This 7.8 acre parcel is located north of 104th Avenue and east of Steele Street. The property is zoned Multifamily. Overall density planned for the site is 11.95 dwelling units per acre, with approximately 72 units.
- Presidential Ridge: This 15.4 acre parcel is located northwest of the intersection of 100th Avenue and Colorado Boulevard. In February 2013, Thornton City Council denied a request to (1) rezone the property from Planned Development to Multifamily and (2) amend the Comprehensive Plan to change the designation from Residential Medium to Residential High. The proposed rezoning would have allowed for up to 18 dwelling units per acre (with the proposal calling for development of 256 apartment units). Current entitlements allow for 12 dwelling units per acre (approximately 120 townhomes on the site).
- Settler's Chase: The residential portion of Settler's Chase, located immediately west of the railroad tracks behind Colorado Marketplace, is approximately 45 acres. Phase 1 and 2 are built with condos / apartments and duplex / triplexes. The total acreage of Phase 1 and 2 is about 27 acres, with 77 dwelling units as duplex or triplex units, and 216 condo/apartment units. Phase 3 is approximately 18 acres and the maximum number of dwelling units is 220. Two luxury apartment/condo buildings have been built with a total of 39 dwelling units. A new developer has purchased the vacant portion of the property and intends to build the remaining buildings, which should result in anywhere from 160 to 220 dwelling units in Phase 3.

2.6 Infrastructure

Roadway Network and Traffic Patterns

The Station Area includes the intersection of Colorado Boulevard and 104th Avenue, which is surrounded by the curvilinear street pattern of adjacent subdivisions. Colorado Boulevard is a four-lane major arterial with intermittent left and right-turn lanes, carrying over 20,000 vehicles per day. 104th Avenue is an important east-west link. It is a four-lane divided major arterial west of Colorado Boulevard and carries over 29,000 vehicles per day. To the east of Colorado Boulevard, 104th Avenue is a four-lane arterial with turning lanes for commercial access. According to Thornton's 2009 Transportation Master Plan, both Colorado Boulevard and 104th Avenue west of the station have a level of service of E (unacceptable), while the portion of 104th Avenue east of the station has an F level of service (failing). These are expected to improve to acceptable levels by 2035 with transit and infrastructure improvements.

Transit, Bicycle and Pedestrian Facilities

North Metro Commuter Rail Station

The North Metro commuter rail service will run within the existing freight rail alignment, even though Union Pacific freight operations will end in early 2015. New or upgraded track will be installed before passenger service begins. The rail alignment runs parallel with Colorado Boulevard briefly near Arrowhead Pass Road, which is found in the Pine Lakes Ranch subdivision, and then turns northwest and crosses 104th Avenue at a 45 degree angle. See Figure 2.5.

The rail platform and bus loading and unloading areas will be located directly south of the Colorado Marketplace shopping center, with access provided off Colorado Boulevard and 104th Avenue. The station will initially include an 800-space parking structure and approximately 100 surface parking spaces located immediately south of the shopping center along Colorado Boulevard. The parking structure will be built on the site of an existing storm water detention pond that will be relocated to the east side of Colorado Boulevard. Vehicles will access the station from Colorado Boulevard. Bus, pedestrian, and bicycle access is described in the sections which follow.

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



Source: RTD FasTracks

Bus

The Thornton Crossroads at 104th Station Area is served by RTD's Route 92 which travels along 92nd Avenue before turning north and then running along Colorado Boulevard. This service runs with a 30 minute service frequency between 6:30 a.m. and 7:00 p.m. RTD's AA Skyride service also runs along 104th Avenue serving Denver International Airport with a minimum of one-hour frequency between 3:21 a.m. and 10:16 p.m. eastbound, and 6:40 a.m. and 11:48 p.m. westbound.

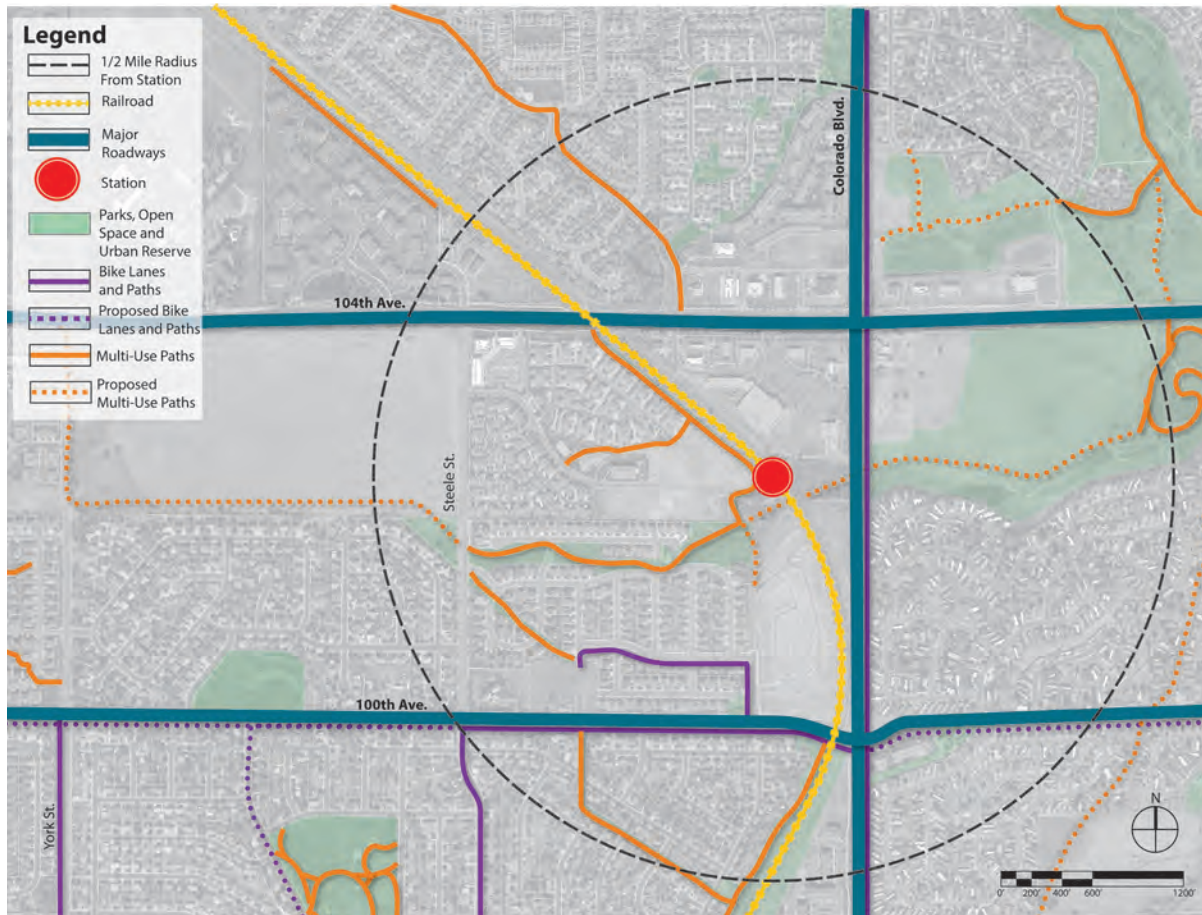
Planned feeder routes include east-west connections 100th Avenue and 104th Avenue routing through the bus exchange. A Call-n-Ride service, which would shuttle passengers to and from the station on-demand, is also described in the Transportation Master Plan.

Bicycle

As part of the City's Complete Streets Policy, the City has recently added portions of an on-street bicycle lane on Colorado Boulevard north of 104th Avenue. As the City resurfaces other stretches of Colorado Boulevard, additional bike lanes will be connected or added. In addition to on-street bicycle improvements, there are several discontinuous off-street bicycle facilities within the Station Area. The closest to the proposed station is a multi-use trail which travels east from Steele Street towards Colorado Boulevard and then turns northeast parallel to the alignment and then along 104th Avenue to the west. There is also a ½-mile segment of multi-use trail off Colorado Boulevard north of 104th Avenue which connects to Birch Street and the Grange Hall Creek Regional Trail in the Riverdale Open Space and Prairie Dog Habitat. Further from the station, multi-use trails alongside the Grandview Ponds Open Space provide pedestrian and bicycle links for neighborhoods to the north and east of the station.

Proposed bicycle facility improvements, as set out in the Parks and Open Space Master Plan (2012) include the completion of an east-west multi-use trail connecting the Grandview Ponds trails with the trail adjacent to the alignment. Existing and planned facilities are shown in Figure 2.6.

Figure 2.6: Station Area Pedestrian and Bicycle Infrastructure



Pedestrian

The pedestrian facilities serving the Station Area are functional, particularly along both major roads where there are ample sidewalks. However, the substantial street width, traffic speed, and the pedestrian’s proximity to auto traffic may make walking unappealing to some residents. The residential areas adjacent to the station generally have sidewalks, though the subdivisions are not necessarily pedestrian-oriented as ‘intuitive journeys’ are often made circuitous by the street layout and lack of ‘cut-throughs’.

Social trails, created by pedestrians ‘cutting through’ are apparent throughout the vacant areas adjacent to the station.

Existing and proposed bicycle facilities are primarily multi-use paths which also serve pedestrians. Important new pedestrian connections will be evaluated in the future, including a proposed grade-separated pedestrian crossing across Colorado Boulevard to connect the station to areas east.

Chapter 3.0 Station Area Market Potential

The Project Team conducted a detailed market study to analyze the potential demand for residential, retail, and office uses in 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 described in Chapter 4. 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.

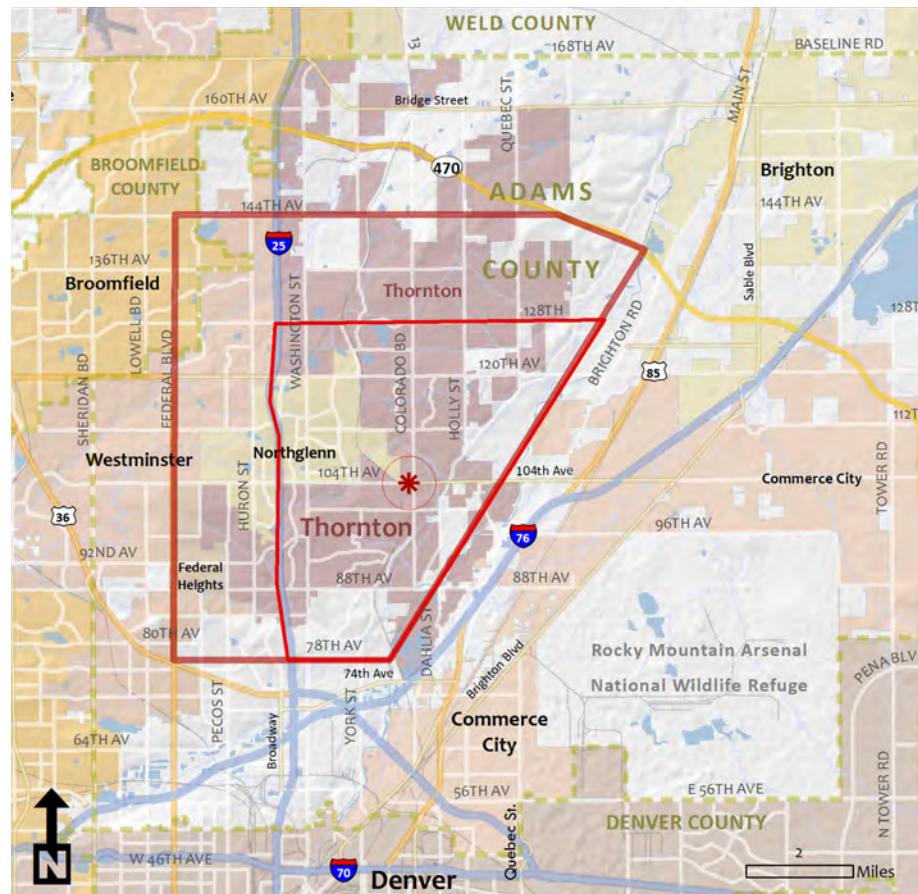
3.1 Primary and Regional Market Areas

For purposes of the market analysis, a Primary Market Area and Regional Market Area were designated for the Thornton Crossroads at 104th Station Area (Figure 3.1). The market areas are drawn to reflect the potentially broad regional nature of the Station Area.

The Primary Market Area reflects the locations of the most competitive and comparable residential projects to a future project at the Thornton Crossroads at 104th Station Area. The Primary Market Area is bordered by I-25 to the west and most of the developed area along the eastern boundary of Thornton. 128th Avenue is its northern boundary. It extends through Original Thornton to the south.

Because the Thornton Crossroads at 104th Station is located along a major highway corridor, it has the potential to serve a much broader Regional Market Area, particularly for commercial services, including lodging, entertainment, and offices. The Regional Market Area therefore extends up to 144th Avenue. It is bordered by Federal Boulevard to the west, south Thornton to the south and the developed area of Thornton to the east. Most of the Regional Market Area is in Adams County, although a small portion lies within Broomfield County.

Figure 3.1: Thornton Crossroads at 104th Station Market Areas



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 because of the neighborhood context and land availability in the area. In order to estimate the level and type of residential demand in the station area, DRCOG growth forecasts for the Primary Market Area are estimated and vacancy rates and other development assumptions are applied to these forecasts.

Residential Rental Demand

According to the market analysis results, approximately 6,000 units would be needed for rental housing in the Market Area. Assuming the Station Area captures 25% of the low, moderate, and middle income ranges within the Market Area, the Station Area could accommodate a range of 600 to 1,000 rental units. This demand assumes that the station area becomes a focal point for new residential development.

The highest percentage of households for the Primary Market Area, Regional Market Area and Adams County, have incomes that fall into the \$50,000 to \$74,999 range. Based on this information, the most likely target market for the Station Area would fall in the middle income ranges of \$50,000 to

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. Since 2006, about 22% of the residential permits issued were for multifamily units.

\$75,000 and would pay \$1.20 per square foot per month for residential rentals, which is substantially lower than what downtown Denver residents pay at over \$2.00 per square foot per month.

The Station Area is likely to attract the younger demographic (ages 25-34) that many of the downtown Denver projects are aiming for, but at a much lower price point. Specifically, the young urban professionals are likely to be drawn to the area because of easy accessibility to downtown, cheaper rents, and larger units. This group likes to work and play in downtown Denver, but prefers the price points of units outside of downtown.

For-Sale Residential Demand

According to the market analysis results, approximately 14,700 additional units would be needed for For-Sale housing in the Market Area. Of those, an estimated 55% of units would be needed for ownership housing, based on an extrapolation of current housing tenure in the Market Area. Assuming the Station Area is able to capture between 2% and 15% by price point in the low, moderate, and middle income ranges, approximately 380 to 450 patio homes and single-family detached units could be developed within the station area.

One of the challenges currently inhibiting the development of attached residential ownership units is the existing 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. Today, 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 first-time and lower-income home buyers.

Assuming the construction defects issue is resolved the Station Area could see a greater share of for-sale attached units. According to the market analysis, an estimate of 150 to 200 attached units – including townhomes, duplex units and condos – could be developed within the Station Area.

Senior Housing and Services Demand

Another example of a potential residential niche that could be appropriate for the Station Area would be senior housing and the continuum of care associated with senior housing, from senior apartments to assisted living. While the Regional Market Area has a range of senior housing services, there is potential additional demand, given the projected population growth in the immediate area.

According to the market analysis results, there is potential demand for up to 200 senior housing units within the Station Area. The market demand is not very deep and should be tested prior to any development in the area. There are a lot of services in the area, and it is easy to overstate the demand

for these types of units, particularly given the desire by most people to stay in their current homes as long as possible while they age. However, as the population increases and ages, the potential demand would likely deepen.

3.3 Commercial Market Demand

The commercial market analysis examined current and future retail demand and supply in the market areas.

The Thornton Crossroads at 104th Station Area will be located adjacent to the Colorado Marketplace, an Albertsons anchored neighborhood shopping center, built in 1998, and currently operating at about 98% occupancy. The center serves as a valuable source of tax revenue for the City and serves a neighborhood need. While Albertsons, in particular, may need to address access and delivery issues because of the new station, there is little market impetus to make any immediate changes to the center itself. The Colorado Marketplace may see the opportunity to take advantage of the additional customers they may draw from the commuter rail station. On the other corners of the Colorado Boulevard and 104th Avenue intersection, there may be infill and redevelopment potentials. Although in the immediate future, they are likely to be in a standard suburban configuration oriented to highway access and primarily serving the local neighborhood.

One of the challenges with respect to additional commercial services in the area is the fairly significant amount of commercial services available in the Thornton market already. While the Colorado Marketplace does well, it struggles to compete with other parts of the City. Based on the market analysis, however, there is demand for up to 50,000 square feet of additional retail services, primarily restaurant and eating locations, most of which would be on infill parcels along Colorado Boulevard or 104th Avenue in pad site configurations.

Long term, there is a desire to create a regional retail and commercial services center near the station. Currently, most of the regional retail and entertainment options are centered along I-25 and major corridors. Like other older commercial centers that have transitioned over time, the potential for Colorado Marketplace to redevelop becomes more of a reality once the rail corridor is constructed and population and employment in the larger regional area increases.

3.4 Office Market Demand

Based on the current jobs forecast for the Regional Market Area and respective requirements for office space, the Regional Market Area may see demand for an additional 2 million square feet of office space by 2035. Much of this demand however, will be oriented to the I-25 corridor. That said, there may be smaller office space users who would desire to be closer to the station; and this use becomes more viable once the rail line has been constructed. Assuming a modest capture rate of 1-5% would result in

potential demand for 20,000 to 100,000 square feet of office in the Station Area. However, proactive economic development activities would potentially be necessary to attract office users to the area.

3.5 Summary of Station Area Market Potential

Table 3.1 details the future development potential for residential, retail, commercial, and office development based on the results of the market analysis. The Project Team incorporated the forecast land use estimates into the development of Land Use Concepts described in the following chapter.

Table 3.1: Summary of Station Area Developmental Potential

Land Use Type	Market Forecast										
Residential	<table border="0"> <tr> <td>Multifamily Rental:</td> <td>600- 1,000 units</td> </tr> <tr> <td>Condos/Townhomes:</td> <td>150- 200 units</td> </tr> <tr> <td>Single-Family Detached/Patio Homes:</td> <td>380- 450 units</td> </tr> <tr> <td>Senior Continuum of Care:</td> <td>200 units</td> </tr> <tr> <td>Total:</td> <td>1,330- 1,850 units</td> </tr> </table>	Multifamily Rental:	600- 1,000 units	Condos/Townhomes:	150- 200 units	Single-Family Detached/Patio Homes:	380- 450 units	Senior Continuum of Care:	200 units	Total:	1,330- 1,850 units
Multifamily Rental:	600- 1,000 units										
Condos/Townhomes:	150- 200 units										
Single-Family Detached/Patio Homes:	380- 450 units										
Senior Continuum of Care:	200 units										
Total:	1,330- 1,850 units										
Retail and Commercial	Up to 50,000 square feet										
Office	Up to 50,000 square feet										

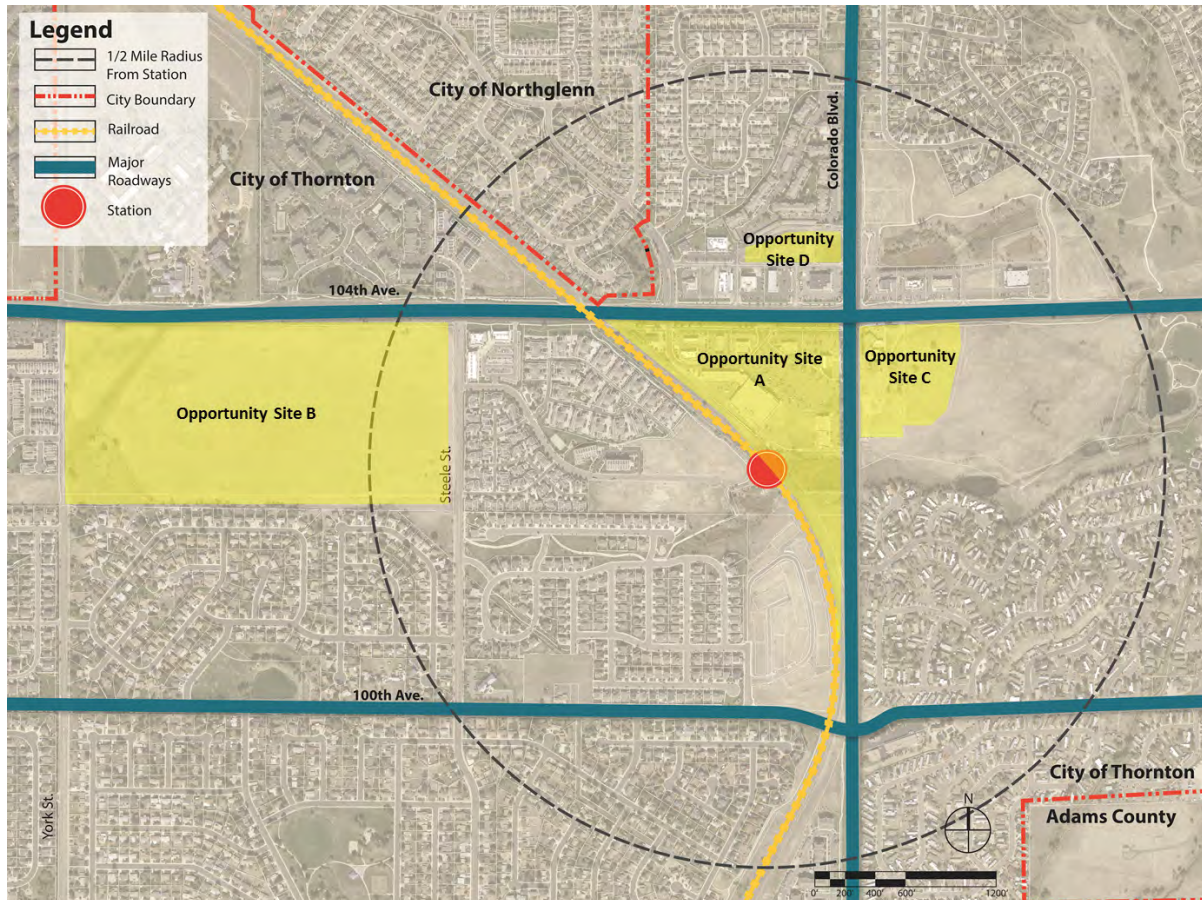
Chapter 4.0 Land Use Concepts

This chapter describes the Land Use Concepts proposed for each of the Opportunity Sites within the Thornton Crossroads at 104th Station Area (shown in Figure 4.1). These Concepts are based on the long-term planning vision for this area and are intended to create a rich mix of land uses within convenient walking distance to the station. They were developed and refined through multiple working sessions with City staff, stakeholders, and public input and, in total, are planned to meet the forecast market absorption rates for the Station Area.

The Land Use Concepts provide examples of how TOD could evolve in the Station Area and include a mix of both infill and redevelopment. 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 of Thornton, as well as RTD investment and construction.

Note that the vacant parcels located west of the railroad tracks have not been identified as Opportunity Sites because, at the time of this Plan development, they are pending residential developments (as described in Chapter 3). These areas, known as Presidential Ridge and Settler's Chase, are currently entitled for up to 280 new multifamily units and will likely build out over the next few years. While these new units are included in the total planned land uses for the station area (as described at the end of this chapter) the Project Team did not develop Land Use Concepts for these two areas.

Figure 4.1: Thornton Crossroads at 104th Station Opportunity Sites



The following sections describe the Land Use Concepts for each Opportunity Site.

4.1 Opportunity Site A

Opportunity Site A, shown in Figure 4.2, includes the commuter rail station itself, which will be acquired and developed by RTD, and the privately-owned Colorado Marketplace commercial center just to the north of the station.

Figure 4.2: Opportunity Site A



This Opportunity Site will be most affected by the introduction of the commuter rail station because most transit patrons will access the station through this area. The sheer number of commuters coming into and out of this site on a daily basis will transform the way this area looks, feels, and functions. As such, this site also has the greatest potential to add and/or redevelop with transit-supportive uses that create a strong synergy between the station itself and the shopping center. With this in mind, the Project Team developed two distinct Land Use Concepts to incorporate transit supportive uses into the site, as described here:

- Infill Concept: The Infill Concept illustrates potential development on the last remaining vacant lot within Colorado Marketplace (and shows the current concept plan for the commuter rail station).

- Infill and Redevelopment Concept: The Infill and Redevelopment Concept illustrates potential development on the last remaining vacant lot within Colorado Marketplace and shows redevelopment of an adjacent lot (that is currently occupied by retail development).

Infill Concept

Figure 4.3 shows the extent of the infill site, highlighted in yellow, in relation to the commuter rail station to the south and surrounding development. Figure 4.4 then illustrates the Infill Concept.

Figure 4.3: Opportunity Site A - Infill Area

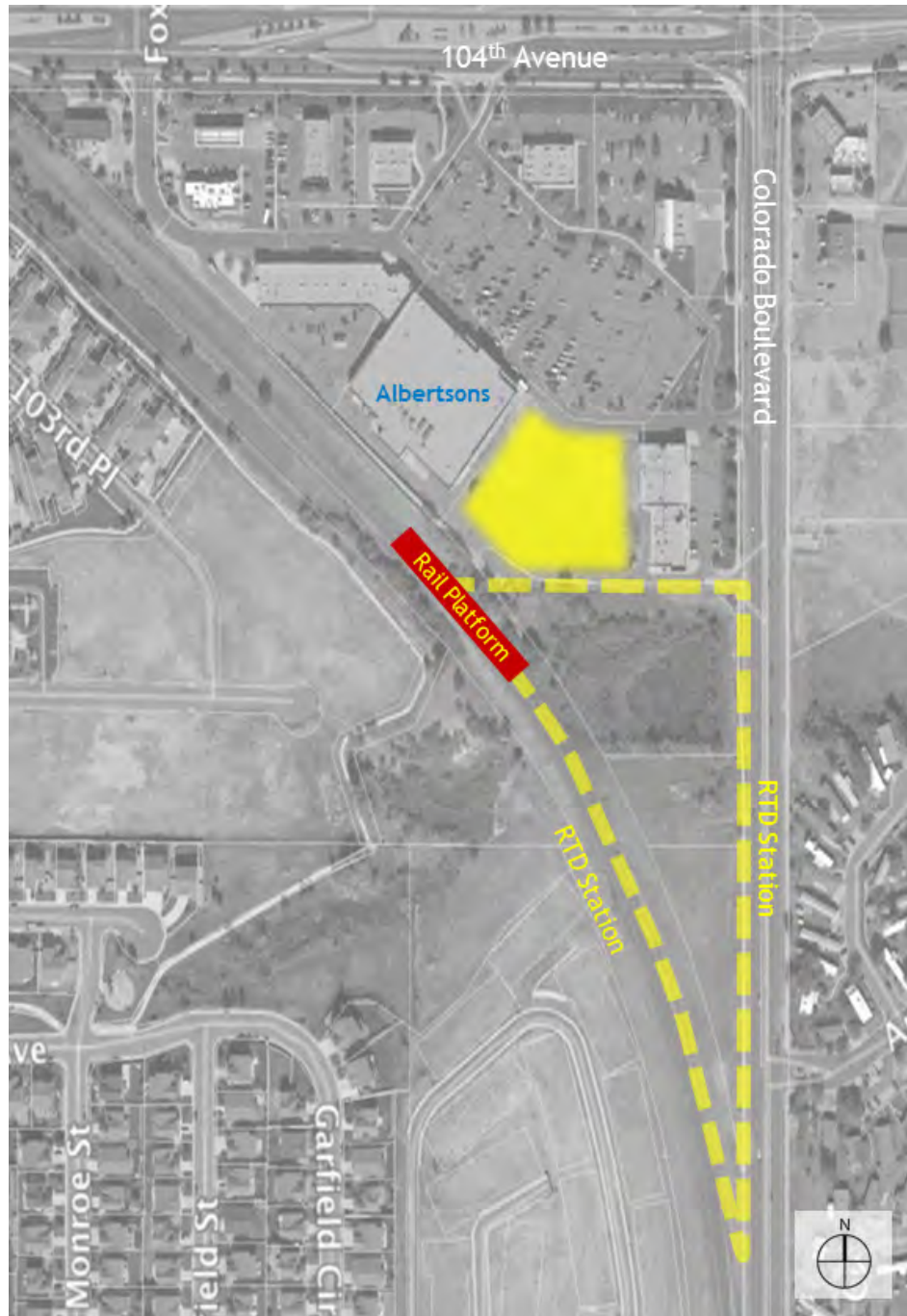


Figure 4.4: Opportunity Site A - Infill Concept



This concept proposes the integration of new mixed-use development into the existing building framework of the shopping center and creates a strong pedestrian connection between Colorado Marketplace and the station. The Infill Concept includes the following features:

- A tree-lined triangular shaped pedestrian plaza connects Colorado Marketplace to the commuter rail station, providing an appealing and convenient area for transit patrons to walk between the shopping center and the station. The approximately 20,000 square foot plaza will create a gateway into the station and a gathering space for shoppers, transit patrons and area residents. Plaza features such as fountains, play areas and sculptures can be incorporated into the plaza to create a distinct and vibrant hub within the station area.
- Mixed-use development, in the form of ground-floor retail storefronts and restaurants and 1-2 story residential units above, frame either side of the plaza. The footprint of the existing retail building (Albertsons) is extended into the adjacent vacant lot to create the storefront retail/ restaurants with residential units above. This building layout offers an opportunity to provide outdoor restaurant dining on either side of the plaza – helping to further draw people into this space – and activate the area outside typical commuting hours. And importantly, the orientation of these buildings frame the entrance into the plaza and allow for direct lines of sight between the station platform, transit drop-off area and the shopping center parking lot. When people have direct views between the station and Colorado Marketplace, they feel more open, connected and safe within the station environment.
- The Colorado Marketplace parking area and automobile access is reorganized to improve efficiency and eliminate awkward shapes, such as the small areas throughout the parking lot that are currently planted with Kentucky bluegrass. The reconfigured parking lot includes an additional north-south access point from 104th Avenue that provides a direct and clear connection to the plaza area. The reconfigured parking area also illustrates planted islands to delineate circulation paths for the benefit of both pedestrians and automobile drivers; and adds streetscape improvements along the building fronts to create appealing and safe pedestrian spaces.
- On-street and off-street pedestrian and bicycle paths will connect surrounding areas to the station, Colorado Marketplace and residential areas to the west of the platform. A planned pedestrian underpass below the railroad tracks will provide a direct link for people to walk or bicycle between the station and the surrounding neighborhoods and existing and planned trail network to the west. From the east, pedestrians and bicyclists accessing the station from Colorado Boulevard should have designated pedestrian crosswalks when one or more traffic signals are added to Colorado Boulevard south of 104th Avenue. While not illustrated in the Land Use Concept, grade separated pedestrian

connections across Colorado Boulevard and 104th Avenue would help to promote walking and cycling in the area, while providing a more convenient and safe travel option for pedestrians and cyclists.

Infill and Redevelopment Concept

Figure 4.5 (on the following page) shows the extent of the infill and redevelopment sites, highlighted in yellow, in relation to the commuter rail station to the south and surrounding development.

Figure 4.6 (on page 4.9) illustrates the Infill and Redevelopment Concept. Like the previous concept, this plan depicts the integration of new mixed-use development into the shopping center and creates a strong pedestrian connection between Colorado Marketplace and the station. This concept then goes one step further by exploring the idea of redeveloping the strip retail development currently located at the southeast corner of Colorado Marketplace. While most of the features related to the plaza, mix of uses, parking and pedestrian and bicycle circulation are similar to the Infill Concept, this plan is distinct in the following ways:

- The tree-lined plaza connecting Colorado Marketplace to the commuter rail station is designed as more of a linear “pedestrian mall.” Like the triangular shaped plaza shown in the Infill Concept, the linear shaped plaza provides an appealing environment for pedestrians to walk between Colorado Marketplace and the station. It also becomes a destination for shoppers, transit patrons and area residents and, like the Infill Concept, is envisioned as a vibrant area lined with retail storefronts and outdoor cafes.
- Mixed-use development, in the form of ground-floor retail storefronts and restaurants and 1-2 story residential units above, frame either side of the plaza. On the east side of the plaza, the footprint of the existing retail building (Albertsons) is extended into the adjacent vacant lot. On the west side, the concept assumes the existing commercial building along Colorado Boulevard is removed and the site is redeveloped with a larger mixed-use project that extends from Colorado Boulevard to the western edge of the plaza. The configuration of the 3-4 story mixed-use development frames both the pedestrian plaza and the north side of the RTD station. This layout creates an interesting and active environment for many different types of users – from people simply passing through the area, like transit patrons stopping for convenience items before boarding a train – to those who are attracted to the area for a more leisurely experience, like dining in an outdoor café.

Figure 4.5: Opportunity Site A - Infill and Redevelopment Area

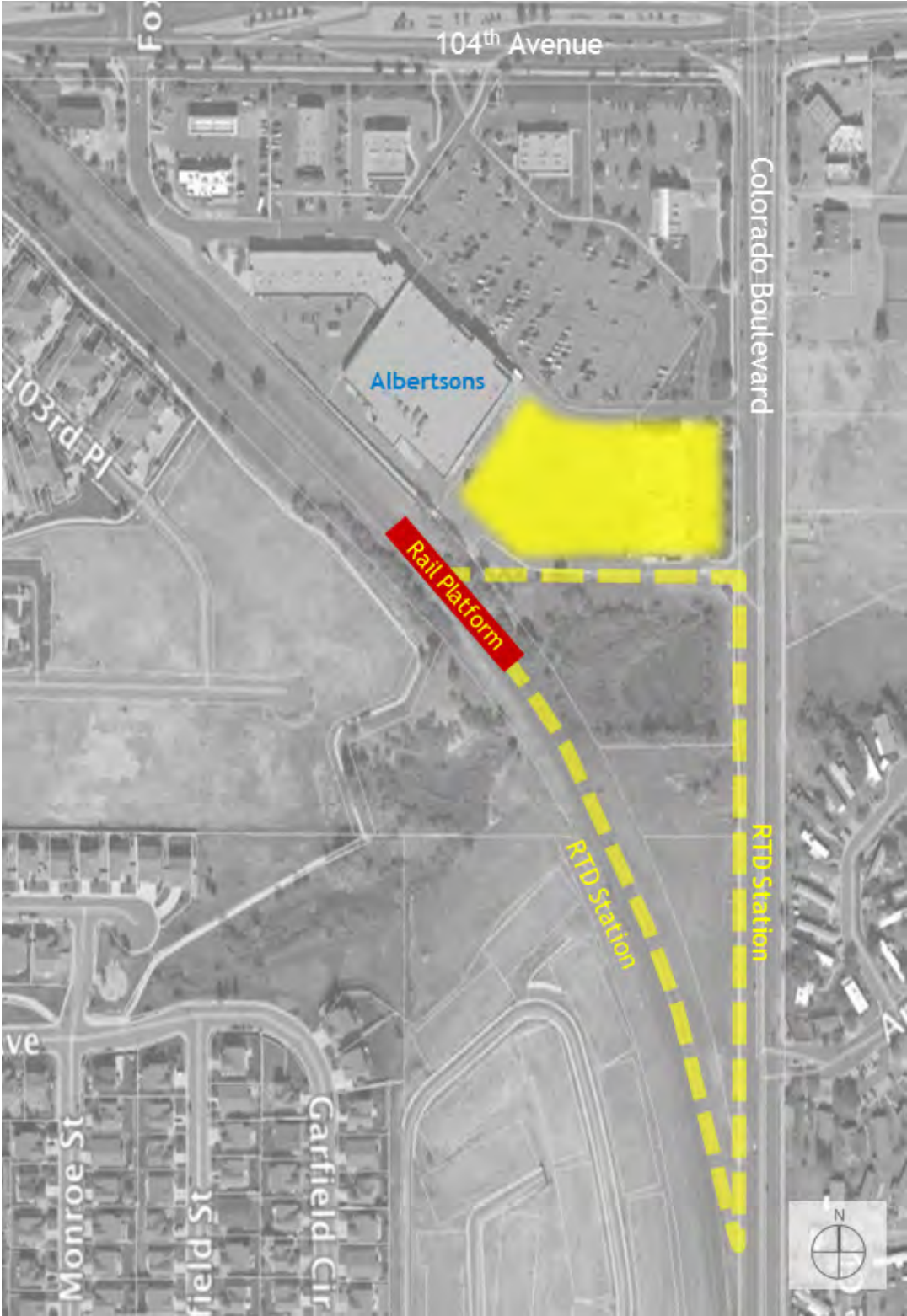


Figure 4.6: Opportunity Site A - Infill and Redevelopment Concept



Planned Land Uses

Table 4.1 below compares the land use buildout for both Land Use Concepts. Note that the Infill and Redevelopment Concept could generate slightly more residential units with less retail and commercial square feet, but the two concepts are fairly comparable in their land use makeup.

Table 4.1: Opportunity Site A - Proposed Land Uses

Land Use Type	Opportunity Site A: Infill Concept	Opportunity Site A: Infill and Redevelopment Concept
Multifamily	80-100 Units	100-120 Units
Retail/Commercial	30,000 sf	25,000 sf

4.2 Opportunity Site B

Opportunity Site B, shown in Figure 4.7, is located just on the western edge of the half-mile radius of the Thornton Crossroads at 104th Station. It is a 72-acre site bordered by 104th Avenue on the north, the Sherwood Hills neighborhood to the south, Steele Street on the east and York Street on the east.

Figure 4.7: Opportunity Site B



The land is currently vacant and under single ownership. It is one of the last remaining large undeveloped parcels in this area of the city and it (1) presents a tremendous opportunity to add a mix of residential product types to the area; and (2) offers the advantage of providing close and convenient access to the station. As one of the last remaining large developable parcels, all or part of the site may also be suitable for development of an educational campus. With these factors in mind, the Project Team developed two distinct Land Use Concepts, as described here:

Mixed-Use Concept: The Mixed-Use Concept illustrates potential development of a residential neighborhood with supporting retail and community facilities such as a neighborhood park and school.

Mixed-Use + School Campus Concept: The Mixed-Use + School Campus Concept illustrates most of the site developed as an educational campus.

Mixed-Use Concept

Figure 4.8 illustrates the Mixed-Use Concept. Proposed land uses envisioned for Opportunity Site B include a mix of land use types. While development of the site would predominantly be residential, a mix of neighborhood-supporting commercial, parks, a school and regional trail connections help to create a dynamic and vital neighborhood.

Figure 4.8: Opportunity Site B - Mixed-Use Concept



The Mixed-Use Concept includes the following features:

Residential Land Uses

A diversity of housing types is integrated throughout the site, with higher intensity uses located to the east within closer proximity to the station and to the north bordering 104th Avenue. Residential intensities would taper down to the south to ensure compatibility with the existing scale of the adjacent neighborhood. Residential land use designations include the following product types:

- Multifamily residential areas are planned at approximately 25-30 dwelling units per acre and are envisioned as 2-3 story apartments or condominiums. Within the multifamily land use designation, there may also be a demand for senior continuum of care services – from senior apartments to assisted living. As Thornton’s population ages, the demand for senior facilities, (like the Village at Sunny Acres senior citizen housing complex located just north of the site), will likely strengthen. This area may be well suited for senior housing, given its proximity the transit station and the number of medical services located on the east side of Steele Street.
- Single-family attached and detached residential areas are planned at approximately 8-12 dwelling units per acre and located more internally

to the site. 1-2 story single-family attached and detached products, stacked row homes and patio homes are all product types envisioned as an appropriate mix of products within these land use designations.

Commercial Land Uses

Approximately 20,000 square feet of commercial uses are designated at the southwest corner of 104th Avenue and Steele Street. This retail development would mirror the existing retail corner located across Steele Street; thereby creating a commercial node of services and providing convenient access on a highly visible corner for drivers, pedestrians and cyclists.

School

Given the degree of interest in locating an educational facility in the station area, this concept plans for a 7-acre school campus in the southern portion of the site. The school would be centrally located with direct north-south access from 104th Avenue, thereby minimizing school traffic on neighboring streets.

Park and Trail

A 4-acre central park provides a recreational amenity to new residents and helps to knit the distinct areas of the site into one cohesive neighborhood. By locating the park adjacent to the future school, the park may be used by both residents and students. Another important feature is the planned trail connection running along the south side of the site. The trail would provide a key link to the existing and planned regional trail network that runs through the station area and connects the commuter rail station to neighborhoods on the west side of the railroad tracks.

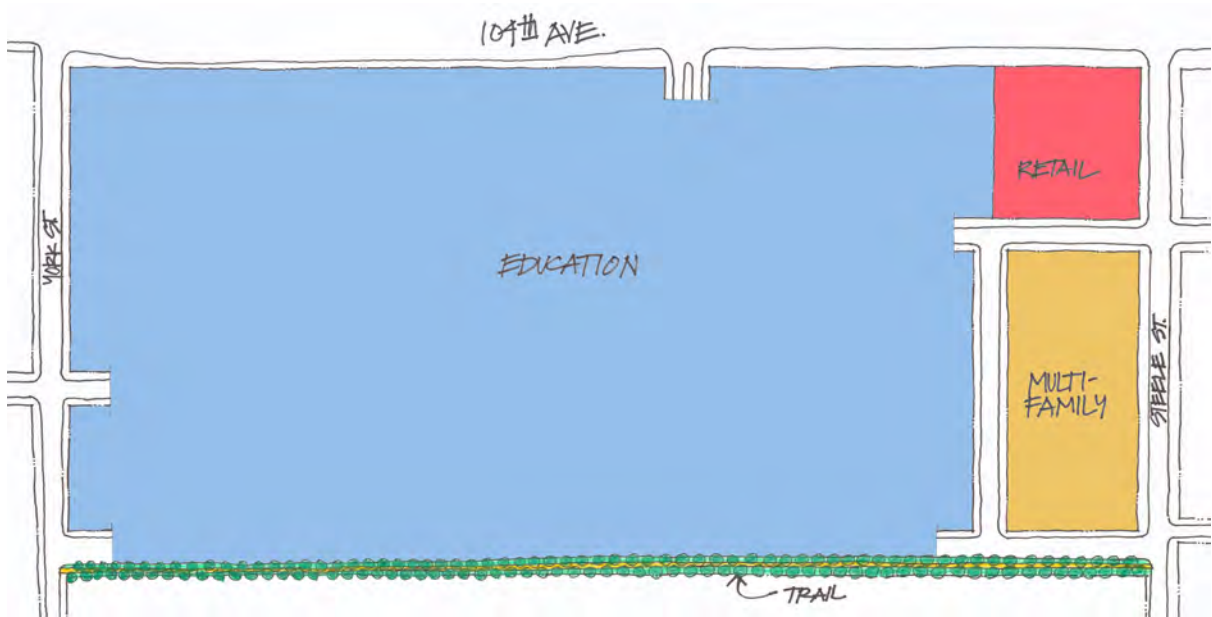
Circulation and Access

The planned transportation network creates several means of access into and out of the site via 104th Avenue, York and Steele Streets. The Mixed-Use Concept calls for an east-west collector through the center of the site. It has been designed with an S-curve to slow traffic and provide visual interest, creating a sense of place within the neighborhood, particularly as it bends around the planned park. Within the site, the small residential block configuration creates a clear, walkable and well-connected neighborhood with a human scale and distinct character. 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.

Mixed-Use + School Campus Concept

Figure 4.9 illustrates the Mixed-Use + School Concept. In this concept, the majority of the site – approximately 72 acres – is planned as a school campus. The remainder of the site, on the eastern edge and within half-mile of the station is divided between retail and multifamily uses as described above in the Mixed-Use Concept.

Figure 4.9: Opportunity Site B - Mixed-Use + School Campus Concept



Planned Land Uses

Table 4.2 below compares the residential and commercial land use build-out for both Land Use Concepts. Note that the Mixed-Use + School Concept dedicates the majority of the site to a school facility.

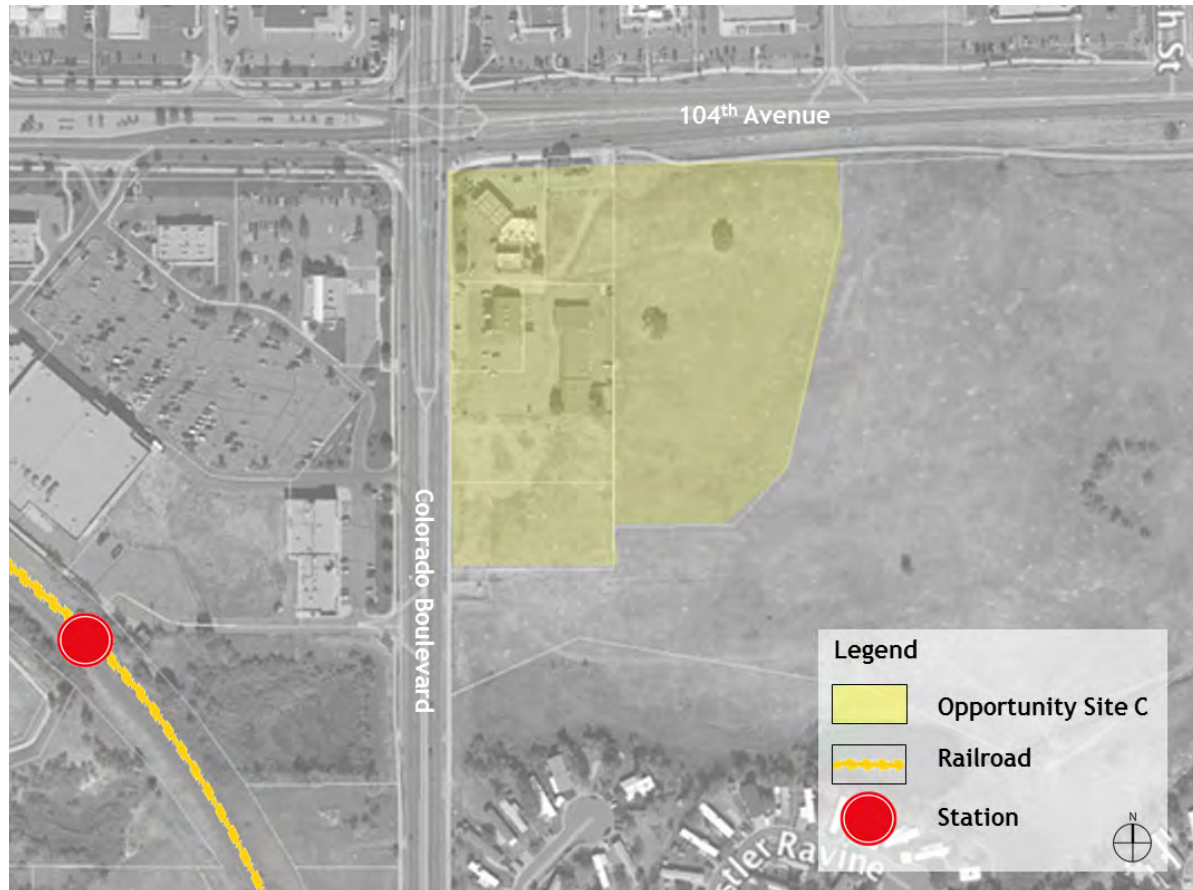
Table 4.2: Opportunity Site B - Proposed Land Uses

Land Use Type	Opportunity Site B: Mixed-Use Concept	Opportunity Site B: Mixed-Use + School Concept
Single-Family	100 - 240 Units	
Multifamily	450 - 650 Units	100 units
Retail/Commercial	20,000 sf	20,000 sf

4.3 Opportunity Site C

Opportunity Site C is approximately 7-acres located at the southeast corner of 104th Avenue and Colorado Boulevard, as shown in Figure 4.10.

Figure 4.10: Opportunity Site C



A corner gas station and older retail/office establishments line the corner of this site, while the back 5-acres, which border the Grandview Ponds Open Space and Prairie Dog Habitat, is undeveloped. Given that this is one of the few remaining vacant parcels in the area and is within convenient walking distance of the station, the undeveloped portion of the site could become an attractive location for higher density residential development. The vacant area has the added appeal of being located adjacent to open space with expansive views to the southeast. However, it would require the extension of roadway infrastructure into the site to provide auto access.

The Project Team developed two distinct Land Use Concepts for this site. One concept featured redeveloping the existing commercial buildings and adding residential development to the back portion of the site, while the other concept left the existing and planned retail establishments intact and only planned for residential development of the back portion of the site. Through extensive discussions with stakeholders, elected officials and the public, it was determined that the existing retail establishments may be updated and/or redeveloped over time, particularly as the commuter rail station comes online and property values in the area potentially increase. However, a full-scale redevelopment and consolidation of the existing retail establishments is not likely to occur within the planning horizon.

Given these factors, the preferred concept for Opportunity Site C focuses only on infill development, with a plan for higher density multifamily residential uses bordering the Grandview Ponds Open Space to the east and the build out of two additional retail pad sites adjacent to existing retail, as show in Figure 4.11. Depending on the height of the multifamily buildings, the site could accommodate between approximately 125 units (2-stories) and 220 units (3-stories). Auto access could be provided from 104th Avenue to the north and Colorado Boulevard to the west. However, with the desire to limit the number of curb cuts off these major thoroughfares, a more detailed roadway and circulation design will be required in the future. Pedestrian and bicycle connections between Opportunity Site C and the commuter rail station would occur at grade via a new signalized intersection on Colorado Boulevard at the south end of the site (or via a pedestrian underpass as described earlier).

Figure 4.11: Opportunity Site C - Land Use Concept



Planned Land Uses

Table 4.3 below details the proposed land use buildout for Opportunity Site C.

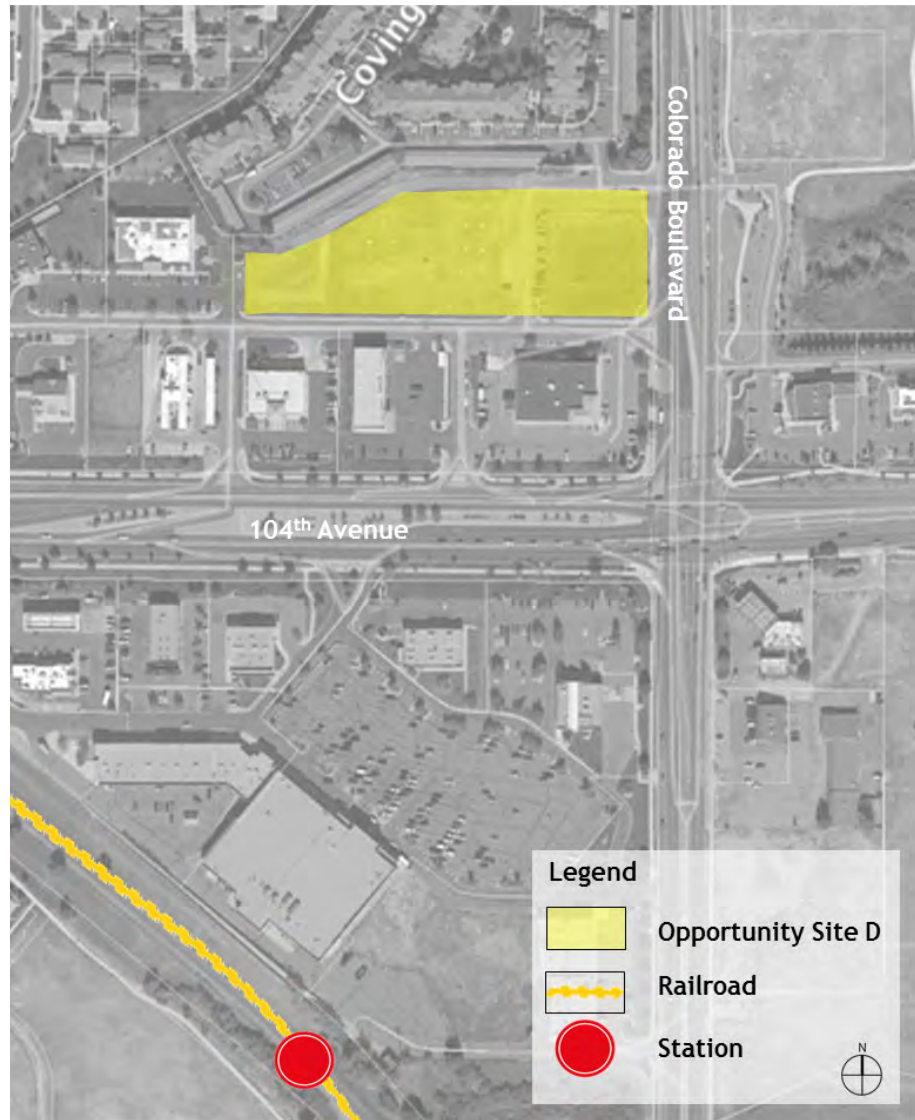
Table 4.3: Opportunity Site C - Proposed Land Uses

Land Use Type	Opportunity Site C: Land Use Concept
Multifamily	125- 250 units
Retail/Commercial	10,000 sf

4.4 Opportunity Site D

Opportunity Site D is approximately 3.8-acres located north of 104th Avenue, as shown in Figure 4.12.

Figure 4.12: Opportunity Site D



It is situated between Covington Ridge to the north, retail establishments to the south and Colorado Boulevard to the east. The Project Team examined potential uses for this site because it may offer an infill opportunity and is conveniently located within close proximity to the commuter rail station. While Opportunity Site D has existing roadway access, it is encumbered by a large detention area on the east side and limited roadway frontage from Colorado Boulevard and 104th Avenue. While it is currently zoned for commercial uses, it would unlikely be viable for retail development because it lacks visibility from adjacent thoroughfares. Therefore, the Project Team explored alternate uses on the site and illustrated one concept that adds more residential development to the station area.

As shown in Figure 4.13, the Project Team developed a concept that plans for 2-story multifamily residential development, and up to approximately 120 dwelling units. While a corridor-type multifamily building may be feasible on the site, developers will have to address the need to accommodate storm water detention, which may limit the size of the residential development shown. Or, alternative uses such as offices or daycare facilities that would require less developable property could be considered.

Figure 4.13: Opportunity Site D - Land Use Concept



Planned Land Uses

Table 4.4 below details the proposed land use buildout for Opportunity Site D.

Table 4.4: Opportunity Site D: Proposed Land Uses

Land Use Type	Opportunity Site D: Land Use Concept
Multifamily	120 units
Other Potential Uses (not shown in Land Use Concept)	Office, Institutional/Community Services, Lodging

4.5 Summary of Planned Land Uses

Table 4.5 below summarizes the proposed land uses for each of the four Opportunity Sites, as well as buildout of the two undeveloped parcels west of the rail station (Settler’s Chase and Presidential Ridge). The number of planned residential units falls below what the market forecast calls for in the station area, but is consistent with the community’s desire to develop transit-supportive uses that are appropriately scaled to the surrounding neighborhoods.

Table 4.5: Summary of Proposed Land Uses

Land Use Type	Settler’s Chase & Presidential Ridge	Opportunity Site A	Opportunity Site B	Opportunity Site C	Opportunity Site D	Total
Residential	280 units	80-120 units	100*-890 units	125-250 units	120 units	705-1,660 units
Retail/Commercial	-	25-30,000 sf	20,000 sf	10,000 sf	-	55-60,000 sf

Please note that all development needs to follow the design principles contained in Chapter 5. This includes creating a gradient of densities when transitioning from high densities to the existing lower density area.

*Assumes majority of site is developed as a school campus with limited residential development.

Chapter 5.0 Guiding Principles

TOD in the station area is more than adding higher density housing on the vacant sites near the Thornton Crossroads at 104th Station. 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 – the entire station area 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 environment, including public and private spaces and related infrastructure. The following pages describe and illustrate guiding principles for station area design and development, with some principles being applicable to specific Opportunity Sites. These principles have been used in the development of the Concept Plans described in Chapter 4 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 Thornton Crossroads at 104th Station Area.

5.1 Land Use

L1: Create a Mix of Uses

To fully realize the potential for the Thornton Crossroads at 104th 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 will continue to be residential with community-scaled retail services, but an opportunity exists to develop a full complement of mixed-use development within the station area through both infill and redevelopment.

This mix (as shown in the Land Use Concepts in the previous chapter) should include the types of uses that people want and need, including housing, retail and restaurants, possibly small offices, and other amenities such as educational facilities where appropriate. The more complete the mixture of origins (homes) and destinations (such as retail), 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 mixed-use development envisioned for the station area can be mixed both horizontally and vertically. Vertical mixed-use development, where commercial space is located on the ground floor and residential above, has witnessed a re-emergence as a transit- and pedestrian-friendly building form. Vertical mixed-use development, which is proposed for the Colorado Marketplace (Opportunity Site A) will support and complement the entire station area and appeal to those looking for retail amenities and transit access outside their doorstep. 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, i.e. well-designed flexible space, can provide flexibility needed by the development community.

Horizontal mixed-use development – where residential and retail uses are located adjacent to each other – is envisioned for each of the other Opportunity Sites (B through D). The addition of higher density residential development adjacent to existing and planned commercial uses will allow for convenient walking to retail services, restaurants and other neighborhood amenities. This mixing of uses in the station area also allows people to more readily choose to walk or bike to their local activities, and thereby further reduces auto trips.



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.



Ground floor retail stores above residential units create activity during non-traditional business hours.

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; and the principle of integrating mixed-income housing can be applied to each of the Opportunity Sites. The introduction of a mix of for-sale single-family products, such as detached houses, townhouses and patio homes, and rental units near the Thornton Crossroads at 104th Station will provide choices for several income levels. The introduction of higher density residential development can also help promote access for the transit-dependent and reduce the need for private automobiles. An appropriate housing mix will 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.

A potential residential niche that could be appropriate for the station area would be senior housing and the continuum of care sometimes associated with senior housing.

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 Thornton Crossroads at 104th 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 neighborhoods, such as Riverdale Heights, located immediately south of Opportunity Site B.

Higher-density uses, such as apartments, should be established within closer proximity to the commuter rail station (including Opportunity Sites A, C and D and the eastern side of Opportunity Site B), 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, additional lower-density and/or auto-oriented uses should be discouraged within the station area.

5.2 Urban Design

U1: Develop Great Public Spaces

Colorado Marketplace and the surrounding commercial uses on all sides of the 104th Avenue/Colorado intersection already draw a large volume of residents from throughout the Thornton community. As even more people travel to this area to use commuter rail, this customer reach will only expand. This area therefore has the potential to become much more than a pass through for commuters or shoppers. It has the potential to become a destination in and of itself.

Creating a sense of place within the station area is very much tied to creating memorable public spaces. This is particularly important in the area adjacent to the station, where the Land Use Concepts in Opportunity Site A call for a mix of ground floor retail and second or third story residential uses fronting a pedestrian plaza. This plaza would provide an important link for residents, shoppers and visitors, becoming the major organizing feature and public space connecting the transit station to Colorado Marketplace and areas beyond. Plaza features could include outdoor seating, landscaping, public art and interactive play areas. The plaza should be lined with retail, restaurant or other active ground floor uses that are directly accessible to people walking to and from the station. Building facades should be oriented toward the plaza and entrances to the street, amenities such as seating can further enhance this active edge to create a welcoming environment.

An important element of creating a great public space is defining the entrance to this distinct area and ensuring it becomes a focal point of activity. This will be especially important at either end of the public plaza where pedestrians will enter from either Colorado Marketplace or the transit station. These should be distinct focal points, or landmarks, within the station area that are visible from Colorado Boulevard and 104th Avenue. Focal points can be created by a combination of architectural and design features, such as greater building heights (3-4 stories), corner building features, clock towers, and gateway arches.



Public art can help create memorable places and attractive environments for area residents and commuters.



Outdoor seating and plaza-facing retail establishments combine to create a welcoming environment.



Memorable transit sculptures create a focal point and establish an iconic place.



Active edges promote an engaging plaza or sidewalk environment.

U2: Create Active Edges

Creating a quality pedestrian environment is also an important component of creating a sense of place. This is particularly important along Colorado Boulevard and 104th Avenue, where the Land Use Concepts call for fronting these thoroughfares with a mix of retail and residential uses. Where practical, these streets 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.



Inviting streets feature landscaping, distinctive lighting and storefront windows.

This type of building orientation would be a departure from most of the existing development patterns within the station area, where streets are fronted with parking and buildings are set back from the road. An exception to this, and a good example of desired future development patterns, is the existing retail development located at the southeast corner of 104th Avenue and Steele Street. In this case, the buildings have been pushed up to line the street, creating an active edge, and parking is placed within the interior of the site.



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

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. This will be particularly important within Opportunity Site B where a new street network will be put in place at the time of development.

U3: Incorporate Multimodal Street Design

As Opportunity Sites within the station area develop and/or redevelop, the design of new streets and modifications to existing streets 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. Within Opportunity Site B, traffic-calming measures such as widened pedestrian bulb-outs at intersections and mid-block crossings are additional features that will further improve safety for pedestrians.

5.3 Mobility and Circulation

M1: Design Well-Connected Access Points and Streets

As the primary means of access and circulation for vehicular, bicycle, and pedestrian traffic, streets will serve an important function within the Thornton Crossroads at 104th Station Area. While much of the street network is already well established, there are opportunities to establish new street networks (within Opportunity Site B) and reconfigure internal auto access (within Opportunity Site A) to create a more organized, understandable, and walkable network of streets, sidewalks, and parking areas.

Within Opportunity Site B, relatively small blocks and well-connected streets will allow for autos, pedestrians, and bicyclists to use direct routes and provide multiple ways to get to and from any given point within the immediate neighborhood and beyond. As a rule of thumb, blocks within Opportunity Site B should be no more than a five-minute walk around their perimeters (approximately ¼ mile). This helps to promote a well-connected and walkable neighborhood that is comfortable, safe, and designed to a human scale.

Within Opportunity Site A, redesigning the current access and parking configuration at Colorado Marketplace to provide more direct north-south and east-west connections will establish a more understandable travel path and therefore more convenient connections to the station.

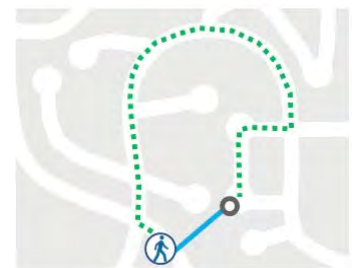
M2: Create Off-Street Trails and Open Space Linkages

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 station area is centrally located at the junction of a number of open space areas and trail networks, including the Riverdale and Grandview Ponds Open Space and Prairie Dog Habitat, and a number of regional and local trails that provides wildlife habitat, recreational amenities and neighborhood trail access. However, there are several missing links in the network.

The trails and open space network should be completed 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. This may mean the construction of new pedestrian and bicycle underpasses across major thoroughfares, as may be the case along Colorado Boulevard and 104th Avenue. As important, a conveniently located pedestrian and bicycle railroad track underpass will create a convenient east-west linkage through the station area, providing a more direct and appealing alternative to traveling out of direction to access destinations such as the transit station.



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



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.



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

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.



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

M4: Incorporate Alleys into New Residential Neighborhoods

An important consideration as Opportunity Site B develops is that 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.

5.4 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 Thornton Crossroads at 104th Station Area include the following:

P1: Reduce 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 should be reduced by 20-50% from the current City Code standards.

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.

5.5 Summary of Guiding Principles

Table 5.1 summarizes the guiding principles developed for the Thornton Crossroads at 104th Station Area and its related development.

Table 5.1: Summary of Guiding Principles

Category	Guiding Principles	Key Features
Land Use	L1: Create a Mix of Uses	<ul style="list-style-type: none"> • Focus on adding residential land uses • Promote community-scaled commercial uses at targeted locations • Mix both horizontally and vertically • Ensure flexibility to adapt to changing market needs
	L2: Integrate Mixed-Income Housing	<ul style="list-style-type: none"> • Provide a choice of residential size and price points • Cater to people at all stages of life, particularly seniors • Ensure good design of housing at all levels
	L3: Create a Gradient of Densities	<ul style="list-style-type: none"> • Focus highest density around transit station • Reduce density as development approaches established neighborhoods
Urban Design	U1: Develop Great Public Spaces	<ul style="list-style-type: none"> • Design a distinctive plaza fronted with active retail and restaurant spaces • Provide appealing amenities
	U2: Create Active Edges	<ul style="list-style-type: none"> • 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
	U3: Incorporate Multimodal Street Design	<ul style="list-style-type: none"> • Give priority to pedestrians and bicyclists where possible • Use effective traffic calming measures to improve pedestrian safety
Mobility and Circulation	M1: Design Well-Connected Access Points and Streets	<ul style="list-style-type: none"> • Design small blocks • Focus on human-scale grid system to provide direct routes to destinations

Category	Guiding Principles	Key Features
	M2: Create Off-Street Trails and Open Space Linkages	<ul style="list-style-type: none"> • Provide good connections to existing facilities • Integrate facilities into design of new development
	M3: Utilize Good Signage and Wayfinding	<ul style="list-style-type: none"> • 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
	M4: Incorporate Alleys into Neighborhoods	<ul style="list-style-type: none"> • 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: Reduce Parking Ratios	<ul style="list-style-type: none"> • Reduce required parking by 20-50% of current City Code standards
	P2: Utilize Effective Parking Minimums and Maximums	<ul style="list-style-type: none"> • Use parking maximums when possible to discourage developers from providing too much parking
	P3: Utilize Shared Parking Where Possible	<ul style="list-style-type: none"> • Provide proper balance of temporal use of parking • Consider sharing transit parking
	P4: Unbundle Parking from Development	<ul style="list-style-type: none"> • Give residents the choice to use parking if needed • Encourage use of alternative modes
	P5: Utilize Paid Parking if Appropriate	<ul style="list-style-type: none"> • Regulate usage and provide a potential revenue source, if needed • Coordinate with neighborhood parking strategy

5.6 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 Thornton Crossroads at 104th 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.

Arvada Ridge Station (Arvada, CO)

The Arvada Ridge Station is a RTD Gold Line commuter rail station on Ridge Road between Kipling Parkway and Miller Street. The station area is currently a mix of vacant land, single-family residential development and recently built apartments (Arvada Station).

Station Area Plan and Results

In 2003, the Arvada City Council approved an urban renewal plan to revitalize the area known as “Ralston Fields,” including the area ultimately proposed as the location of the Gold Line station, including the former Ridge Home, an abandoned hospital, with part of the site now consisting of the Arvada campus of Red Rocks Community College. Overall guidance on the site’s development came from the City’s Arvada Transit Station Framework Plan (2007), shown in Figure 5.1. The concept plan assumes the highest density development adjacent to the rail station and Kipling, consisting primarily of commercial and retail with residential/office above, medium density residential (30-60 units per acre) on either side of the station, and moderate density residential (16 units per acre) on the western edge of the site as a transition zone to existing residential.

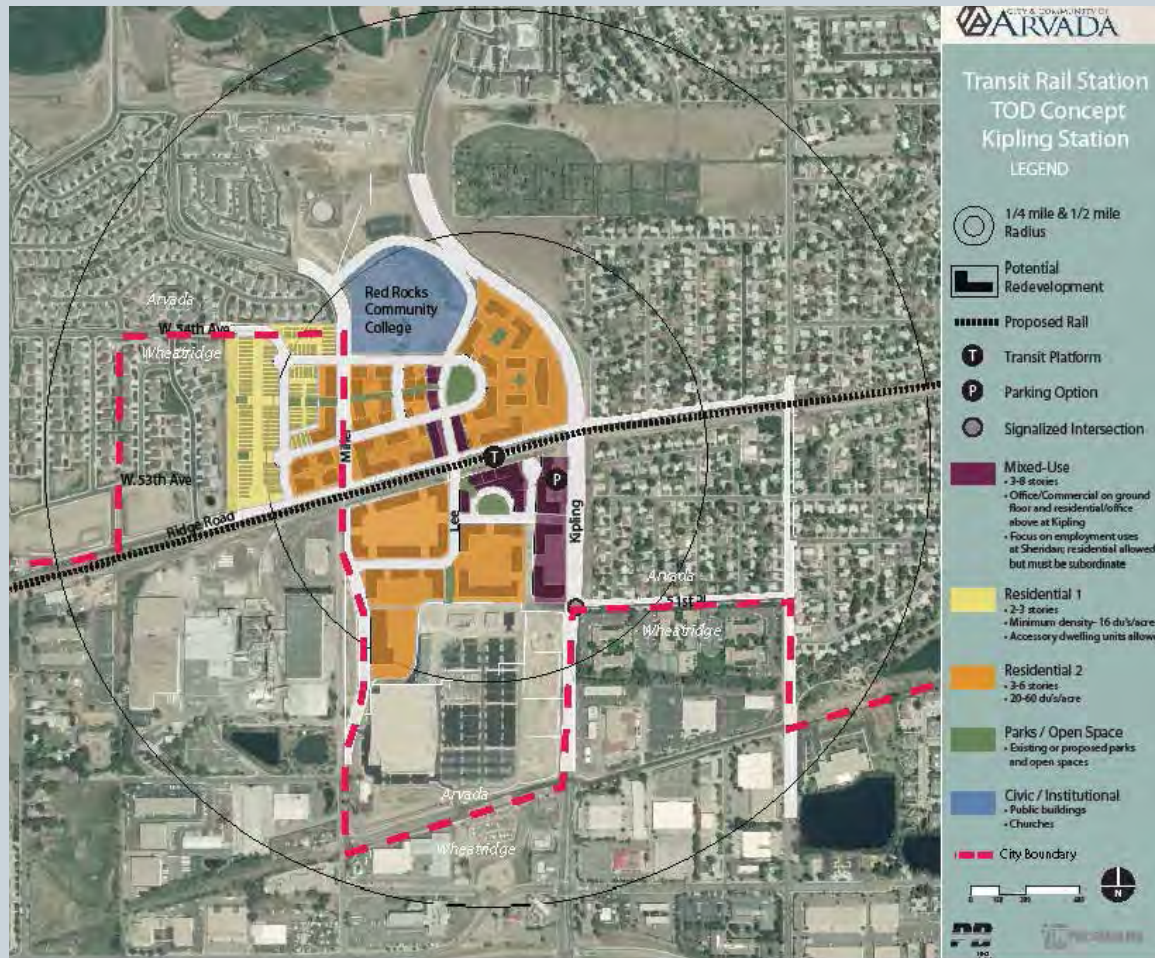
According to the City of Arvada website, the area is “currently being transformed into a transit-oriented, mixed-use retail and residential community.” The 68-acre site is being developed in three phases:

- Phase One: Consists of the Arvada Ridge Market Place, a 260,000 square foot retail development anchored by a Super Target on the south end of the development area that opened in 2005.
- Phase Two: Includes a 380-unit apartment neighborhood that opened in 2013 (Arvada Station). The 15-acre site is located just north of the Super Target Center and near the Gold Line station.
- Phase Three: Additional mixed-use retail and residential development.

Lessons Learned for Thornton

- Build on regional retail and a regional destination: plans for the station area recognize the synergy that can be achieved with well-designed regional retail uses adjacent to a transit station.
- Incorporate community uses: by incorporating civic and institutional uses - such as the community college - into the station plan, the area becomes more of a community destination.
- Vary density depending on distance from rail station: transitioning to lower densities adjacent to single-family areas buffers more intense uses from established neighborhoods.

Figure 5.1: Arvada Ridge Station Area Plan Concept



Source: City of Arvada

Charlotte Tyvola and Archdale Stations (Charlotte, NC)

The Tyvola and Archdale Stations are located on the City of Charlotte's light rail line southwest of downtown Charlotte. The Tyvola station is near the intersection of major thoroughfares and is surrounded by a mall, a mix of office, commercial and strip retail, residential areas and light industrial uses. The Archdale station is the next station to the south and is more residential in nature (east and west of the station, a mixture of apartments, townhomes, and single-family homes), with community-serving retail and some industrial uses.

Station Area Plans and Results

The two stations were the subject of a joint station area plan adopted by the Charlotte City Council in 2008. The vision for the Tyvola station was to transform the area around the station into an employment and residentially-based village, as shown in Figure 5.2. It includes redevelopment of properties closest to the station with ground-floor retail and office and residential above. It also assumes the redevelopment of Tyvola Mall, with redevelopment of apartments in the area to form a buffer to residential in the east. The plan also calls for the intensification of existing office uses.

The plan for the Archdale station area (shown in Figure 5.3) proposes a transformation into a pedestrian-oriented mixed-use transit village to complement the surrounding residential areas. It assumes intensification of neighborhood retail and the introduction of a new street network where appropriate to improve connectivity, with the major emphasis on changing the nature of the automobile-oriented development along South Boulevard into more of a pedestrian-friendly environment.

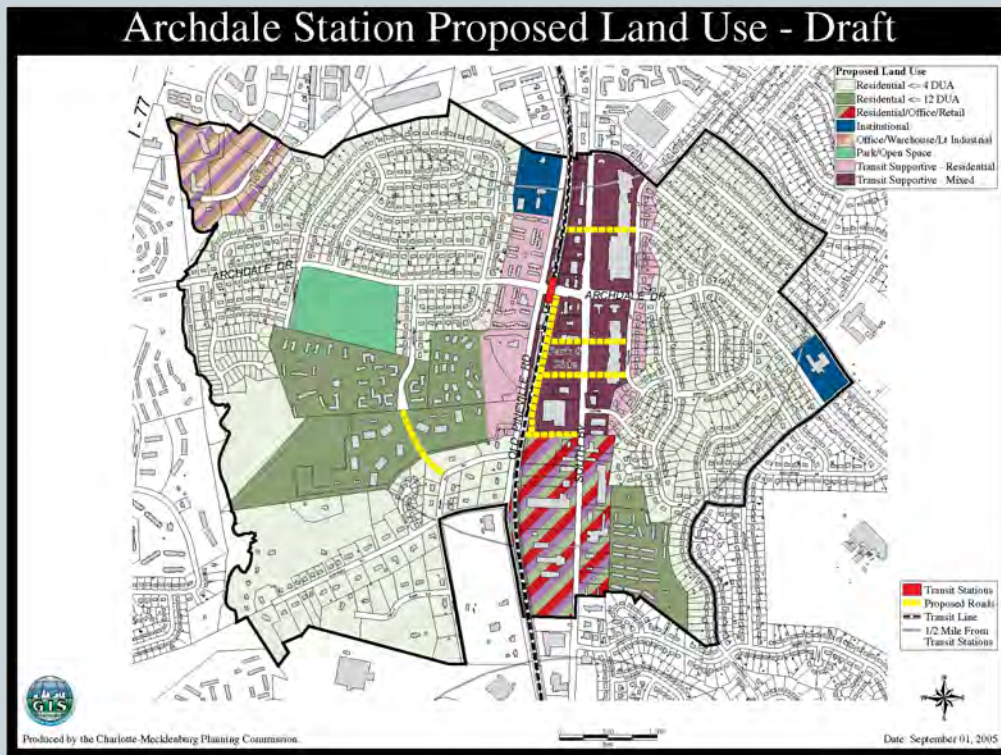
Since adoption of the plan, the City of Charlotte has taken a pro-active approach to promoting development in the two station areas by:

- Issuing bonds for \$50 million worth of infrastructure improvements in the area;
- Adopting zoning changes to promote TOD; and
- Engaging the City's Economic Development Office to promote the sites for redevelopment.

Lessons Learned for Thornton

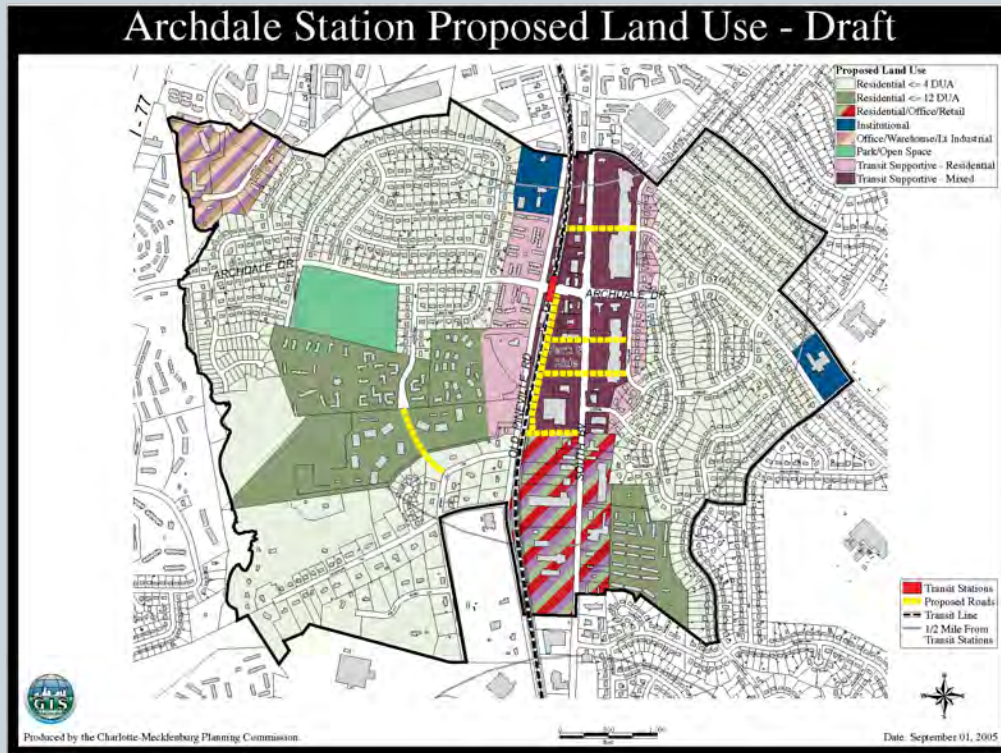
- Long term vision for shopping center redevelopment: while still a relatively healthy retail center, the city recognizes that a long term vision for redevelopment of the Tyvola Mall (similar in scale to Colorado Marketplace) would include a mix of higher intensity uses.
- Transition zones for housing buffers: the plan calls for transitional density in close proximity to established residential neighborhoods.
- Intensification of commercial and office uses: the station area is currently an active auto-oriented commercial destination that has the opportunity to intensify and diversify over time.
- Active promotion by City government: the city is pursuing a combination of public investment, marketing and regulatory changes to advance the goals of the station area plans.

Figure 5.2: Tyvola Station Land Use Concept Plan



Source: City of Charlotte

Figure 5.3: Archdale Station Land Use Concept Plan



Source: City of Charlotte

Chapter 6.0 Implementation

The Thornton Crossroads at 104th Station Area Master Plan (STAMP) establishes a vision for the future of the station area. To achieve that vision – as conceptualized in the Land Use Concepts planned for each Opportunity Site – 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 the STAMP.

Implementation strategies are organized by the following categories in Tables 6.1 through 6.6:

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

Tables 6.1 through 6.6 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 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 6.1: Plan Administration Implementation Strategies

No	Strategy	Responsibility	Timeframe
Plan Administration			
★ PA-1 ★	Adopt the Thornton Crossroads at 104th 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 STAMP 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 Thornton Crossroads at 104th 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	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	<p>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 and Current Planning, Economic Development, Neighborhood Services and Development Engineering – for the regulatory, policy, and entitlement requirements associated with redevelopment. A marketing and communications campaign to attract potential developers and investors could include the following strategies:</p> <ul style="list-style-type: none"> • Business outreach (community leader and business briefings); • Public information program (facts sheets and briefing folders); • Marketing outreach (a “developer kit” with site information about the area’s development potential); and • Media/public relations (local media pitches). 	City Development, Economic Development, Communications	Ongoing
PA-6	<p>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.</p>	City Development	Ongoing

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

Table 6.2: Land Use and Design Implementation Strategies

No	Strategy	Responsibility	Timeframe
Land Use and Design			
LU-1	Opportunity Site A. Create an overlay zoning district that permits residential uses with density and height ranges recommended for Opportunity Site A in the STAMP. Proposals deemed to be in substantial compliance with STAMP land use concepts and Guiding Principles may be eligible for administrative review.	City Council, City Development	Short
LU-2	Rezoning of Opportunity Site B. At the time of the STAMP adoption, it is understood that the Mapleton School District is actively pursuing purchase of all or part of Opportunity Site B. The City should work with the School District to encourage development of the remainder of the site that is consistent with the land use concept for Opportunity Site B and STAMP Guiding Principles. This may include rezoning.	City Council, City Development	Short
LU-3	Rezoning of Opportunity Site C. Pursue rezoning (City-initiated if necessary) of Opportunity Site C at the southeast corner of 104th Avenue and Colorado Boulevard from Multifamily Zoning to a new zone category that allows between 20 and 35 multifamily dwelling units per acre and/or commercial mixed-use with multifamily above.	City Council, City Development	Short
LU-4	Rezoning of Opportunity Site D. Assess current entitlements to ensure the City allows flexibility regarding allowable uses on Opportunity Site D.	City Council, City Development	Short
LU-5	Design standards. Develop Design Standards as part of the new TOD overlay zoning district that are consistent with the Guiding Principles described in Chapter 5. If development is proposed prior to rezoning occurring, the developer must establish design standards consistent with Chapter 5. Design Standards should be specific for the Opportunity Site 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

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

No	Strategy	Responsibility	Timeframe
Land Use and Design			
LU-6	<p>Streetscape Design Standards. Develop Streetscape Design Standards as part of a new TOD overlay zoning district 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 5, 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.</p>	City Development	Short
LU-7	<p>Parking Standards and Management. Develop Parking Standards as part of a new TOD overlay zoning district for the station area. The parking standards will need to 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 develop a comprehensive parking management plan for the station area.</p>	City Development	Short
LU-8	<p>Settler's Chase and Presidential Ridge. Monitor progress of development and ensure compatibility with planned pedestrian and bicycle connections to the commuter rail station and surrounding neighborhoods. The City expects that the buildout of Settler's Chase with additional multifamily units and the development of Presidential Ridge with multifamily units will take place in the near future. The City should closely monitor progress and consider allowing additional density in close proximity to the station, as appropriate.</p>	City Development	Ongoing

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

Table 6.3: Transportation Implementation Strategies

No	Strategy	Responsibility	Timeframe
Transportation			
★ T-1 ★	<p>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 Thornton Crossroads at 104th 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.</p>	Infrastructure, City Development, RTD, RRP	Short to Medium
★ T-2 ★	<p>Prioritize Pedestrian Routes to Transit. Prioritize pedestrian routes that provide direct, safe and convenient travel from surrounding neighborhoods into the station area and through the station area to the transit platform. This may be accomplished through the next Parks and Open Space Plan update. Routes should include on-street and off-street facilities, including pedestrian connections to surrounding neighborhoods. These routes will be installed as new development occurs.</p>	Community Services, Infrastructure	Short to Medium
T-3	<p>Monitor parking. Consider programs to monitor parking in the station area and mitigate overflow parking impacts, as needed. Strategies may include neighborhood parking permits, shared parking and education campaigns to inform commuters of alternative travel modes.</p>	Community Services, Infrastructure	Short to Medium

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

Table 6.4: Infrastructure Implementation Strategies

No	Strategy	Responsibility	Timeframe
Infrastructure			
★ I-1 ★	<p>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. 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 the station area is a unique place. Betterment projects could include higher quality design materials and features at the rail platform and parking structure, wayfinding and signage, and public art at the platform and on the transit plaza, chosen and designed in a cohesive and comprehensive manner.</p>	City Development, Community Services, Infrastructure	Short
I-2	<p>Pedestrian Grade Separated Crossings. Upgrade on-street pedestrian crossing infrastructure on Colorado Boulevard or 104th Avenue with striping, pavement treatments, median refuges and enhanced pedestrian signals to create more inviting and safer crossings. Alternatively, design and construct grade-separated pedestrian and bicycle crossings of 104th Avenue and Colorado Boulevard in conjunction with the opening of the Thornton Crossroads at 104th Station. Improvements should improve safety for all modes of travel and encourage pedestrian and bicycle activity to and from the station across major arterials that currently inhibit travel via foot or bicycle.</p>	Infrastructure, City Development	Short to Medium

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

Table 6.5: Financing Implementation Strategies

No	Strategy	Responsibility	Timeframe
Financing			
F-1	<p>Prioritized TOD Projects. Based upon the prioritization of Capital Improvement Plan projects within the station area, strategically pursue public-private partnerships to pursue catalyst projects and infrastructure improvements, particularly related to public spaces and enhanced pedestrian, bicycle and intersection facilities.</p>	City Development, Infrastructure, Community Services	Ongoing
F-2	<p>Work with Property Owners. Based upon the STAMP, work with private property owners on potential redevelopment of strategic parcels. When it is appropriate, consider potential financing tools include Urban Renewal, Tax Increment Financing, Special Districts, Public Improvement fees, development incentives as described below, and additional City incentives, and other financing mechanisms to facilitate redevelopment.</p>	Economic Development, City Development	Short to Medium
F-3	<p>Greater Outdoor Colorado Funds or Other Available Grant Funding Sources. Explore the use of Greater Outdoor Colorado (GoCO) funds and other available funding sources to pay for trails and other pedestrian and bicycle infrastructure improvements in the station area.</p>	Community Services	Ongoing
F-4	<p>Development Incentives. The City should consider various incentive tools for developers who propose development consistent with the Land Use Concepts and Guiding Principles set forth in the approved STAMP, including but not limited to:</p> <ul style="list-style-type: none"> • Rebate of development fees. • Rebate of a portion of incremental 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. • New income tax credits. • Low income housing credits. 	City Development, Management Services, Economic Development	Ongoing

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

Table 6.6: 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 Engagement. As needed, meet with station area property owners to work towards developing the Land Use Concepts as envisioned in the STAMP.	City Development	As needed

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





Thornton Crossroads at 104th Station Market Study

Presented to:

City of Thornton, Colorado

December 4, 2014

Prepared by:



1807 South Pearl Street
Denver, CO 80210
720.244.7678 t
720.228.2211 f

Table of Contents

I. Executive Summary	4
II. Introduction	7
III. Economic and Demographic Framework	9
IV. Residential Market Analysis	21
V. Retail Market Analysis	45
VI. Office and Jobs Analysis	57
VII. Development Potentials.....	62

Tables

Table 1 Thornton Crossroads at 104th Station Area Future Demand by Land Use Category.....	6
Table 2 Denver Metro Population Trends, 1990-2010	9
Table 3 Employment in Adams County, 2003-2012.....	12
Table 4 Employment in the City of Thornton, Adams County, and Denver MSA, 2012	13
Table 5 Population and Households in the Thornton Crossroads at 104th Station Area Market Areas, 2014	15
Table 6 Median Ages in the Thornton Crossroads at 104th Station Market Areas, 2014	16
Table 7 Owner vs. Renter Occupied Housing in the Thornton Crossroads at 104th Station Market Areas, 2014.....	17
Table 8 Median and Average Household Incomes in the Thornton Crossroads at 104th Station Market Areas, 2014	18
Table 9 Percentage Population by Occupation in the Thornton Crossroads at 104th Station Market Areas, 2014	19
Table 10 Race and Ethnicity in the Thornton Crossroads at 104th Station Market Areas, 2014.....	20
Table 11 Residential Building Permits, 2006-2012	21
Table 12 Planned Residential Projects Key.....	22
Table 13 Population and Households Forecasts for Thornton Crossroads at 104th Station Market Area, 2014-2035	28
Table 14 Rental Apartments	30
Table 15 Unit Mixes at Representative Apartments	31
Table 16 Unit Sizes at Representative Apartments.....	31
Table 17 Unit Rent Ranges.....	32
Table 18 Average Rents per Square Foot	33
Table 19 Residential Rental Demand	34
Table 20 Thornton Crossroads at 104th Station Area Multifamily Rental Demand.....	35
Table 21 Key for Residential Subdivisions	36
Table 22 Thornton Crossroads at 104th Station Area Subdivision Sales, 2013	38
Table 23 Residential Owner Demand Assumptions	39
Table 24 Thornton Crossroads at 104th Station Area Residential Owner Demand.....	40
Table 25 Senior Housing and Services	41
Table 26 Potential Demand for Senior Apartment Units	42
Table 27 Potential Demand for Independent and Assisted Living Units.....	43
Table 28 Total Household Incomes, 2014-2035	48
Table 29 Estimate of 2014 and 2035 Retail Opportunities	49
Table 30 Unmet Retail Demand by 2035	50
Table 31 Thornton Crossroads at 104th Station Area Retail Demand, 2014-2035	51
Table 32 Regional Hotel Locations.....	53
Table 33 Office Development Trends	58
Table 34 Potential Office Space Demand in Regional Market Area, 2010-2035.....	60
Table 35 Thornton Crossroads at 104th Station Area Future Demand by Land Use Category	62

Figures

Figure 1 Thornton Crossroads at 104th Station Area	7
Figure 2 Adams County Employment, 2003-2012	10
Figure 3 Thornton Crossroads at 104th Station Primary & Regional Market Areas	14
Figure 4 Household Sizes in the Thornton Crossroads at 104 th Station Market Areas, 2014	15
Figure 5 Age Breakdowns in the Thornton Crossroads at 104th Station Market Areas, 2014	16
Figure 6 Household Income Breakdowns in the Thornton Crossroads at 104th Station Market Areas, 2014	17
Figure 7 Educational Attainment in the Thornton Crossroads at 104th Station Market Areas, 2014	18
Figure 8 Vehicle Ownership in the Thornton Crossroads at 104th Station Market Areas, 2014	19
Figure 9 Residential Projects in the Planning Pipeline	22
Figure 10 North Metro Rail Line Stations.....	23
Figure 11 Commerce City Station Area Plan	24
Figure 12 Eastlake Station TOD Master Plan.....	25
Figure 13 North End Station TOD	27
Figure 14 Rental Apartments in the Thornton Crossroads at 104th Station Area	30
Figure 15 Active Residential Subdivisions in the Thornton Crossroads at 104th Station Area Market Area, 2014.....	36
Figure 16 2013 Single Family Residential Sales Prices.....	37
Figure 17 Senior Housing and Services.....	41
Figure 18 Regional Sales Trends, 2005-2012.....	45
Figure 19 Retail in the Thornton Crossroads at 104th Station Area	46
Figure 20 Location of Area Movie Theaters	52
Figure 21 Hotels in Regional Area.....	53
Figure 22 Thornton Crossroads at 104th Station Area Office	57
Figure 23 Absorption, Deliveries & Vacancies in the 104 th Station Avenue Regional Market Area	59

I. EXECUTIVE SUMMARY

Stear Davies Gleave with ArLand Land Use Economics (ArLand) was retained by the City of Thornton in 2013 and 2014 to prepare a Station Area Master Plan for its Thornton Crossroads at 104th 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 station area plan.

Project Scope

The market analysis provides an analysis of the potential demand for residential, office, and retail uses near the station area taking into consideration local market trends, feedback from area real estate experts, developers, brokers, property owners, and competitive development projects. 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.

- The RTD Board recently approved a contract award to Regional Rail Partners to design and build the North Metro Commuter Rail Line to 124th Avenue. The Regional Rail Partners 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 Thornton Crossroads at 104th Station.
- Colorado Marketplace, which is anchored by an Albertson's grocery store, is directly north of the proposed station. There are commercial services found on all four corners of the 104th Avenue and Colorado Boulevard intersection. There are a few scattered sites with infill potential throughout the ½ mile radius. There is also an approximately 70 acre site at Colorado Boulevard and Steele Street ½ mile west of the station area that is available for development. And, there are several development parcels immediate south of the station with proposals for up to 300 residential rental units focusing on young professionals and families.
- 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.
- Parts of the City are relatively new and reflect recent suburban development patterns. Much of the development near the Thornton Crossroads at 104th Station was built in the 1990's and early 2000's and there are no market or development pressures to redevelop at this point in time. Occupancies at the commercial centers are very high (98%), and the City is benefitting from property and sales tax revenues.
- There is residential demand for a range of 600 to 1,000 rental units both near the station as well as on infill parcels in the ½ mile radius around the station area. This would also include senior apartments. The target market would pay \$1.20 per square foot for residential rentals, substantially lower than what downtown Denver residents pay at over \$2.00 per square foot.

For locations closer to the station, young urban professionals could be attracted to the area because of easy accessibility to downtown, cheaper rents and bigger units.

- The project area could accommodate 150-200 residential ownership units, including condos and townhomes. There would also be potential demand for patio homes and single family detached units of 380-450 units. These units would be located further from the station within the ½ mile radius.
- There is demand for senior continuum of care services from senior apartments to assisted living. There appears to be demand for 200 independent and assisted living units which might be more appropriate at the currently vacant 70 acre property located at 104th Avenue and Steele Street, within the ½ mile radius of the station. The market demand is not very deep and should be tested prior to any development in the area. There are a lot of services in the area, and it is easy to overstate the demand for these types of units, given the desire by most people to stay in their current homes as long as possible while they age. However, as the population increases and ages, the potential demand would likely deepen.
- 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 first-time and lower-income homebuyers.
- While the Colorado Marketplace does well, it struggles to compete with other parts of the City. There is, however, demand for up to 50,000 square feet of additional retail services, primarily restaurant and eating locations, most of which would be on infill parcels along Colorado Boulevard or 104th Avenue in pad site configurations.
- Long term, there is a desire to create a regional retail and commercial services center near the station area. Currently, most of the regional retail and entertainment options are centered along I-25 and major corridors. Several case studies were presented that showed how older commercial centers have transitioned over time. In the case of the Thornton Crossroads at 104th Station Area, that potential becomes more of a reality, once the rail corridor is constructed and population and employment in the larger regional area increases.
- While there is demand for office related uses in the broader regional market area, larger office users desire to be closer to I-25. However, there may be smaller office space users who would desire to be closer to the station. This use becomes more viable once the rail line has been constructed.

Table 1 summarizes the development potential at the Thornton Crossroads at 104th Station Area within the 1/2 mile radius.

Table 1
Thornton Crossroads at 104th Station Area Future Demand by Land Use Category

Use	Units / SF	Niches
Residential	600-1,000 units	Market Rate multifamily (targeting middle income renters with incomes of \$50,000 to \$75,000 with rents about \$1.20 / square foot) and senior apartments
	150-200 units	Condos/Townhomes
	380-450 units	Single Family Detached / Patio homes
	200 units	Senior Continuum of Care
Retail and Commercial Uses	up to 50,000 sf	Fill in commercial pad sites along 104th and Colorado. Most demand for restaurant and eating / drinking uses. No current demand for movie theaters and hotels. Long term potential use; would need to be reexamined.
Office	up to 50,000 sf	Most users want to be on I-25; potential for "one off" or niche office uses

Source: ArLand

II. INTRODUCTION

Stear 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 Thornton Crossroads at 104th 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

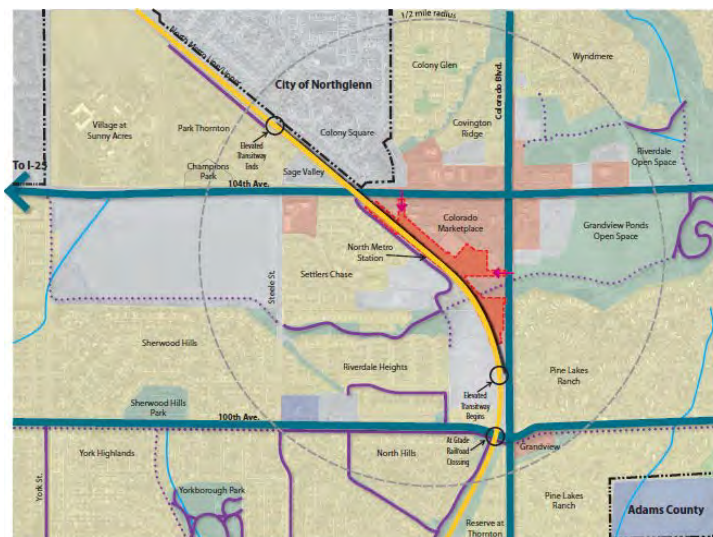
The RTD Fastracks project is a \$6.5 billion expansion of the regional transit system in the Denver metro region approved by Denver metro residents in 2004. The project proposes to add six additional rail transit lines, bus routes, approximately 70 transit stations, and associated parking. The North 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 Highway 7 in Adams County.

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

Current Conditions

The broader area around the Thornton Crossroads at 104th Station is generally characterized by suburban residential subdivisions and commercial centers built in the 1990's and 2000's. The Colorado Marketplace, an Albertson's-anchored commercial center, is directly north of the station (Figure 1).

Figure 1
Thornton Crossroads at 104th Station Area



Source: Leese and Associates

There are commercial services found on all four corners of the 104th Avenue and Colorado Boulevard intersection. There are a few scattered sites with infill potential in the area. There is also a 70 acre site at Colorado Boulevard and Steele Street that is available for development approximately ½ mile west of the station area. And, there are several development parcels immediately south of the station with current development plans for apartments.

The station area planning effort and this market study is intended to set the orderly framework for future redevelopment for this area. The development that is in place was built fairly recently and is operating successfully. However, because the commuter rail is being built in the foreseeable future, it is imperative to establish a plan and framework for future development and redevelopment at this station area.

Market Study Scope

The market study's scope examines local and regional economic and demographic trends and projections impacting the Thornton Crossroads at 104th Station Area and assesses the long term development potential. 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 Thornton Crossroads at 104th Station Area.
- *Residential Market Analysis* provides housing unit forecasts and discusses the current and future residential market potential appropriate for the station area. It also examines the senior housing market and its appropriateness for the station area.
- *Retail Market Analysis* examines the retail market and potential retail uses appropriate for the station area. It also examines movie theaters and lodging as long term future land uses.
- *Office Analysis* discusses the office market in the area.
- *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%

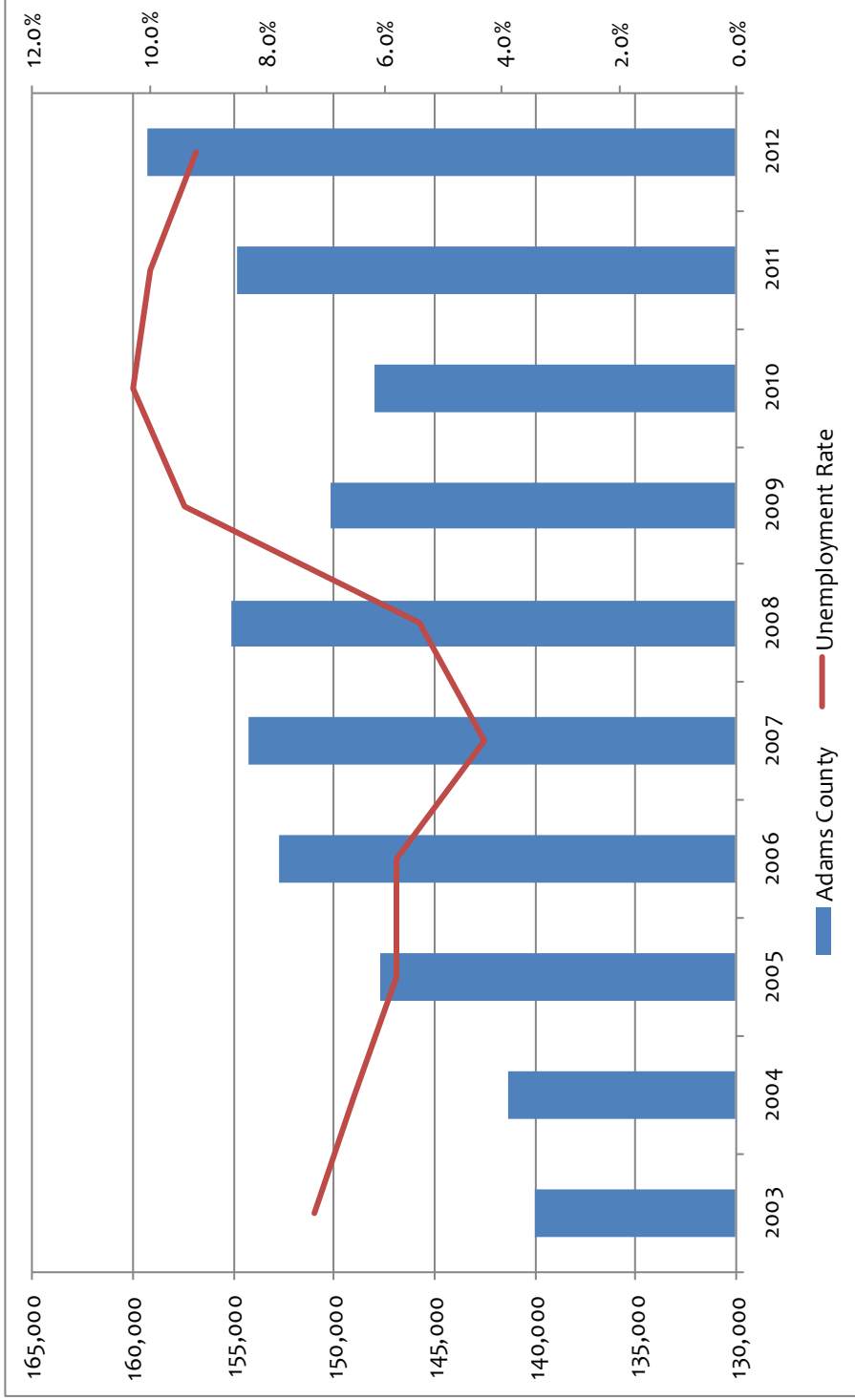
Source: US Census, ArLand

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 Manufacturing 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 are 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 county 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		Change 2003- 2012		CAGR 2003- 2012	
							Employment					
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, ArLan

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

Industry	City of Thornton		Adams County		Denver MSA		Location Quotient vs. MSA	
	City of Thornton	% of Total	Adams County	% of Total	Denver MSA	Total	% of Total	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

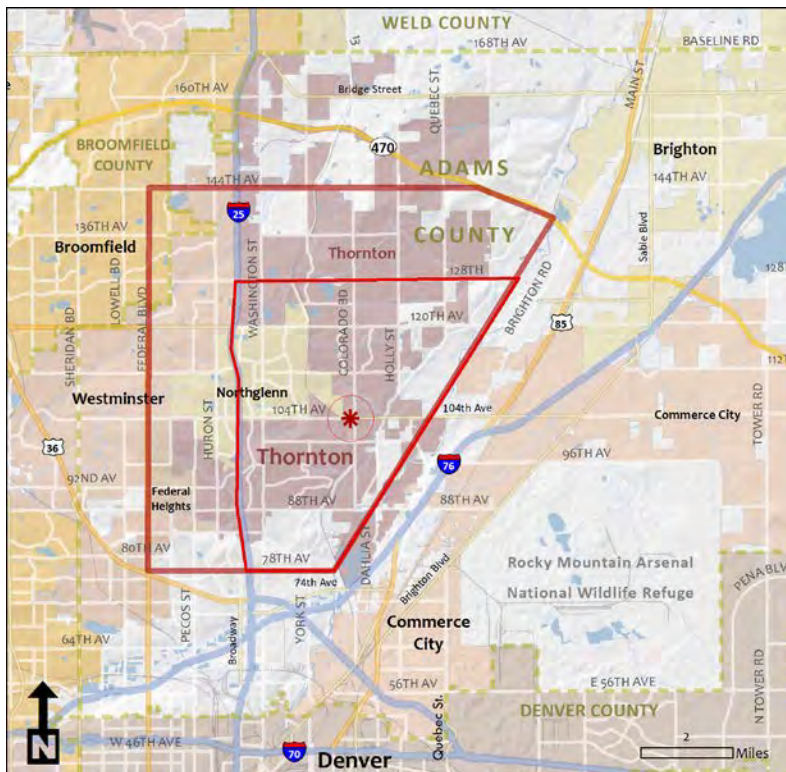
3.1 Current Demographic Characteristics

The City of Thornton is located in Adams County, approximately 10 miles north of Denver. For purposes of the residential and commercial analysis, Primary and Regional Market Areas were designated for the Thornton Crossroads at 104th Station Area (Figure 3).

The market areas are drawn to reflect the potentially broad regional nature of the station area. The Primary Market Area is bordered by I-25 to the west and most of the developed area along the eastern boundary of Thornton. 128th Avenue is its northern boundary. It extends through South Thornton to the south. It reflects the locations of the most competitive and comparable residential projects to a future project at the Thornton Crossroads at 104th Station Area.

The Regional Market Area extends up to 144th Avenue. It is bordered by Federal Boulevard to the west, South Thornton to the south and the developed area of Thornton to the east. Most of the Regional Market Area is in Adams County, although a small portion lies within Broomfield County. Because of the Thornton Crossroads at 104th Station is located along a major highway corridor, it has the potential to serve a much broader market area, particularly for commercial services.

Figure 3
Thornton Crossroads at 104th Station Primary & Regional Market Areas



Source: ArLand

Market Area Demographic Characteristics

Table 5 shows that there are over 96,000 people in the Primary Market Area in over 33,500 households and over twice that many people (over 229,500) in the Regional Market Area in over 82,500 households. The Primary Market Area contains approximately 75% of the City of Thornton's population and households and 21% of Adams County's population and households. The Regional Market Area is a very broad area and has nearly twice the population as the City of Thornton.

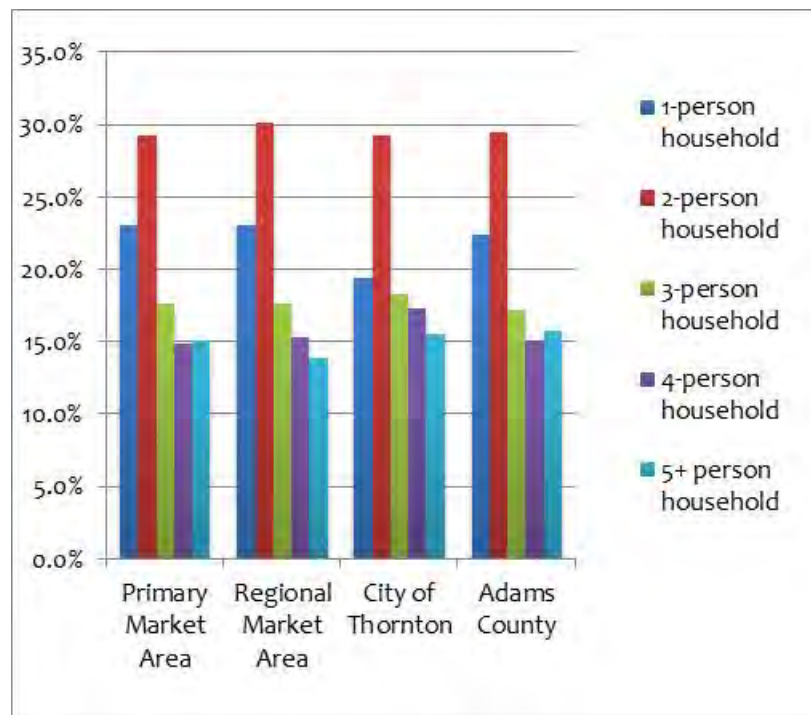
Table 5
Population and Households in the Thornton Crossroads at 104th Station Area Market Areas, 2014

	Primary Market Area	Regional Market Area	City of Thornton	Adams County
Persons	96,107	229,630	129,805	470,862
Households	33,720	82,632	44,440	163,457
Persons / Households	2.85	2.77	2.91	2.86

Source: Claritas, ArLand

On average, there are 2.85 persons per household in the Primary Market Area, which is higher than the Regional Market Area and slightly lower than the City of Thornton and Adams County.

Figure 4
Household Sizes in the Thornton Crossroads at 104th Station Market Areas, 2014



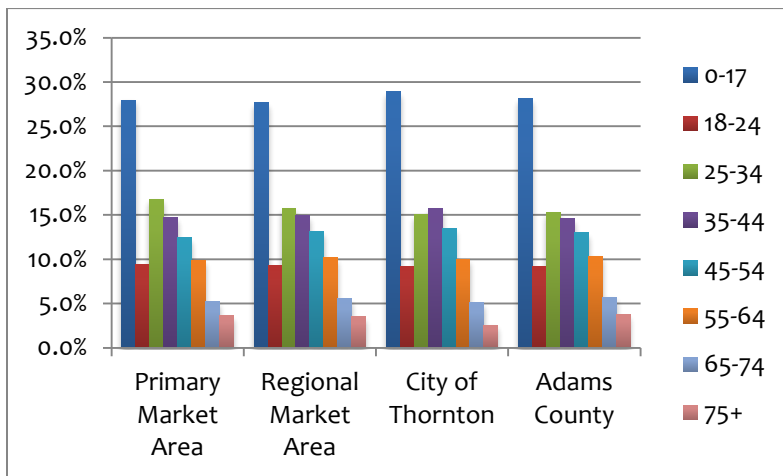
Source: Claritas, ArLand

Figure 4 shows that the Primary Market Area has a similar makeup of household sizes when compared to the Regional Market Area, City of Thornton and Adams County. The Primary Market

Area has slightly higher percentages of 1-person households (23.1%) and slightly lower percentages of 4-person households (14.9%) than the City of Thornton. Households comprised of one or two people account for approximately half of all households in the market areas examined.

As Figure 5 depicts, age breakdowns are very similar across all of the market areas. In all study areas, the greatest percentage of the population—between 27.7% and 29%--is below the age of 17. The smallest percentages of the population fall into the 18-24 and over 55 age categories. Table 6 shows that the median age is between 32.5 and 33.3 for the market areas, with the Primary Market Area having the lowest median age.

Figure 5
Age Breakdowns in the Thornton Crossroads at 104th Station Market Areas, 2014



Source: Claritas, ArLand

Table 6
Median Ages in the Thornton Crossroads at 104th Station Market Areas, 2014

	Median Age
Primary Market Area	32.5
Regional Market Area	33.3
City of Thornton	32.9
Adams County	33.3

Source: Claritas, ArLand

Table 7 indicates that most homes are owner-occupied, however, the City has a much higher owner occupancy share than the Primary and Regional Market Areas and Adams County.

Table 7
Owner vs. Renter Occupied Housing in the Thornton Crossroads at 104th Station Market Areas, 2014

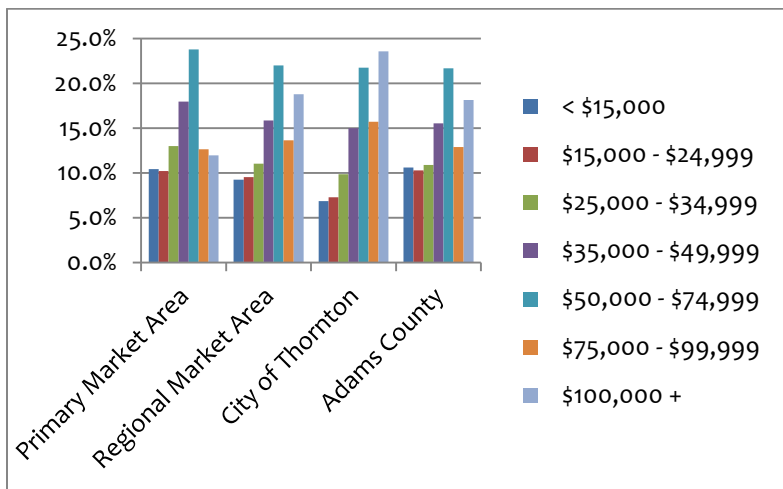
	Owner Occupied	Renter Occupied
Primary Market Area	62.8%	37.2%
Regional Market Area	66.3%	33.7%
City of Thornton	71.3%	28.7%
Adams County	65.8%	34.2%

Source: Claritas, ArLand

Household income breakdowns are shown in Figure 6 and median and average household incomes are shown in Table 8. Households outside the Primary Market Area are wealthier than households within the Primary Market Area.

Twelve percent (12%) of people earn incomes over \$100,000 in the Primary Market Area, as compared to between 18.2% and 23.5% in the other market areas. The highest percentage of households for the Primary Market Area, Regional Market Area and Adams County fall into the \$50,000 to \$74,999 range, while the highest percentage of households for the City of Thornton fall into the over \$100,000 category.

Figure 6
Household Income Breakdowns in the Thornton Crossroads at 104th Station Market Areas, 2014



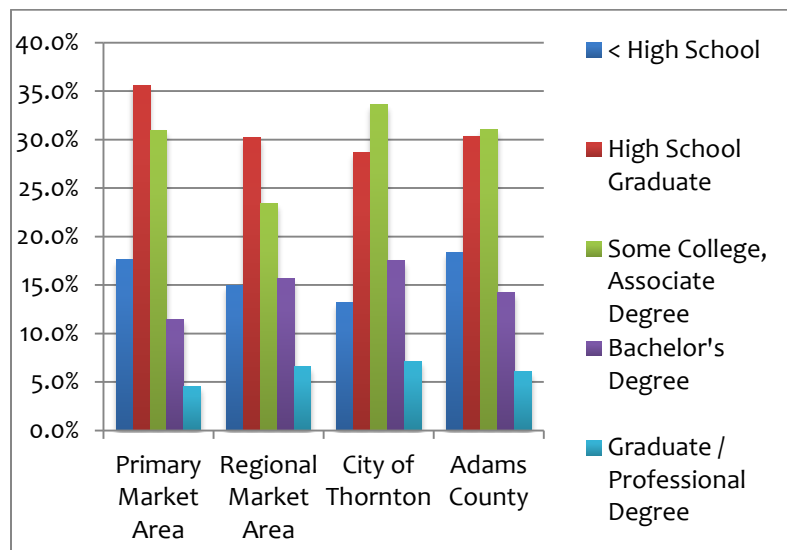
Source: Claritas, ArLand

Table 8
Median and Average Household Incomes in the Thornton Crossroads at 104th Station Market Areas, 2014

	Median Household Income	Average Household Income
Primary Market Area	\$48,646	\$56,534
Regional Market Area	\$54,966	\$65,252
City of Thornton	\$62,641	\$72,125
Adams County	\$53,117	\$64,107

Source: Claritas, ArLand

Figure 7
Educational Attainment in the Thornton Crossroads at 104th Station Market Areas, 2014

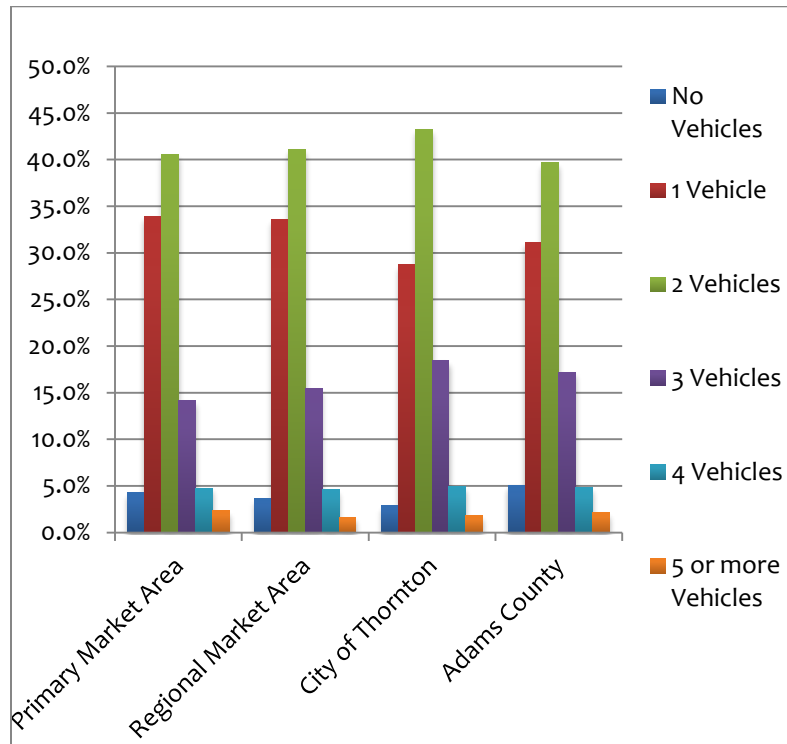


Source: Claritas, ArLand

Figure 7 shows that for the Primary and Regional Market Areas, the highest percentages of residents have graduated from high school. For the City of Thornton and Adams County, the highest percentages of residents have some college or an associated degree. Sixteen percent (16%) of Primary Market Area residents have a Bachelor's degree or higher, which is 4.3% to 8.7% lower than the other market areas.

Figure 8 shows that vehicle ownership is comparable across all market areas. Around 30% of households own 1 vehicle and 40% of households own 2 vehicles in all market areas—the categories containing the highest percentages of the populations. 4.3% of households in the Primary Market Area and 3.6% of households in the Regional Market Area do not own a vehicle, compared to 3% in City of Thornton and 5% in Adams County. The Primary and Regional Market Areas have a slightly lower average estimated number of vehicles per household at 1.9, as compared to the City of Thornton at 2.0 and Adams County at 1.94.

Figure 8
Vehicle Ownership in the Thornton Crossroads at 104th Station Market Areas, 2014



Source: Claritas, ArLand

Table 9
Percentage Population by Occupation in the Thornton Crossroads at 104th Station Market Areas, 2014

	Primary Market Area	Regional Market Area	City of Thornton	Adams County
Office/Admin Support	17.5%	17.3%	16.9%	16.3%
Sales/Related	10.5%	11.0%	11.3%	10.8%
Transportation/ Moving	8.6%	7.9%	7.7%	8.4%
Production	7.1%	5.7%	5.6%	6.1%
Management	6.4%	8.4%	9.4%	8.1%
Food Prep/Serving	5.6%	5.3%	4.5%	5.6%
Maintenance Repair	4.7%	4.0%	3.4%	4.4%
Healthcare Support	3.6%	2.8%	2.9%	2.6%
Personal Care/Svc	3.4%	3.2%	3.5%	3.3%
Health Practitioner	2.9%	3.4%	3.5%	3.2%
Protective Svcs	2.2%	2.5%	2.7%	2.2%
Legal	0.5%	0.7%	0.7%	0.7%
Life/Phys/Soc Science	0.4%	0.5%	0.4%	0.4%
Farm/Fish/Forestry	0.3%	0.2%	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. There is a higher percentage of residents in Office/Admin Support jobs across all market areas, ranging between 16.3% in Adams County and 17.5% in the Primary Market Area. The Primary Market Area trends between 1.1% and 1.5% higher than the other market areas in the Production category. The Primary Market Area also trends between 2% and 3% lower than the other market areas in the Management category.

Table 10
Race and Ethnicity in the Thornton Crossroads at 104th Station Market Areas, 2014

Race/Ethnicity	Primary Market Area	Regional Market Area	City of Thornton	Adams County
White	73.4%	75.3%	76.0%	72.5%
Black	2.2%	2.0%	1.9%	3.2%
American Indian	1.6%	1.3%	1.2%	1.4%
Asian/Pacific Islander	3.6%	4.4%	4.8%	3.7%
Other / Two or more	19.2%	16.9%	16.1%	19.2%
Hispanic Origin*	40.8%	34.2%	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 72.5% and 76% for all market areas); however, all the areas have a substantial Hispanic population. The Primary Market Area has the largest percentage of Hispanic residents at 40.8%.

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, because of land availability in the area within the ½ mile radius of the Thornton Crossroads at 104th Station, the single family residential market will also be examined.

According to the Adams County assessor’s records, in the 1/2 mile radius around the station:

- Single family residences in the area were built in the 1990’s, with average values of \$198,500 and average sizes of 1,750 square feet.
- Condominiums in the area were built in the early 2000’s with average values of \$116,500 and average sizes of 1,200 square feet.
- Apartments in the area were built in the late 1990’s.

Table 11
Residential Building Permits, 2006-2012

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 the greatest 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.

4.1 Planned Residential Projects

Figure 9 and Table 12 describe the residential projects in the planning pipeline.

Figure 9
Residential Projects in the Planning Pipeline

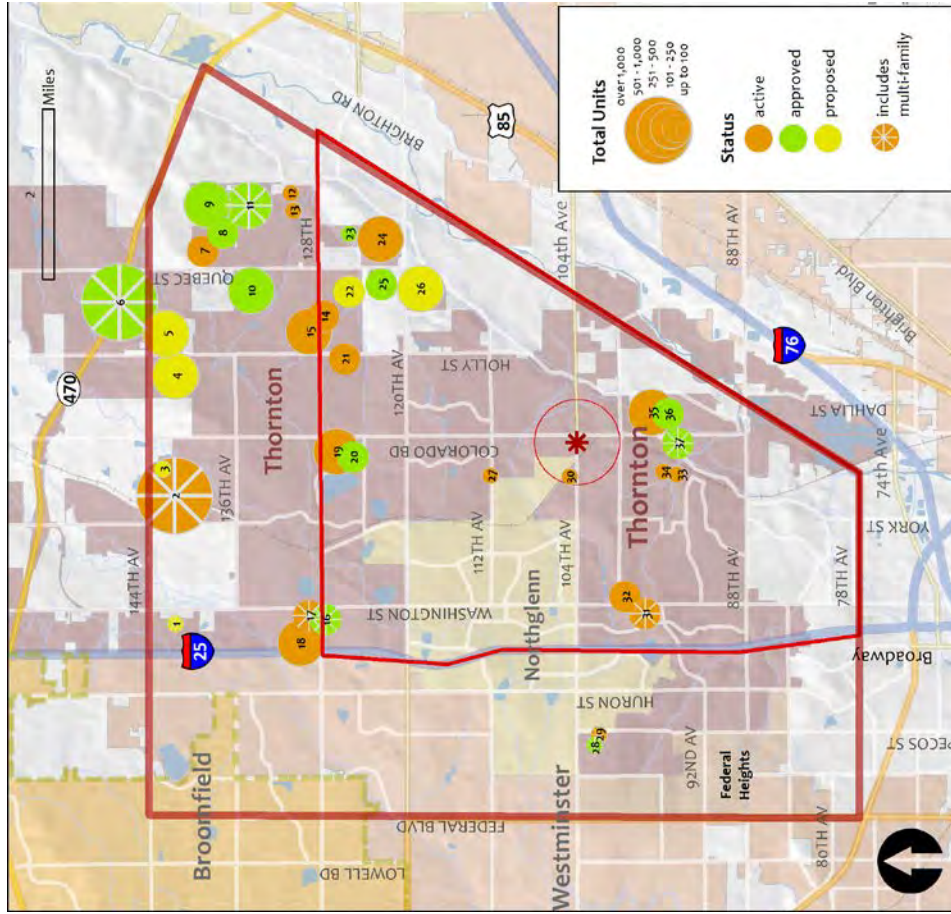


Table 12
Planned Residential Projects Key

Map No.	Name	SF Units	MF Units
1	144th Grant / Multifamily		
2	Fallbrook Farms	545	502
3	Fallbrook Farms	93	
4	Lewis Pointe	348	
5	Holly Hills Estates	313	
6	Parterre	2,184	1,960
7	Quebec Highlands Amd 1	219	
8	Merritt Ranch	291	
9	Quebec Highlands Amd 2	122	
10	Amber Creek	341	
11	Tsuzuki (Timberland)	266	190
12	Glen Eagle Estates	63	
13	Glen Eagle Estates Phase 3	38	
14	Ash Meadow	111	
15	Riverdale Park #5	252	
16	Villages at Thorncreek		283
17	Villages at Thorncreek		
18	Thorncreek Village	270	
19	Terra Lago	360	
20	The Oaks at Eastlake	140	
21	Bramming Farm	128	
22	Creekside Village	230	
23	Brantner Village	84	
24	King Ranch Estates	285	
25	Aspen Reserve	209	
26	Mayfield	276	
27	Woodglen #9	10	
28	Landmark Towers		82
29	Quivas Condos		52
30	Sage Valley	72	
31	HighPointe Park		220
32	Sundance Condos	176	
33	Villages North #5	26	
34	Villages North #7	38	
35	River Valley Village	475	
36	Cherrylane	141	
37	Thornton Valley		240
Total		8,106	3,529

Sources: City of Thornton, ArLand

It is important to note that while there are a few planned residential projects in the Thornton Crossroads at 104th Station Area, the vast majority of planned units are located in Thornton’s northeast suburbs with most of them potentially taking years to build out. Given the commercial services readily available in the area, and the proximity of the rail, the station area, as a residential location, would be more competitive than other locations. While the map depicts residential projects in the Primary and Regional Market Areas, the most relevant competitive residential projects would be located in the Primary Market Area.

Station Area Plans along the North Metro Rail Line

The City of Thornton has undertaken planning processes at its Eastlake and North End stations and is concurrently planning for its station located near 88th Avenue.

The following summarizes the plans for the other station areas on the future North Metro Rail Line (Figure 10). Like aspects of the Thornton Crossroads at 104th Station Area plans, some of these plans are long term in nature. In addition to the rail line investment, many of the station areas will require significant public infrastructure investment.

Figure 10
North Metro Rail Line Stations



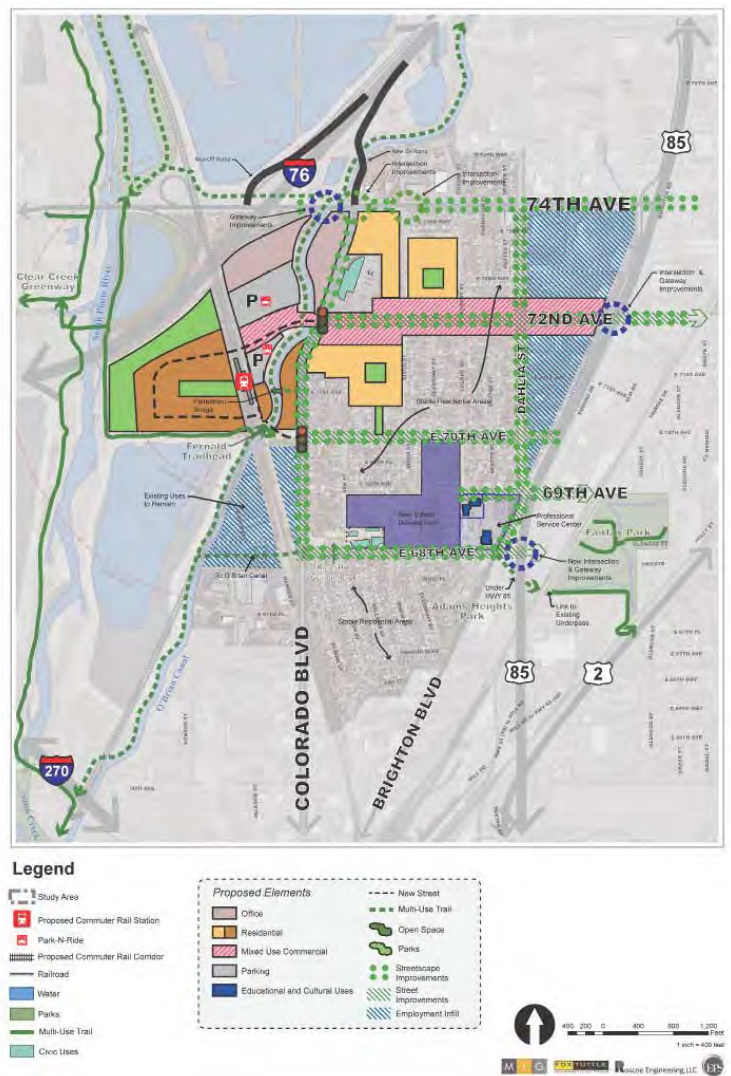
Source: RTD

Commerce City Station Area Master Plan for East 72nd Avenue and Colorado Boulevard (Figure 11)

The Commerce City plan encourages the area east of 72nd Avenue to transform into a vibrant mixed-use multimodal corridor that provides a link between the commuter rail station and key destinations such as neighborhood schools, the Derby neighborhood, retail and restaurants, the Civic Center, and Dick’s Sporting Goods Park. E. 72nd Avenue is planned to gradually develop a more urban “main street” character with a mix of active ground-floor uses, attractive façades, and streetscape improvements. The community envisions neighborhood services such as “mom and pop” retail; housing or offices above ground-floor retail; a neighborhood-scale grocery market; a carniceria; cafes; and a range of small-scale, affordable, and family-friendly restaurants. The neighborhood’s industrial and manufacturing uses also may be strengthened with the addition of synergistic light industrial and/or innovative manufacturing uses. Key aspects of the program include:

- Two-to-six story mixed use development including residential, office and retail uses
- Commercial uses, such as cafes, flower shops, cleaners, and fast-casual restaurants to support the needs of transit patrons and residents
- Convenient access to open space and recreational or cultural amenities
- Relocation of Alsup Elementary School, Adams Middle School, and Adams County Human Services Building to provide aggregated land
- Potential for new community and cultural destinations, such as a proposed professional development center and potentially a small library or art museum
- Up to four story mixed-use commercial and residential development with active ground-floor retail uses and upper-story office uses, apartments, and condominiums along E. 72nd Avenue
- Transitioning away from the E. 72nd Avenue corridor, housing types should include two- to three story townhomes and small-lot, single-family homes compatible with existing single-family neighborhoods
- West of the station, three- to six-story residential development and a publicly-accessible park
- Three- to six-story office development north of the station, just south of I-76 and the E. 74th Avenue intersection

Figure 11
Commerce City Station Area Plan



- A wide variety of residential buildings at a range of price points, including row houses, townhomes, condominiums, senior housing, and apartments, proposed to provide home ownership opportunities for individuals at a range of income levels
- Alley-loaded residential units, parking and service entries to the rear, parking structures wrapped with pedestrian-friendly, ground-floor uses to enhance the public realm and support community life.

City of Thornton Eastlake Station Transit Oriented Development Master Plan (Figure 12)

The City of Thornton plan encourages the development of a residentially based mixed use community on the approximately 40 acres of vacant land west of the proposed transit station. This village would become a compact walkable neighborhood with supporting small-scale retail services and recreational opportunities. The scale of development would complement the existing Eastlake village. Key aspects of the program include:

Figure 12
Eastlake Station TOD Master Plan



Source: City of Thornton

- Two-three story commercial buildings with residential or office above.
- Multifamily residential development with a recommended density range of 20 to 30 units per acre
- Two-story townhomes or row homes at 9 to 12 units per acre

- Live-work units of 2-3 stories in height with work space on the ground floor and residential uses above
- Transition Eastlake Open Space #1 into a community park
- Additional multiuse trail connection between 128th Avenue and the station area
- Renovation and adaptive reuse of emblematic grain elevator to be utilized for civic or public use as museum or community space
- A split parking configuration with 400 spaces west of the platform and approximately 400 spaces southeast of the platform on the former Adams County Maintenance Facility Site
- Long term, the following uses could be accommodated by 2030:
 - 1,600 – 2,000 mid-density residential units
 - 194,000 – 264,000 square feet of office space
 - Up to about 3,500 square feet of new medical office space
 - Up to 1 million square feet of industrial space (*This assumed that Hunter Douglas follows through with its future development plans*)
 - 155,600 square feet of retail space
- Potential educational facility, such as a vocational or technical school

North End Station TOD (Figure 13)

The City of Thornton plan encourages the development of a 203 acre site at the last station of the North Metro FasTracks line. The currently vacant area is planned to transform into a mixed use, mixed income higher density community served by transit that will provide broad access to work opportunities, affordable housing, community services and an attractive and healthy living environment. Key aspects of the program include:

- Small block neighborhoods adjacent to parks, plazas, and open spaces
- Higher density housing incorporating a maximum of 3,500 multifamily, townhouse, row house, loft and flat units
- A maximum of 750,000 square feet of mixed-use and commercial development, including retail and office space
- 32 acres of parks and civic space
- New elementary school
- Medical office facilities

Figure 13
North End Station TOD



Source: Van Meter Williams Pollack

All of the station areas profiled are planning for a significant amount of services, residences, and densities. They differ significantly from each other.

The Commerce City Station Area Plan is located in an area with a significant need for redevelopment and market challenges. The Eastlake and the North End Stations are in areas with very low density or no development at all this time. While existing development is unlikely to be an impediment, buildout is likely to take place over a very long term.

The Thornton Crossroads at 104th Station is different from the other stations because the area has been built out. While it is a station with long term potential with a base of existing infrastructure and investment from which to build on, its challenges are going to be how to transition potential land use changes and long term densification in an area with a standard suburban form.

One of the future long term challenges may be competition between the stations. In general, however, the northern metro area is projected for a significant amount of growth.

4.2 Market Area Forecasts

Table 13
Population and Households Forecasts for Thornton Crossroads at 104th Station Market Area, 2014-2035

	2014	2015	2020	2025	2035	Change 2014-2035	CAGR 2014-2035
Primary Market Area							
Population	96,107	97,564	105,291	113,228	130,472	34,365	1.5%
Households	33,720	34,203	36,896	39,808	47,047	13,327	1.6%
Persons / HH	2.85	2.85	2.85	2.84	2.77	2.58	
Regional Market Area (Additional)							
Population	133,523	135,930	144,388	152,960	171,036	37,513	1.2%
Households	48,912	49,500	52,407	55,554	63,378	14,466	1.2%
Persons / HH	2.77	2.75	2.76	2.75	2.70	2.59	

Source: DRCOG, ArLand, Claritas

Claritas estimates and DRCOG population and household projections for both the Thornton Crossroads at 104th Station Primary and Regional Market Areas are shown in Table 13. The Primary Market Area should reach over 100,000 residents by 2020. The persons per household are expected to decrease within both areas. The Regional Market Area, which encompasses the growing suburbs, will gain more residents and households than the Primary Market Area.

4.3 Activity in the Thornton Residential Marketplace

Most TOD residential development focuses on higher density multifamily product types. There are a number of apartment projects in the Thornton Crossroads at 104th Station Area already, particularly along 104th Avenue, so additional apartments in the station area would not present a significant change to what is currently in the market. Given the station location, however, there has been a demonstrated interest in potential densifying from the current 2-3 story prototype. However, there have been ongoing neighborhood concerns particularly related to traffic generation.

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 and 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.

A representative sampling of some of the more recently built and potentially most competitive apartment units are shown in Figure 14 and described in Table 14. They are located in the Primary

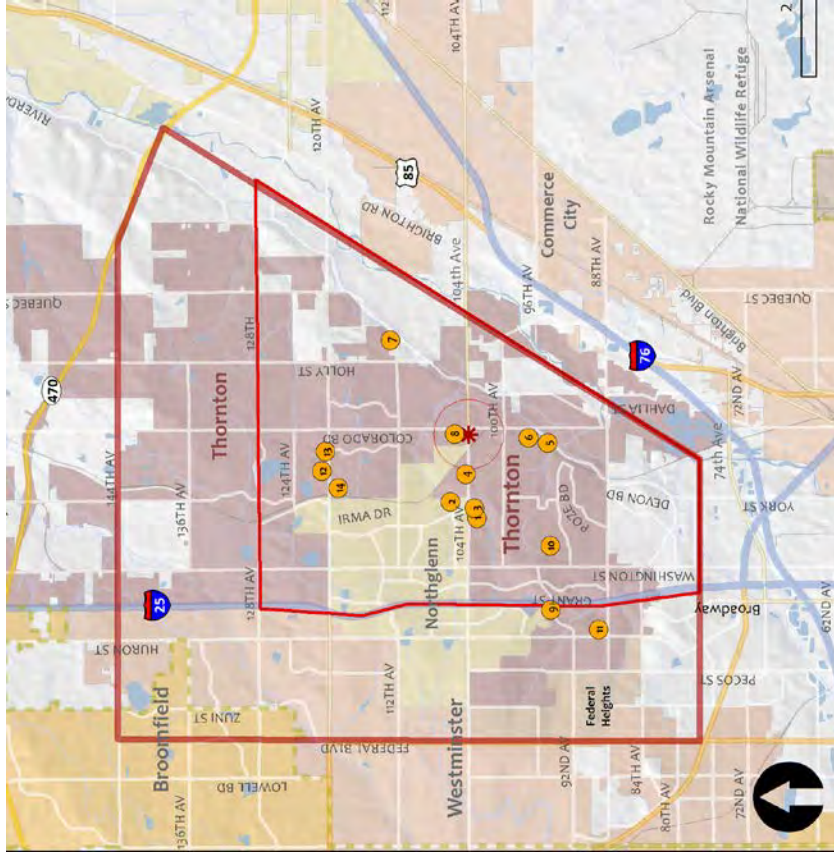
Market Area. Most of these units were built in the 1990's and 2000's. They tend to be in large complexes at 2-3 stories.

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	33.39
8	Covington Ridge	216	1996	3	9	11.1	19.4
9	Promenade at Hunters Gle	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
12	Waterford Place	336	1998	3	11	18.7	18.0
13	Madison Park	344	2004	2	42	26.0	13.2
14	Hawthorne Hill	336	2001	3	16	25.1	13.4

Source: Colorado Apartment Insights, ArLand

Figure 14
Rental Apartments in the Thornton Crossroads at 104th Station Area



Source: CAI, ArLand

**Table 15
Unit Mixes at Representative Apartments**

		Unit Mixes	N
-- Flats --	Studio	0.4%	
	1 BR / 1 BA	38.2%	
	2 BR / 1 BA	14.9%	
	2 BR / 2 BA	32.9%	
	3 BR / 1 BA	0.7%	
	3 BR / 2 BA	8.7%	
Loft / Townhome	1 BR / 1 BA	0.5%	
	1 BR / 1.5 BA	0.5%	
	2 BR / 1 BA	0.5%	
	2 BR / 1.5 BA	1.0%	
	2 BR / 1.75 BA	0.8%	
	2 BR / 2 BA	1.1%	
	3 BR / 2 BA	0.0%	
Total		100.0%	

Source: Colorado Apartment Insights, ArLand

The majority of rental units at area apartments are 1 bedroom/1 bathroom or 2 bedroom/2 bathroom configurations as described in Table 15. Studio apartment, 3 bedroom/1 bathroom apartments and various loft/townhome configurations each account for 1% or less of multifamily units.

**Table 16
Unit Sizes at Representative Apartments**

		Unit Sizes
-- Flats --	Studio	473
	1 BR / 1 BA	724
	2 BR / 1 BA	898
	2 BR / 2 BA	1,072
	3 BR / 1 BA	1,137
	3 BR / 2 BA	937
Loft / Townhome	919	
Average	913	

Source: Colorado Apartment Insights, ArLand

Multifamily housing units in the station area range from 473 square feet to 1,137 square feet, and average 913 square feet overall (Table 16). Studios average 473 square feet, one bedrooms average 724 square feet, two bedroom average 985 square feet, three bedrooms average 1,037 square feet and lofts/townhomes average 919 square feet.

Table 17
Unit Rent Ranges

	Unit Rent Ranges	
	Market Rate	Affordable / ACHA
Studio	\$770	--
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-\$1,158	\$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 \$1,158 while affordable units and units operated by the Housing Authority tend to be less expensive 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.

Table 18
Average Rents per Square Foot

	Unit Rent/SF Ranges	
	Market Rate	Affordable / ACHA
Studio	\$1.63	--
1 BR / 1 BA	\$1.32	\$1.01
2 BR / 1 BA	\$1.22	\$0.96
-- Flats --		
2 BR / 2 BA	\$1.13	\$0.88
3 BR / 1 BA	\$0.00	\$0.91
3 BR / 2 BA	\$1.21	\$0.87
Loft / Townhome	\$1.22	--
Average	\$1.22	\$0.92

Source: Colorado Apartment Insights, ArLand

Settlers Chase / Colony Ridge and Presidential Ridge

There is a development proposal for the remaining vacant parcels just south of the Thornton Crossroads at 104th Station. The price points and market focus of the development are indicative of the potential development niche of the station area at this time relative to other developments in the area.

There was developer interest in higher density multifamily apartments near the station. While that attempt was denied due to neighborhood opposition to traffic generation, the same group is still desiring to move forward at its Settlers Chase / Colony Ridge development just south of the station with 160 units in a 3-story medium density residential configuration targeting the younger demographic (ages 25-34) that many of the downtown projects are aiming for, but at a much lower price point (less than \$1.20 per square foot). Englewood and other station areas outside of downtown Denver have been successful in attracting this demographic. This group likes to work and play in downtown Denver, but prefers the price points of units outside of downtown. Units tend to be larger and much less expensive than what downtown is offering.

In the southeast portion of the station area at its Presidential Ridge development, the development group is considering a 2 story 120 unit multifamily rental product more oriented towards families.

One of the stated primary challenges has been the access issue and fear of traffic generation by the adjoining neighborhoods, which is an oft-stated fear of many opponents of higher density.

4.4 Residential Rental Demand

In order to estimate the level of residential rental demand in the station area, growth assumptions for the Primary Market Area are estimated from DRCOG forecasts. To provide some development

flexibility, vacancy rates and other development assumptions are incorporated to estimate total unit requirements as seen in Table 19. An estimated 14,693 residential units will be needed to accommodate future growth in the market area. An estimated 45% of those units, or approximately 6,612 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	33,720
Market Area Households 2035	47,047
HH Growth (14-35)	13,327
Vacancy Rate	5.00%
Demolition Rate/yr.	5.00%
Total Unit Requirement	14,693
Pct. Renters	45%
Market Area Rental Demand	6,612

Source: DRCOG, Claritas, ArLand

Table 20
Thornton Crossroads at 104th Station Area Multifamily Rental Demand

Annual Income Range	Approx. Rent Range	HHs in Income Ranges	Market			Rental by		Attainable	
			Area	Rental Demand	Overall % Renters	Income Levels by Renters in Market	Potential Renters in Market Area	Capture Rate (within Rentals)	Attainable Subject Capture (units)
up to \$15K	Affordable	10%	690	63%	435	25.0%	109		
\$15-25K	\$375 - \$625	10%	675	47%	317	25.0%	79		
\$25-35K	\$625 - \$875	13%	860	44%	383	25.0%	96		
\$35-50K	\$875 - \$1,000	18%	1,187	51%	606	25.0%	152		
\$50-75K	\$1,000+	24%	1,571	55%	866	25.0%	217		
\$75-100K	\$1,000+	13%	836	27%	223	25.0%	56		
\$100-150K	\$1,000+	9%	625	18%	114	25.0%	28		
\$150K and up	\$1,000+	3%	167	8%	13	25.0%	3		
Total		100%	6,612	45%	2,957	25.0%	739		
Range of Supportable Rental Housing Units (low)							554		
Range of Supportable Rental Housing Units (high)							924		

Source: ArLand, DRCOG, Claritas, American Community Survey

Table 20 shows the estimated demand for rental housing in the market based on forecast growth in the population. Assuming capture rates of 25% in the low, moderate, and middle income ranges, the project area could accommodate a range of 550 to 925 units. This assumes that the area becomes a focal point for new residential development in the area.

4.5 Single Family Residential

There are a number of active single family housing developments in the Thornton market. Most are in the growing suburbs north of the station area. 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 15 and Table 21.

Figure 15
Active Residential Subdivisions in the Thornton Crossroads at
104th Station Area Market Area, 2014

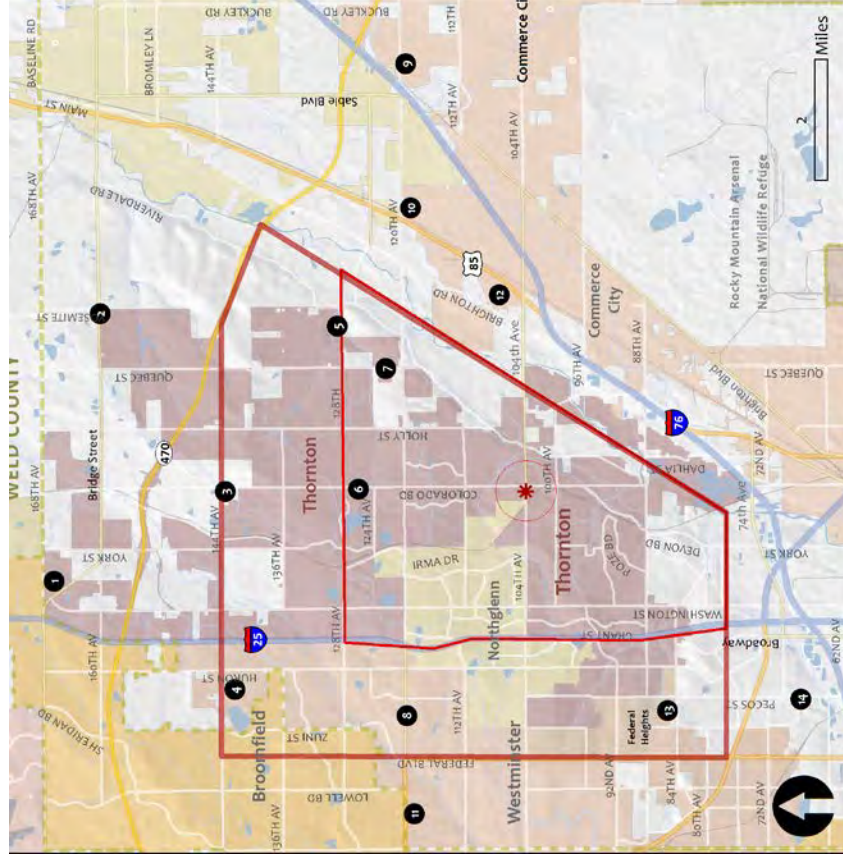


Table 21
Key for Residential Subdivisions

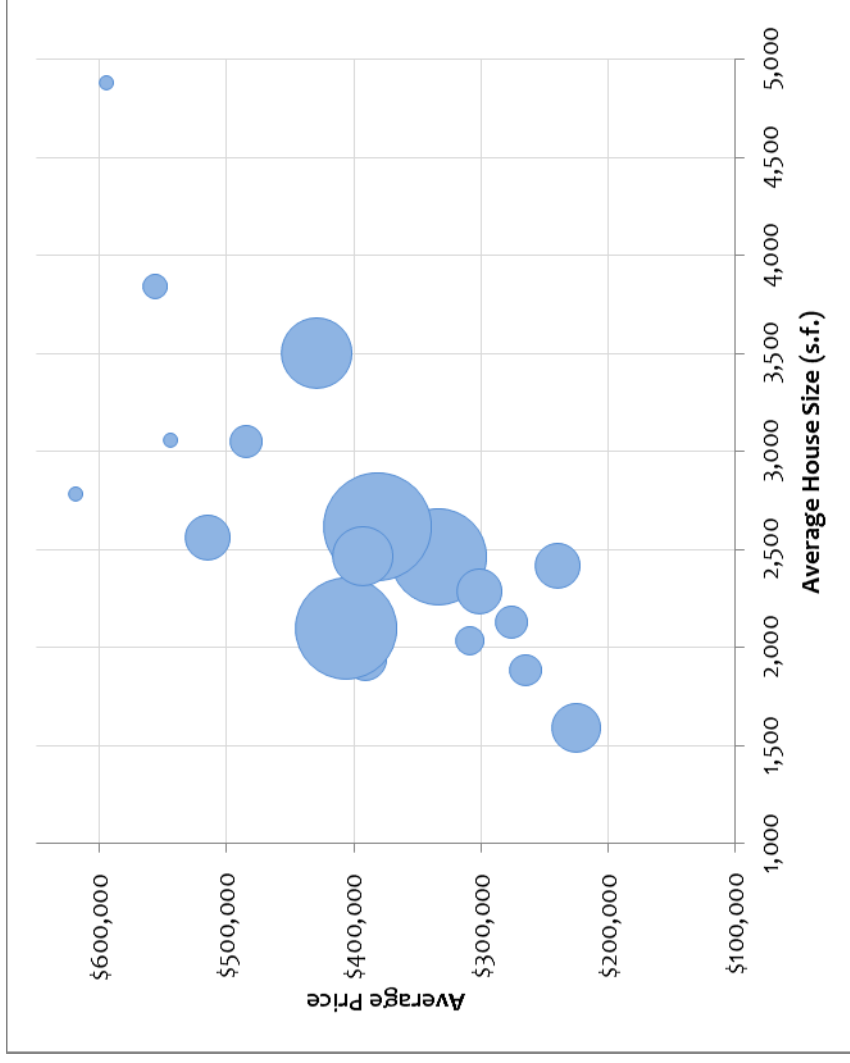
Map ID	Project Name
1	North Creek Farms
2	Todd Creek / Baseline Lakes
3	Fallbrook Farms
4	Huntington Trails / Estates
5	Riverdale / Crossing
6	Terra Lago / Villas (DU)
7	King Ranch
8	Country Club Highlands
9	Buffalo Run / Villages
10	Stillwater
11	Bradburn
12	Belle Creek
13	Hyland Park Heights
14	Midtown 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. 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 16 shows the range of residential sales prices within the communities in these areas in 2013. Most were clustered in the \$400,000 price range although the average is about \$370,000. Table 22, on the following page, shows the actual subdivision statistics, the price ranges, the size of houses and lots. In the short term, if there are any single family attached and/or detached units sold in the area, it would more than likely be at the 70-acre property west of the station at 104th Avenue and Steele Street and /or at infill properties near the station area. Given the nature of the broader market area and potential proximity to the station, price points could be at the upper end of the price spectrum, taking into account, size, amenities, connectivity to the station, etc.

Figure 16
2013 Single Family Residential Sales Prices



Source: Hanley-Wood, ArLand

**Table 22
Thornton Crossroads at 104th Station Area Subdivision Sales, 2013**

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)
1	North Creek Farms		Luxor Homes Inc. Meritage Homes	1 46	\$340,000 \$344,828	\$340,000 \$279,750 - \$427,130	-- 2,323	0 1,587 - 2,747	6,500 7,146	-- \$148.42
2	Todd Creek		Bill Most Construction Bill Most Construction	9 3	\$390,930 \$453,552	\$359,900 - \$424,912 \$422,800 - \$470,155	1,938 --	1,938 0	51,932 43,560	\$201.72 --
			Eagle Shadow South Eagle Shadow South Eagle Shadow South	3 2 5	\$435,552 \$236,700 \$484,825	\$422,800 - \$470,155 \$52,400 - \$421,000 \$441,000 - \$528,710	-- -- 3,048	0 0 2,926 - 3,121	50,225 47,681	-- \$159.05
			Greenbuilt Homes GJ Gardner Homes GJ Gardner Homes	1 1 1	\$435,469 \$383,946 \$383,946	\$435,469 \$383,946 \$383,946	-- -- --	0 0 0	79,279 122,839 --	-- -- --
			New Vision Dev Partners New Vision Dev Partners Lennar	3 51 25	\$402,220 \$406,371 \$429,479	\$392,500 - \$409,048 \$281,900 - \$493,800 \$378,000 - \$505,049	2,622 2,094 3,499	2,622 1,854 - 2,604 2,335 - 4,900	61,855 7,348 7,248	\$153.40 \$194.05 \$122.75
3	Fallbrook Farms		Meritage Homes Richmond American Homes-MDC	46	\$333,202	\$235,600 - \$479,900	2,459	1,905 - 4,139	4,760	\$135.49
			Richmond American Homes-MDC Chappelle Homes Inc	1 1	\$309,400 \$150,000	\$309,400 \$150,000	-- --	0 0	3,713 10,030	-- --
4	Huntington Trails		Sopris Homes Sopris Homes	1 3	\$942,391 \$556,733	\$942,391 \$493,800 - \$631,000	5,632 3,842	5,632 3,250 - 4,138	21,787 10,375	\$222.26 \$167.33
			Richmond American Homes-MDC Retreat Sanctuary	1 1 1	\$544,200 \$554,000 \$618,537	\$544,200 \$554,000 \$618,537	3,054 -- 2,783	3,054 0 2,783	10,030 11,838 10,081	\$178.19 -- \$222.26
5	Riverdale		Capital Homes Capital Homes	1 5	\$264,810 \$301,530	\$250,355 - \$282,000 \$271,300 - \$345,000	1,883 2,287	1,337 - 2,287 1,647 - 2,489	7,917 8,410	\$140.66 \$131.83
			Lennar Richmond American Homes-MDC	10 4	\$308,725 \$276,169	\$280,300 - \$335,100 \$259,900 - \$292,000	2,033 2,128	1,477 - 2,510 1,969 - 2,297	7,403 4,334	\$151.84 \$129.79
6	Terra Lago		Terralago Villas Construction DR Horton	5 58	\$381,858 \$387,987	\$294,577 - \$490,119 \$387,987	2,613 --	1,605 - 4,167 0	7,980 10,263	\$146.13 --
7	King Ranch		DR Horton Century Communities, Inc.	1 10	\$387,987 \$515,021	\$387,987 \$439,349 - \$590,000	-- 2,560	0 1,948 - 3,022	10,263 10,823	-- \$201.16
8	Country Club Highlands		Century Communities, Inc. Richmond American Homes-MDC	4	\$305,600	\$287,600 - \$322,800	--	0	6,245	--
9	Buffalo Run		Richmond American Homes-MDC Richmond American Homes-MDC	3	\$303,133	\$291,200 - \$312,400	--	0	6,228	--
10	Stillwater		Oakwood Homes LLC Oakwood Homes LLC	23	\$326,152	\$281,400 - \$418,200	--	0	7,230	--
11	Bradburn		Century Communities, Inc. Pacific West Dev, LLC	18 1	\$393,190 \$595,000	\$326,250 - \$470,149 \$595,000	2,465 4,880	2,004 - 2,672 4,880	5,516 6,142	\$159.52 \$121.93
12	Belle Creek		Oakwood Homes LLC Foothills Development	10 12	\$239,990 \$225,626	\$204,800 - \$279,000 \$209,950 - \$255,321	2,415 1,588	1,576 - 2,834 1,162 - 2,007	3,399 3,615	\$99.39 \$142.13
13	Hyland Park Heights		Brookfield Homes David Weekley Homes	10 15	\$417,111 \$364,757	\$389,603 - \$468,361 \$304,925 - \$437,940	-- --	0 0	3,916 3,568	-- --
14	Midtown		Brookfield Homes Brookfield Homes	1 1	\$374,050 \$374,050	\$374,050 \$374,050	-- --	0 0	3,413 3,413	-- --
	Total			392	\$369,014	\$204,800 - \$631,000	2,037	1,162 - 4,900	9,639	\$151.05

Source: Hanley-Wood, A/Land

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. To provide some development flexibility, vacancy rates and other assumptions are incorporated to estimate total unit requirements. An estimated 14,693 residential units will be needed to accommodate future growth in the market area. An estimated 55% 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	33,720
Market Area Households 2035	47,047
HH Growth (14-35)	13,327
Vacancy Rate	5.00%
Demolition Rate/yr.	5.00%
Total Unit Requirement	14,693
Pct. Owners	55%
Market Area Residential Owner Demand	8,081

Source: DRCOG, Claritas, ArLand

Table 24 shows the estimated demand for ownership housing in the market, based on forecast growth in the population. Assuming capture rates by price point ranging from 2% to 15% in the low, moderate, and middle income ranges, the project site could accommodate 380 to approximately 640 residential ownership units (based on market demand). As of 2013, an estimated 10% of projects sold in the market area were attached. However, assuming a greater share of units as attached (assuming that the construction defects issue is resolved), yields an estimate of 150 to 200 attached units including townhomes, plex units and condos.

**Table 24
Thornton Crossroads at 104th Station Area Residential Owner Demand**

Annual Income Range	Approx. Home Price Range	HHs in Income Ranges	Market Area For Sale Demand	Owner by Potential		Attainable Capture Rate (within Owners)	Attainable Subject Capture (units)
				Income Levels by Overall % Owners	Owners in Market Area		
up to \$15K	<\$75K	10%	844	37%	312	5.0%	16
\$15-25K	\$75 to \$100K	10%	825	53%	437	5.0%	22
\$25-35K	\$100 to \$150K	13%	1,051	56%	584	10.0%	58
\$35-50K	\$150 to \$200K	18%	1,451	49%	710	15.0%	107
\$50-75K	\$200 to \$250K	24%	1,920	45%	861	15.0%	129
\$75-100K	\$250 to \$350K	13%	1,022	73%	750	15.0%	113
\$100-150K	\$350 to \$500K	9%	764	82%	625	10.0%	62
\$150K and up	\$500K and up	3%	204	92%	188	2.0%	4
Total		100%	8,081	55%	4,467	11.4%	510

Range of Supportable Ownership Housing Units (low) 383
Range of Supportable Ownership Housing Units (high) 638

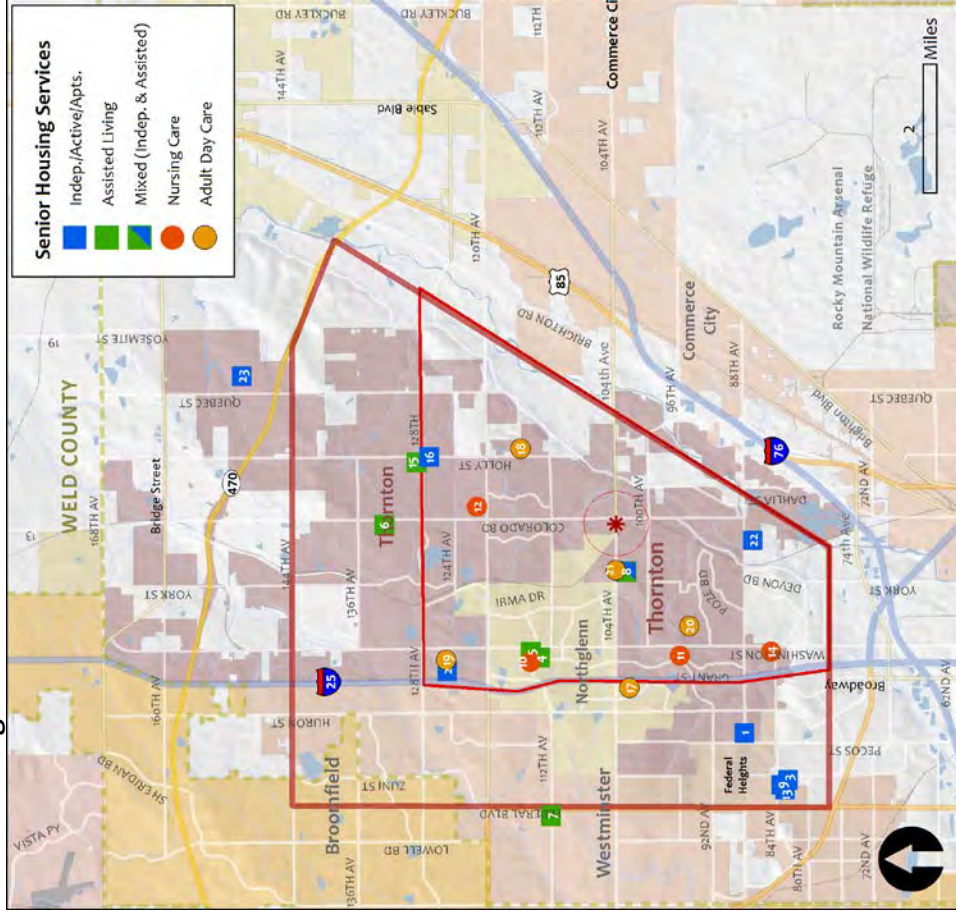
Attached Ownership Units (Townhomes, Plex Units) -- 150-200 --

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.

4-7 Senior Housing and Services Demand

Figure 17
Senior Housing and Services



Source: ArLand

Table 25
Senior Housing and Services

Key	Name	Units / Beds	Notes [1]
1	Orchard Hill Senior Apartments	88	Sr Apts
2	Squire Village Apts	50	Sr Apts
3	Clare of Assissi Place	59	Sr Apts
4	Crossroads Assisted Living	68	AL
5	Northglenn Heights	144	122 AL, 22 ALZ
6	Angels Abode	8	AL
7	Keystone Place at Legacy Ridge	237	AL66, 160 IL, 11 ALZ
8	Villas at Sunny Acres	335	299 IL, 35 AL
9	Cottages at Panorama Pt	50	IL
10	Kindred Transitional Care and Rehab	162	SNF
11	Alpine Living Center	110	SNF
12	Elms Haven Care and Rehabilitation Center	242	SNF
13	Panorama Pointe	72	Sr Apts
14	Vista View Care Center	25	SNF
15	Park Regency Assisted Living	114	AL
16	Total Long Term Care	72	Sr Apts
17	Thornton Estates Manufactured Homes	208	Manufactured Homes
18	Heritage Todd Creek	1,300	Active adult community
19	Senior Hub Adult Day Care	NA	Adult Day Care
20	Blue Sky Adult Day Care	NA	Adult Day Care
21	InnovAge - Total Longterm Care	NA	Adult Day Care
22	Thornton Senior Center	NA	Adult Day Care
23	Gardens at St. Elizabeth (St. Anthony's Sr. Health Center)	NA	Adult Day Care

Source: ArLand

[1] AL is Assisted Living; IL is Independent Living; ALZ is Alzheimer's Care

SNF is Skilled Nursing Facility

Another example of a potential residential niche that could be appropriate for the area would be senior housing and the continuum of care sometimes associated with senior housing. Figure 17 and Table 25 show the senior housing services located in the area.

While the Thornton Regional Market Area has a range of senior housing services, there is potential additional demand, given the projected population growth in the immediate area. Table 26 shows potential demand for independent apartments for seniors based on age and income qualifications in the market area.

Table 26
Potential Demand for Senior Apartment Units

	2014	2019
Number of Age Qualified Persons	6,024	7,211
Number of Age and Income Qualified Persons	3,674	4,473
Percent Living Alone	50%	50%
Number of Existing Age Restricted Senior Units [1]	477	477
Potential Demand	1,360	1,759
Demand for Age Restricted Senior Units at Station Area	136	176

Source: Dixon-Hughes, US Census; Claritas, ArLand

[1] includes Thornton Estates Manufactured Homes which provides affordable housing options for seniors

There is potential demand for 135 to 180 senior housing units near the station area. A potential location for senior units might be in towers adjacent to the station. While the potential location would be within the proposed Settler's Chase / Colony Ridge development project, this could be a phase that would be built after the rest of the proposed development is in place. Given the proximity to the station and construction of the North Metro line, development after the rail line construction is complete, might be advisable. The other advantage to a senior housing project in this location is potentially fewer cars and less traffic generation impacting surrounding neighborhoods.

Table 27 shows potential demand for assisted and independent living units in the market area.

Table 27
Potential Demand for Independent and Assisted Living Units

	2014	2019	2014-2019
Number of Age Qualified Persons	6,024	7,211	1187
Number of Age and Income Qualified Persons	3,674	4,473	799
Percent Requiring Assistance	28%	28%	
Percent Living Alone	50%	50%	
Estimate Number of Age-Qualified Individuals	843	1,010	
Estimate Number of Age and Income Qualified Persons	514	626	112
5% of Caregiver Aged Population	598	1,168	570
Number of Existing Competitive IL and AL Units	922	922	
Number of Market Area Planned Units	--	--	
Potential Demand	190	872	

Source: Dixon-Hughes, US Census; Claritas, ArLand

There appears to be demand for 190 units currently and 872 units in 2019 based on the growth in population and potential need for services. Independent and assisted living units might be more appropriate at the currently vacant 70 acre property located at 104th Avenue and Steele Street, within the ½ mile radius of the station.

4.8 Residential Potential

There is residential demand near the station area including:

- A range of 550 to 925 rental units both near the station as well as on infill parcels in the ½ mile radius around the station area. The target market would pay \$1.20 per square foot for residential rentals, substantially lower than what downtown Denver residents pay at \$2.00 per square foot. For locations closer to the station, young urban professionals could be attracted to the area because of easy accessibility to downtown, cheaper rents and bigger units.
- In addition to the residential rental demand above, there would also be demand for at least 135 to 180 senior apartment units in the market area, a portion of which would be appropriate for the immediate station area. A potential location for senior units might be towers adjacent to the station. While the potential location would be within the proposed Settler’s Chase / Colony Ridge development project, this could be a potential phase that would be built after the rest of the proposed development is in place.

- The project area could accommodate 380 to 450 residential ownership units in single family detached or patio home configurations. While the single family detached demand is potentially larger, the residential focus for a TOD area is denser than what is found in the current single family detached market. There is also demand for 150 to 200 attached units including townhomes, plex units and condos.
- There appears to be demand for up to 200 units of independent and assisted living which might be more appropriate at the currently vacant 70 acre property located at 104th Avenue and Steele Street, within the ½ mile radius of the station. The market demand is not very deep and should be tested prior to any development in the area. There are a lot of senior services in the area, and it is easy to overstate the demand for these type of units, given the desire by most people to stay in their current homes as long as possible while they age.

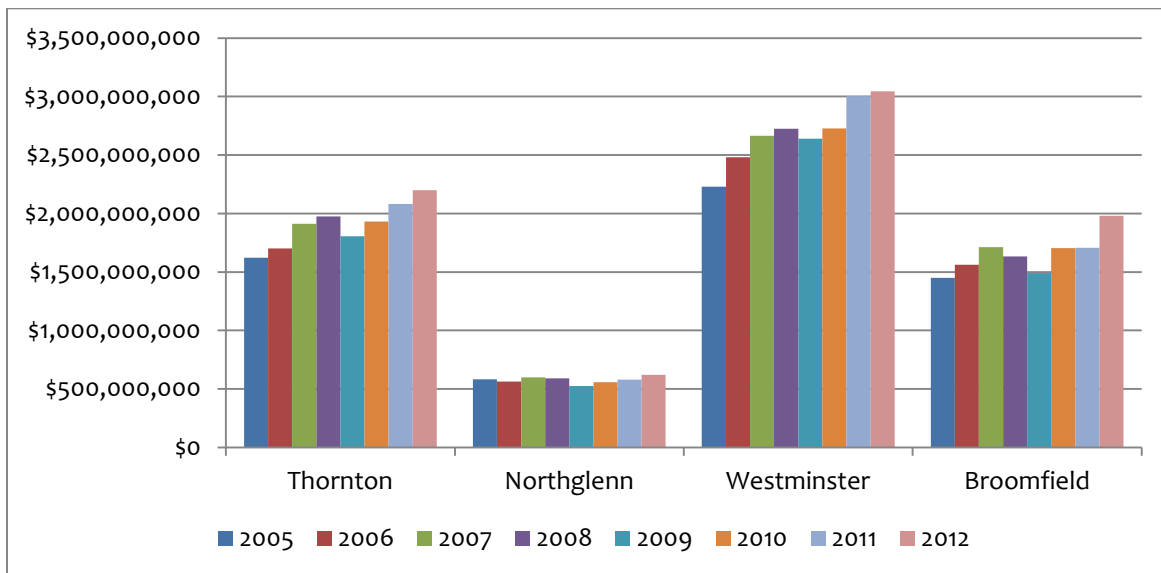
V. RETAIL MARKET ANALYSIS

This section discusses the commercial market potential for the Thornton Crossroads at 104th Station Area. It examines current and future retail demand and supply in the market areas. 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. While the Colorado Marketplace currently serves a neighborhood need, it is not a regional retail center. Most of those services are along I-25. However, with the advent of commuter rail service, in the long term, certain station areas may have the potential for serving a broader based commercial services need, depending on their locations and the market.

5.1 Retail Conditions

Figure 18 shows that in Thornton, retail sales have increased in the last seven years from \$1.6 billion to approximately \$2.2 billion. This gradual upward trend is in line with cities such as Westminster, and Broomfield.

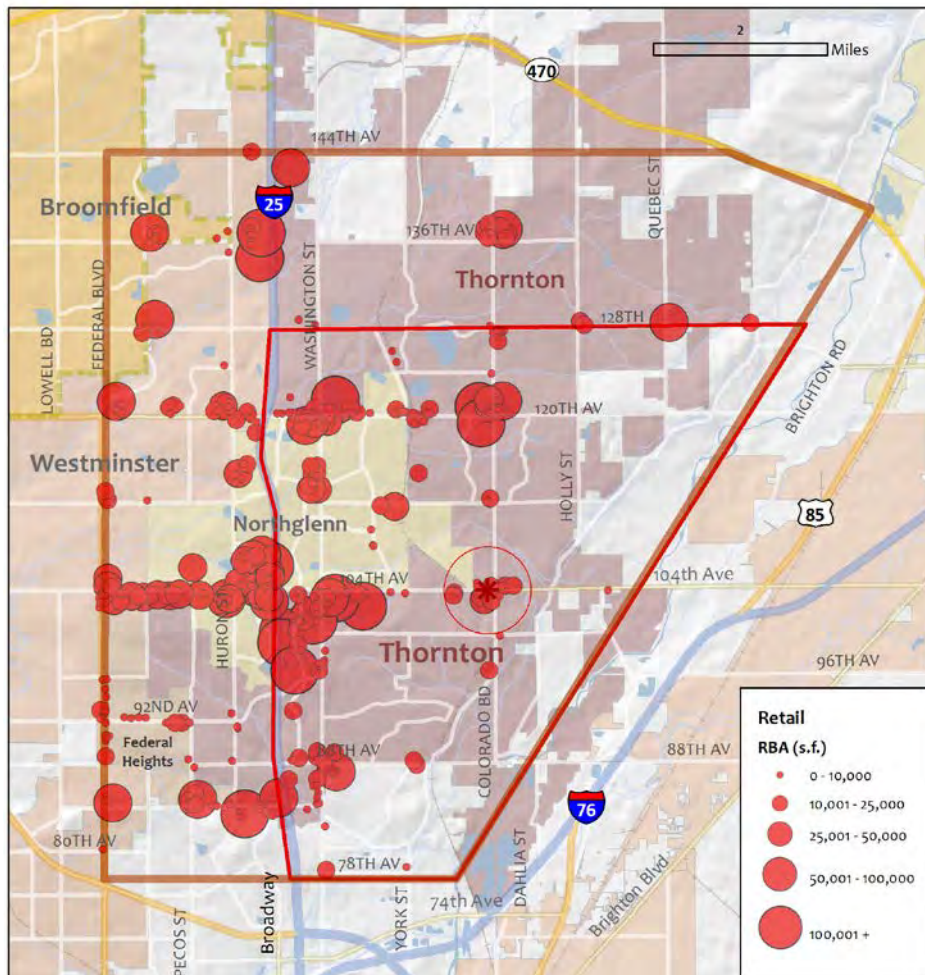
Figure 18
Regional Sales Trends, 2005-2012



Source: Department of Revenue, ArLand

Figure 19 shows the location of retail in the City of Thornton and the Primary and Regional Market Areas. There are several regional retail malls, mega-regional retailers like American Furniture Warehouse, and other regional retail destinations, primarily along I-25. There are also significant clusters of retail along 120th Avenue.

Figure 19
Retail in the Thornton Crossroads at 104th Station Area



Source: CoStar, ArLand

5.2 Retail near the Thornton Crossroads at 104th Station

The Thornton Crossroads at 104th Station Area is adjacent to the Colorado Marketplace, an Albertson’s anchored neighborhood shopping center, built in 1998, and currently operating at about 98% occupancy. The center serves as a valuable source of tax revenue for the City and the center serves a neighborhood need. While Albertson’s, in particular, may need to address access and delivery issues because of the new station, there is little market impetus to make any immediate changes to the center itself. The Colorado Marketplace may see the opportunity to take advantage

of the additional customers the center may have because of the commuter train. On the other corners of the Colorado Boulevard and 104th Avenue intersection, there may be infill and redevelopment potentials, although in the immediate future, they are likely to be in a standard suburban configuration oriented to highway access and primarily serving the local neighborhood.

5.3 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 28 shows the estimated household incomes in the Primary Market Area currently, in 2015, 2020, 2025 and 2035, based on estimated potential growth in households. At this time, we only examine the Primary Market Area because of the neighborhood serving nature of the existing retail in the area. The analysis conservatively estimates that average household incomes will remain constant at the household incomes shown. Total income potentially available, a portion of which will be available for retail expenditures, is currently \$1.9 billion increasing to \$2.7 billion (in today's dollars) by 2035.

Table 28
Total Household Incomes, 2014-2035

	2014	2015	2020	2025	2035	2014-2035	Average Annual Growth Rate 2014-2035
<i>104th Avenue Market Area</i>							
Primary Market Area Households	33,720	34,203	36,896	39,808	47,047	13,327	1.6%
Average Household Incomes	\$56,534	\$56,534	\$56,534	\$56,534	\$56,534		
Total Household Income (\$000s)	\$1,906,326,480	\$1,933,652,638	\$2,085,851,453	\$2,250,499,711	\$2,659,775,521		1.6%

Source: DRCOG, ArLand

Table 29 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 30 and 31 summarize unmet retail demand currently in the Primary Market Area. There is currently an estimated 750,000 square feet of overall unmet demand, which is expected to almost double to 1.3 million square feet of overall unmet demand by 2035. Currently, the categories with the greatest unmet demand are Clothing & Clothing Accessories and Building Materials and Garden Supplies. By 2035, the top three categories with unmet demand will be Clothing & Clothing Accessories, Building Materials and Garden Supplies, and Health and Personal Care. One of the challenges would be the location criteria for all of these store types. Although there may be demand for Clothing or Building Materials, these store types may be more interested, at this time, in an I -25 location.

Table 29
Estimate of 2014 and 2035 Retail Opportunities

2014 Households 33,720
 Avg Household Income \$56,534
 Total Household Income \$1,906,326,480
 Annual HH Growth Rate 1.6%

Category	% Retail Expenditures [1]	Demand (retail potential)	Est. Sales	Current Retail Void (\$)	Est. Sales / s.f. [2]	Current Retail Void (s.f.)	Additional Demand from Household Growth (s.f.) (21-yr)	Total Demand 2035
Convenience Goods								
Grocery Stores	6.32%	\$120,475,342	\$184,249,286	-\$63,773,944	\$400	--	132,584	--
Specialty Food Stores	0.45%	\$8,618,277	\$688,312	\$7,929,965	\$350	22,657	10,839	33,496
Beer, Wine, and Liquor Stores	0.58%	\$11,086,622	\$20,158,521	-\$9,071,899	\$300	--	16,268	--
Health & Personal Care Stores	2.58%	\$49,178,887	\$28,705,912	\$20,472,975	\$350	58,494	61,853	120,348
Shopper's Goods								
General Merchandise Stores	7.29%	\$138,957,988	\$306,174,261	-\$167,216,273	\$400	--	152,924	--
Furniture & Home Furnishings Stores	1.24%	\$23,597,632	\$75,700,359	-\$52,102,727	\$250	--	41,551	--
Clothing and Clothing Accessories	2.62%	\$49,939,158	\$3,252,337	\$46,686,821	\$250	186,747	87,933	274,681
Sport. Goods, Hobby, Book, & Music	1.17%	\$22,334,602	\$7,729,643	\$14,604,959	\$250	58,420	39,327	97,747
Miscellaneous Store Retailers	1.47%	\$28,104,284	\$15,653,360	\$12,450,924	\$250	49,804	49,486	99,290
Food Services & Drinking Places								
Full-Service Restaurants	2.80%	\$53,288,407	\$37,882,080	\$15,406,327	\$350	44,018	67,022	111,040
Limited-Service Eating Places	2.45%	\$46,620,554	\$27,426,437	\$19,194,117	\$325	59,059	63,146	122,205
Special Food Services	0.46%	\$8,790,545	\$394,551	\$8,395,994	\$250	33,584	15,478	49,062
Drinking Places (Alcoholic Bevs.)	0.28%	\$5,347,113	\$5,779,467	-\$432,354	\$250	--	9,415	--
Durable Goods								
Auto Parts, Accessories, and Tires	0.85%	\$16,188,315	\$19,486,378	-\$3,298,063	\$250	--	28,505	--
Bldg Mater., Garden Equip. & Supply	5.11%	\$97,442,521	\$47,297,299	\$50,145,222	\$300	167,151	142,982	310,132
Electronics & Appliance Stores	1.21%	\$23,139,192	\$4,116,380	\$19,022,812	\$250	76,091	40,744	116,835
	36.88%	\$703,109,440	\$784,694,583	-\$81,585,143		756,025		1,334,837

Source: Claritas, Census of Retail Trade for CO, UT, AK and

[1] Demand percentages based on national and state averages

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

Table 30
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	22,657	33,496
Beer, Wine, and Liquor Stores	--	--
Health & Personal Care Stores	58,494	120,348
<i>Shopper's Goods</i>		
General Merchandise Stores	--	--
Furniture & Home Furnishings Stores	--	--
Clothing and Clothing Accessories	186,747	274,681
Sport. Goods, Hobby, Book, & Music	58,420	97,747
Miscellaneous Store Retailers	49,804	99,290
<i>Food Services & Drinking Places</i>		
Full-Service Restaurants	44,018	111,040
Limited-Service Eating Places	59,059	122,205
Special Food Services	33,584	49,062
Drinking Places (Alcoholic Bevs.)	--	--
<i>Durable Goods</i>		
Auto Parts, Accessories, and Tires	--	--
Bldg Mater., Garden Equip. & Supply	167,151	310,132
Electronics & Appliance Stores	76,091	116,835
Total	756,025	1,334,837

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

Table 31 indicates the most promising retail categories for the Thornton Crossroads at 104th Station Area—Specialty Food, Full Service Restaurants, Limited Service Eating Places and Miscellaneous Store Retailers. Currently, most of the space available would be in pad site configurations along 104th Avenue and Colorado Boulevard. Up to 50,000 square feet would potentially be suitable for these locations.

Table 31
Thornton Crossroads at 104th Station Area Retail Demand, 2014-2035

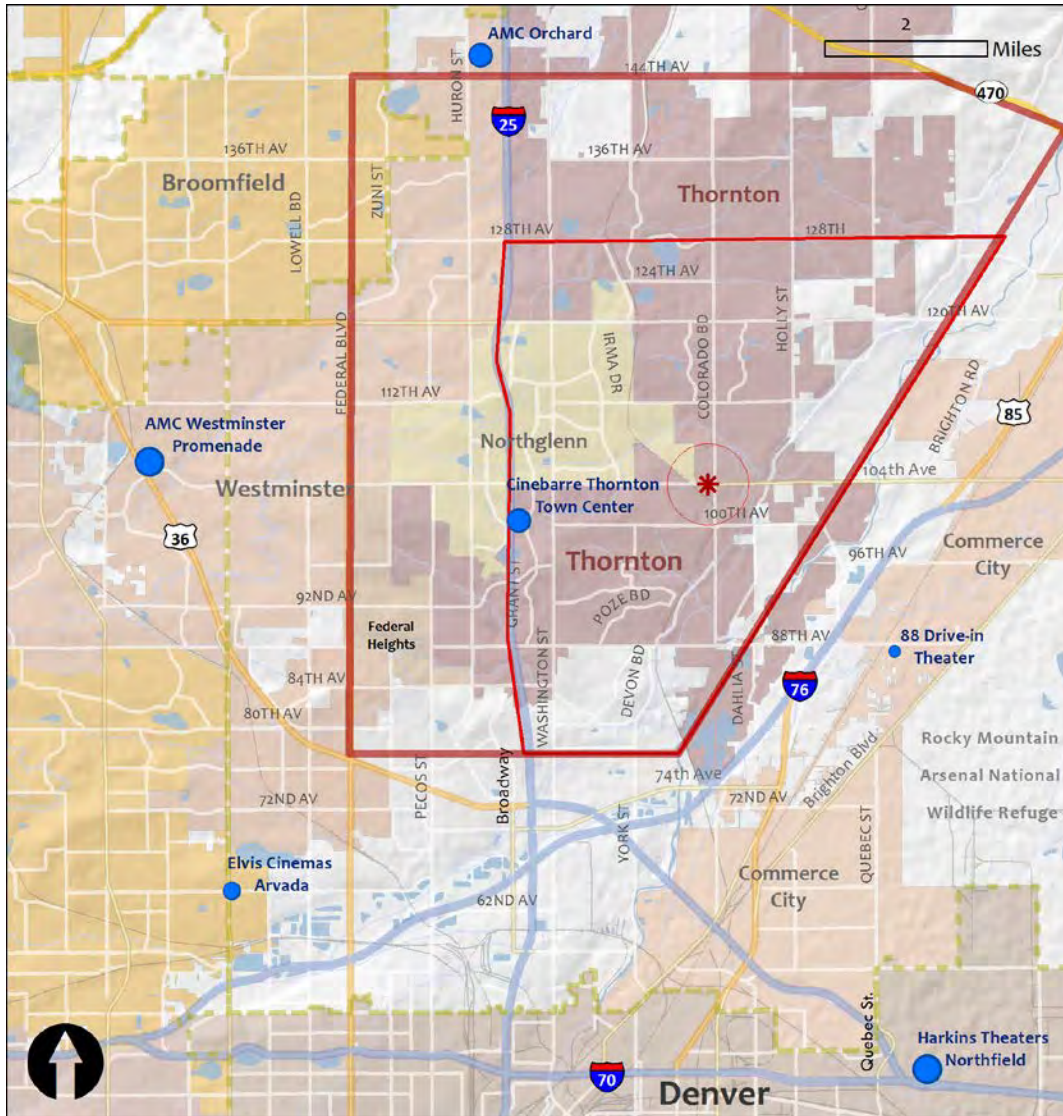
Category	2014 (s.f.)	2035 (s.f.)
Specialty Food	22,657	33,496
Full Service Restaurants	44,018	111,040
Limited Service Eating Places	59,059	122,205
Miscellaneous Store Retailers	49,804	49,062
Total	175,538	315,804

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

5.4 Other Commercial Opportunities

There is a potential desire to transition the Thornton Crossroads at 104th Station Area to a more regional serving station with regional commercial services. Regional commercial centers often have recreational and other entertainment options. Movie theaters are a particularly popular option. Figure 20 shows the location of current movie theaters in the Regional Market Area. There is a movie theater in fairly close proximity to the Thornton Crossroads at 104th Station. While a movie theater is not supportable at this time, given the relatively close proximity of the Cinnebarre movie theaters, this is a use that can be reconsidered as the population in the area grows and as the station area matures.

Figure 20
Location of Area Movie Theaters

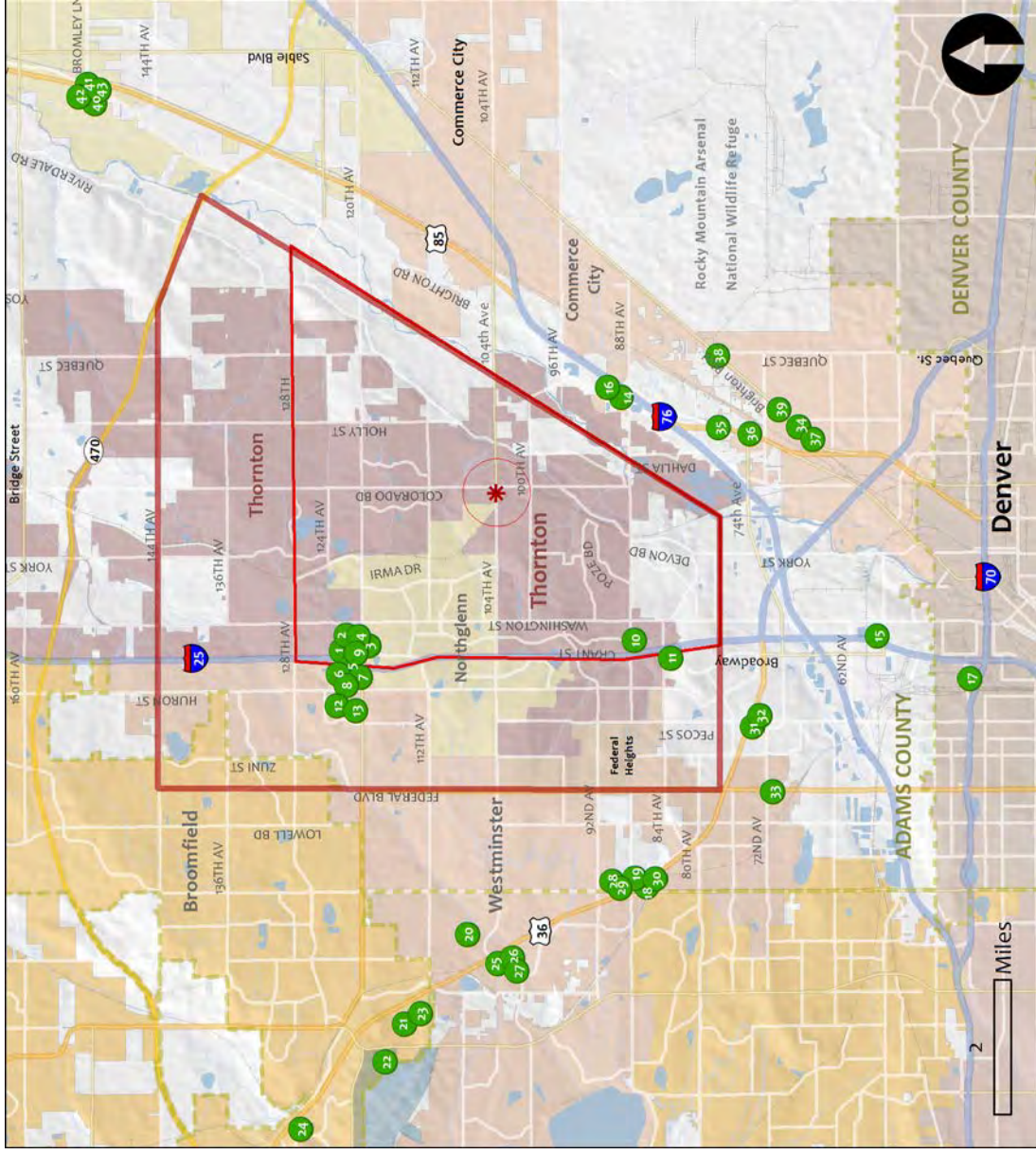


Source: ArLand

Table 32
Regional Hotel Locations

ID	Hotel Name
1	DoubleTree by Hilton
2	Hampton Inn
3	Ramada Plaza
4	Holiday Inn Express Hotel & Suites
5	La Quinta Inn
6	Fairfield Inn & Suites
7	Comfort Suites
8	Super 8
9	Econo Lodge
10	Crossland Denver
11	Motel 6
12	Extended Stay America Hotel
13	Cottonwood Suites
14	La Quinta Inn & Suites
15	Comfort Inn Central
16	Super 8
17	Quality Inn
18	La Quinta Inn
19	DoubleTree by Hilton
20	The Westin
21	Aloft
22	Hilltop Inn & Suites
23	Marriott Hotel
24	Omni Hotels
25	Drury Inn & Suites
26	SpringHill Suites
27	La Quinta Inn
28	Hampton Inn
29	Residence Inn
30	Comfort Inn
31	Venture Inn
32	Valli-Hi Motel
33	City Inn
34	Super A Motel
35	Hi-U Inn Motel
36	Crestline Motor Hotel
37	Penn Motel
38	Clearview Motel
39	Triangle T Motel
40	Hampton Inn
41	Best Western
42	Comfort Inn
43	Super 8

Figure 21
Hotels in Regional Area



Another use that should be examined is hotels. Figure 22 and Table 32 shows the location of hotels in the region. Without exception, they are located along major highways and corridors. Although the North Metro Corridor will eventually be a major transportation corridor, because there are no major employment nodes or demand drivers along the corridor yet (ie entertainment options), demand for a hotel near the station is some years out.

5.5 Thornton Crossroads at 104th Station Area Opportunities

Neighborhood shopping centers transition over a very long period of time for a number of different reasons. The broader environment changes. Over time, shopping centers become obsolete and need reinvestment and reconfiguration. Northern and eastern Thornton, in particular, will continue to fill in, creating a broader market for regional goods and services near the station. Examples of changes seen at other aging shopping centers are described below. The case studies are meant to be examples of the creativity shown by redevelopers in repurposing retail centers.

Uptown District San Diego, California



The Uptown District in San Diego, California is an example of the redevelopment of an aging retail center into a successful 14-acre mixed-use, high-density development. It was built on the site of an abandoned department store and its surrounding parking lot. The City of San Diego originally purchased the site in 1986 for \$9 million to be used for civic buildings but changed its mind and subsequently issued a Request for Proposal (RFP) for the acquisition and development of the site. Stringent land use and design criteria were written into the RFP, including ground floor neighborhood-oriented retail uses and limited upper level commercial uses, as well as a 3,000-square-foot community center.

The property was purchased in 1988 for \$10.5 million and constructed for \$70 million. The completed project combines a mix of uses, including 318 residential units (townhomes, flats, and artists' lofts ranging from 652 to 1,249 square feet), 145,000 square feet of commercial and retail space, a highly successful grocery store, and a 3,000-square-foot community center. The residential density is 52 units per acre, which is far more than the city average of less than 3 units per acre. The uses are mostly mixed horizontally, with most of the retail surrounding a central plaza anchored by a large grocery store in the rear. The housing is on an adjacent block with pedestrian courtyards connecting the units. There is some vertical mixing of uses in the housing block along with first-floor retail along a couple of the streets.



Restoring a regular street grid and creating smaller blocks along with pedestrian pathways helped to create a safer, easier, pedestrian-friendly atmosphere. A pedestrian bridge over a busy street connected the adjacent neighborhood with the project, giving residents access to the grocery store, boutique retail shops, the community center, and transit. Underground parking for both the grocery store and the homes helped to reduce the presence of automobiles in the project. Because the project was in an existing community adjacent to one of the

city's busiest bus corridors, the developers could reduce parking below the requirements for conventional developments in the city.

In addition to providing more housing choices and retail options, this greyfield development spurred redevelopment of adjacent properties along the main arterial road, as well as within the surrounding neighborhood. By the time the Uptown District's construction was well underway, 15 other projects in the area had started or were in advanced stages of planning.

New Roc City Entertainment Center New Rochelle, New York

A developer acquired the site of the former Macy's anchored New Rochelle Mall out of bankruptcy from the Resolution Trust Corporation and Federated Department Stores and redeveloped the site to create a large format entertainment and sports related development to serve the bedroom community of New Rochelle and the broader regional market of Westchester County, New York. In 1999, the dead mall site was transformed into 500,000 square feet of retail and entertainment with a 2,200 square foot parking garage topped by a hotel and office building.

With a design that integrates the local street network, the \$190 million project houses several restaurants, a supermarket, a health club, an 18-screen plus IMAX Regal cinema (which is now one of the chain's top five performers), and a variety of choices for family recreation including miniature golf, an arcade with over 300 interactive games and rides, laser tag, go-karts, a state of the art skating facility and a bowling alley. The Marriott Residence Inn above the parking garage offers 120 single rooms or suites with full kitchens for short-and long-term stays.

The garage was a public/private partnership with \$24 million of its cost funded by the City through bonds. .



5.6 Commercial Potential

While the Colorado Marketplace does well, it struggles to compete with other parts of the City. There is demand for additional retail services, primarily restaurant and eating locations, most of which would be on infill parcels along Colorado or along 104th Avenue in pad site configurations. There is also a longer term desire for the area to transition to a regional retail and services area.

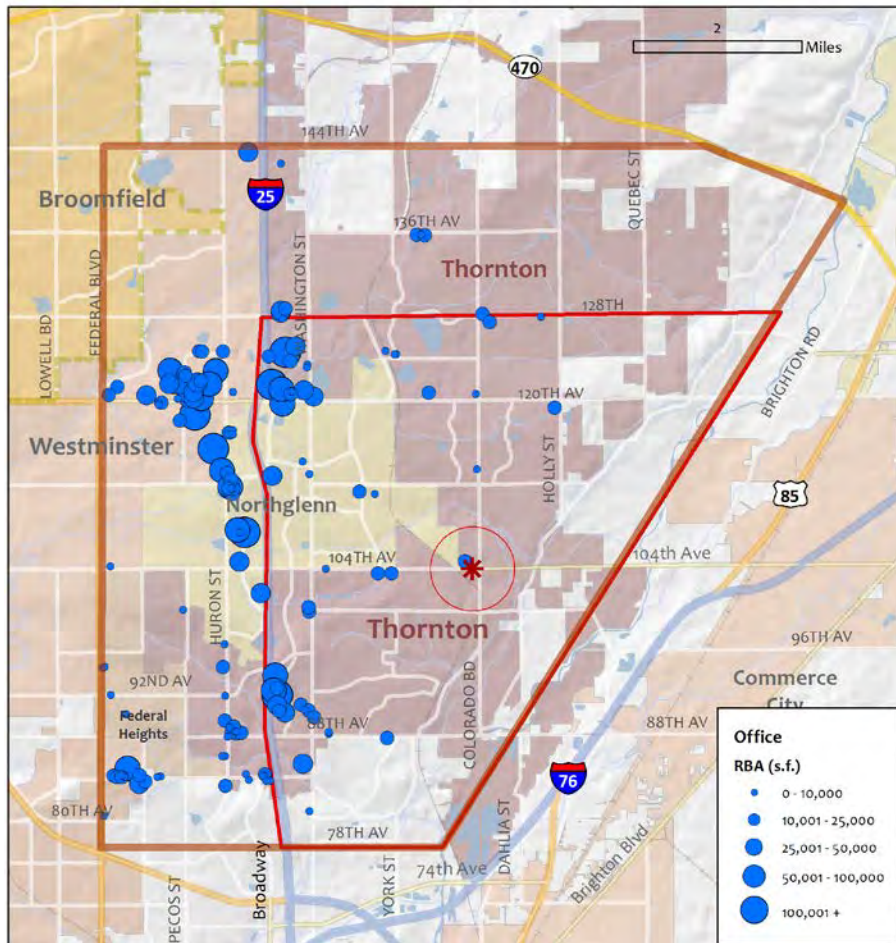
VI. OFFICE AND JOBS ANALYSIS

This section examines the office market. Office is a very desirable, high value use at many TOD stations. It brings in employees who help create a daytime population. Additionally, if the Thornton Crossroads at 104th Station is to transition to a more regional serving station, broadening land uses to include office would be a valuable addition.

6.1 Office Development Trends

Figure 15 shows the location of office clusters within the 104th Avenue Regional Market Area. The majority of offices are located along I-25 and just west of the highway.

Figure 22
Thornton Crossroads at 104th Station Area Office



Source: CoStar, ArLand

Table 30 shows the office inventory in the Thornton Crossroads at 104th Station Regional Market Area. The Primary Market Area is shown for comparison purposes. There is a total of over 3.5 million square feet of office space in the Regional Market Area. Rents are generally lower in offices closer to the immediate station area. Over 700,000 square feet of office space was constructed in the last ten years.

Table 33
Office Development Trends

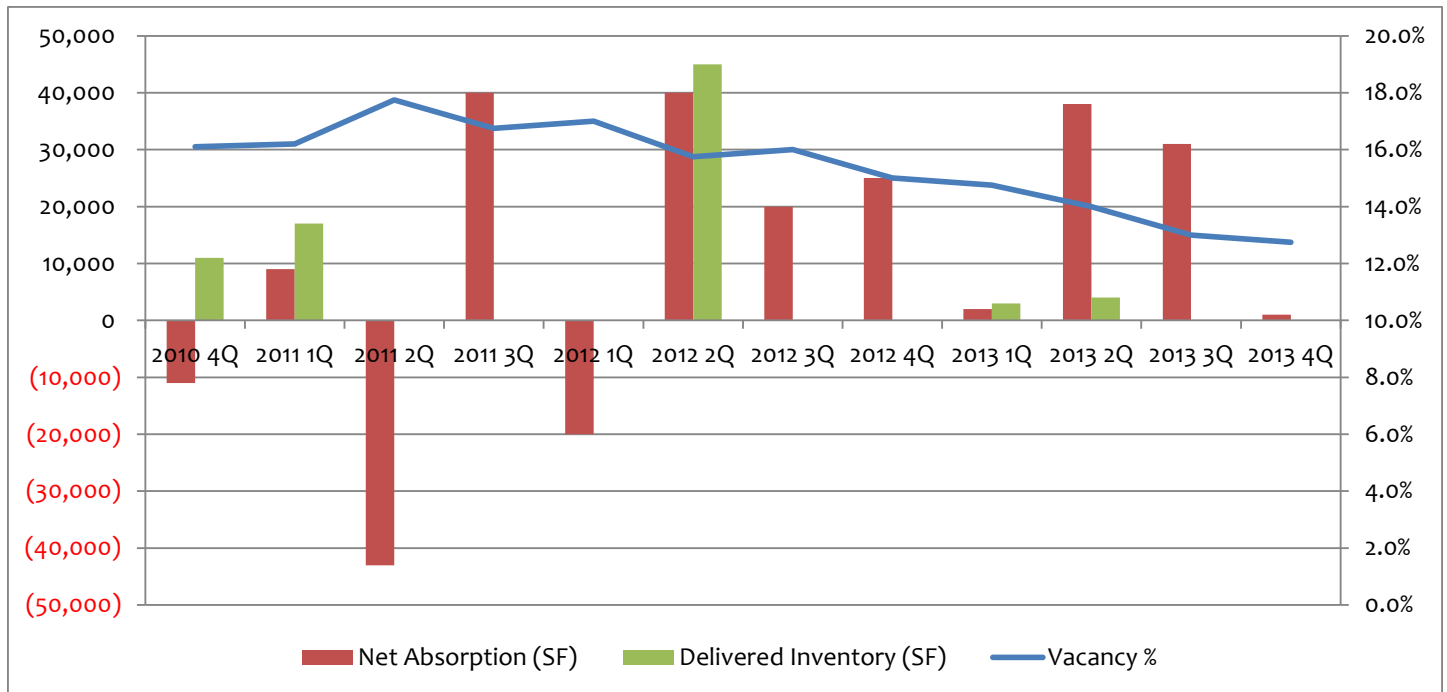
	Primary Market Area	Regional Market Area (not inclusive of PMA)
Inventory (sf)	1,218,644	2,413,528
Vacancy	136,492	331,007
Leased Space (sf)	1,092,741	2,094,467
Average Rental Rate	\$15.96 / yr	\$18.23 / yr

Source: CoStar, ArLand

Figure 16 shows when newly constructed buildings were added to the overall inventory (green column) against the overall fluctuation of vacancy rates within the Regional Market Area (blue line). It should be noted that the additions to office inventory were not within the 104th Avenue Primary Market Area but within the larger Regional Market Area, likely in the northern portion of the market area, where most of the regional office interest has been located. While the vacancy rate is decreasing, it still hovers at over 13 %.

Significant office development is being planned at approximately I-25 and State Highway 7 in Broomfield by the McWhinney Development Company at its North Park development. While buildout will take place over a number of decades, the focus of new office development in the northern metro area is likely to be at that intersection.

Figure 23
Absorption, Deliveries & Vacancies in the 104th Station Avenue Regional Market Area



Source: CoStar, ArLand

6.2 Office Development Potential

The market for office is a function of growth or change in jobs among those industry sectors that typically occupy office space. Table 34 describes the current jobs forecast for the Regional Market Area. The forecasts indicate jobs growth of approximately 41,000 jobs in the Regional Market Area by 2035.

After calculating the number of potential new jobs during this time period, an estimate was made of the portion of the workforce in industry categories and their requirements for office space. While categories such as Construction and Wholesale Trade may occupy very little traditional office space, industries such as Professional and Technical Services, for example, have an estimated high percentage of their work force in office space.

Table 34
Potential Office Space Demand in Regional Market Area, 2010-2035

Industry	Estimated Regional Jobs 2014	% Jobs	% of Total Jobs Estimated to be Office	New Regional Market Area Jobs 2014-2035	Office Jobs	Regional Market Area Office Space Needs ^[1]	Office	Office
							Potential Capture (low) ^[2]	Potential Capture (high) ^[2]
Agriculture, Forestry, Fishing and Hunting	55	0.1%	2%	38	1	190	2	9
Mining	258	0.4%	10%	177	18	4,437	44	222
Utilities	215	0.4%	10%	148	15	3,696	37	185
Construction	2,743	4.6%	2%	1,886	38	9,428	94	471
Manufacturing	1,898	3.2%	2%	1,305	26	6,523	65	326
Wholesale Trade	2,239	3.8%	2%	1,539	31	7,695	77	385
Retail Trade	10,547	17.8%	2%	7,249	145	36,246	362	1,812
Transportation and Warehousing	1,229	2.1%	2%	845	17	4,225	42	211
Information	2,003	3.4%	70%	1,377	964	240,973	2,410	12,049
Finance and Insurance	2,349	4.0%	70%	1,614	1,130	282,514	2,825	14,126
Real Estate and Rental and Leasing	1,126	1.9%	80%	774	619	154,783	1,548	7,739
Professional and Technical Services	3,858	6.5%	80%	2,652	2,121	530,346	5,303	26,517
Management of Companies and Enterprises	1,097	1.8%	80%	754	603	150,740	1,507	7,537
Administrative and Waste Services	5,628	9.5%	2%	3,868	77	19,342	193	967
Educational Services	3,018	5.1%	2%	2,075	41	10,373	104	519
Health Care and Social Assistance	8,931	15.0%	35%	6,139	2,149	537,126	5,371	26,856
Arts, Entertainment, and Recreation	806	1.4%	2%	554	11	2,769	28	138
Accommodation and Food Services	6,683	11.3%	2%	4,593	92	22,966	230	1,148
Other Services, Ex. Public Admin	1,886	3.2%	2%	1,296	26	6,481	65	324
Public Administration	2,804	4.7%	35%	1,927	675	168,630	1,686	8,431
Other	0	0.0%	2%	0	0	0	0	0
Total	59,374	100.0%	22%	40,809	8,798	2,199,482	21,995	109,974

Source: Claritas, DRCOG, ArLand

[1] CoStar estimates 250 square foot per office job

[2] Assumes capture rates of 1-5% of regional market

While future jobs growth in the broader region would translate into demand for an additional 2 million square feet of office space, much of this demand will be oriented to the I-25 corridor. Assuming a modest capture rate of 1-5% would result in potential demand for 20,000 to 100,000 square feet of office. However, proactive economic development activities would potentially be necessary to attract office users to the area.

VII. DEVELOPMENT POTENTIALS

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 planned developments 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 play, the presence of commuter rail shapes the environment and creates a focal point for future development opportunities. One of the challenges for the market area is the relative newness of the residential and commercial projects in the area. The presence of a station does not fundamentally alter a market; however, there would be the expectation of increased interest in area projects and redevelopment. It provides a new focal point for development.

Based on the market analysis, the future development potentials near the station area include the following shown in Table 35:

Table 35
Thornton Crossroads at 104th Station Area Future Demand by Land Use Category

Use	Units / SF	Niches
Residential	600-1,000 units	Market Rate multifamily (targeting middle income renters with incomes of \$50,000 to \$75,000 with rents about \$1.20 / square foot) and senior apartments
	150-200 units	Condos/Townhomes
	380-450 units	Single Family Detached / Patio homes
	200 units	Senior Continuum of Care
Retail and Commercial Uses	up to 50,000 sf	Fill in commercial pad sites along 104th and Colorado. Most demand for restaurant and eating / drinking uses. No current demand for movie theaters and hotels. Long term potential use; would need to be reexamined.
Office	up to 50,000 sf	Most users want to be on I-25; potential for "one off" or niche office uses

Source: ArLand