



Glenwood Springs, Colorado

Moving Forward Together | U.S. EPA Brownfields Area-Wide Plan

ACKNOWLEDGEMENTS

A project of this scope and magnitude could not be realized without the support and commitment of many individuals. It is important to acknowledge the vision and leadership of those that assisted in the preparation of this plan, especially the elected officials of Glenwood Springs, as well as the City staff that supported technical work required.

All of the participants that played a valuable role in the project, including government, institutional, and community leaders, are too numerous to list.

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EXECUTIVE SUMMARY

THE HISTORY - WHY PREPARE THIS PLAN?

This plan addresses what is likely one of the most significant changes to Glenwood Springs' development pattern and economy in recent years. The key aspect of this effort is the fact that the City is not only responding to new opportunities but also looking at how rethinking large swaths of land can set the stage for making its downtown ever more vibrant. Community planning is more than preparing a preferred development proposal. Instead, it represents the proactive role government can take in working with property owners and developers to ensure that the redevelopment of former or under-utilized industrial/brownfield sites is undertaken in a manner that fully maximizes their potential with regards to meeting community needs and providing a greater quality-of-life. Complimenting the existing neighborhood development patterns and melding the new with the existing are two primary outcomes that will provide an overall benefit to everyone.

WHAT IS A BROWNFIELDS AREA-WIDE PLAN?

This Brownfields Area-Wide Plan (AWP) is focused on a defined area that includes brownfields properties. The planning aspects of the project are not limited solely to those properties but evaluates a larger area that may have been influenced by the presence of environmental contaminants or other environmental and physical constraints impairing the ability for redevelopment to occur.

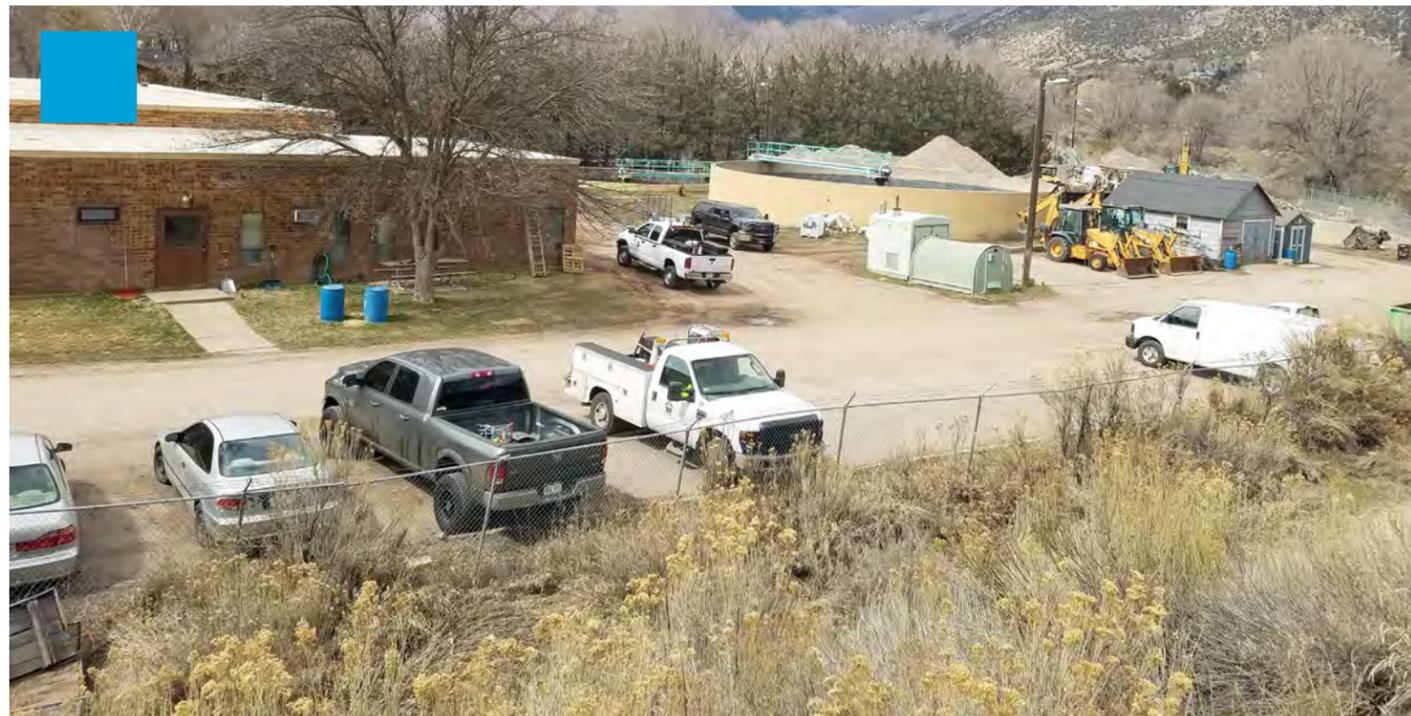
In order to promote redevelopment activities that are context-sensitive and mesh well with their surroundings, the City took the lead in undertaking the preparation of the AWP. It advances initiatives that integrate land use, transportation, and economic development elements to create a comprehensive urban redevelopment strategy. It considers site specific redevelopment and neighborhood improvements, including broader infrastructure needs required to attract and support private investment.

THE CATALYST BROWNFIELD SITES

The Former Wastewater Treatment Plant – This 5-acre property was utilized as a wastewater treatment plant from 1968 until 2012. The City is in the process of demolition and abatement of this site to make it development-ready. This site and its surrounding context, including other brownfields parcels associated with former railroad related parcels, is the primary focus of the AWP reuse planning effort.

The Active Colorado Department of Transportation (CDOT) Engineering & Maintenance Center – In use by CDOT since the 1970s, this active facility was identified as a potential opportunity for redevelopment as a higher and better use. After meeting with CDOT officials, it appears that due to multiple service requirements needed for such a facility, the ability to relocate the complex to another location is not feasible at this time.

The Former Holly Quarry – Formerly owned by the Pitkin Iron Corporation, this 27-acre former limestone quarry closed in 1991 and is currently vacant and unused. The current owners have expressed an interest in determining what development potential exists on the site. Based on available information it appears that there are no known environmental issues associated with the mining operation that would impact the site's ability to be developed for other commercial or residential uses.



Former Wastewater Treatment Plan prior to demolition.



View of the CDOT site with Two Rivers Park, the Colorado River, and Midland Avenue in the distance.

WHAT ARE THE PLAN'S LIMITATIONS?

The recommendations in this document are purely for guidance in decision-making; the plan is not the letter of the law. The decision-makers include multiple parties including but not limited to City leaders, Garfield County, and RFTA, and therefore the plan should serve as a common reference for all parties, as step-by-step decisions are made.

The reuse plans developed for the targeted reuse areas within the overall AWP study area illustrate one or more potential build-out scenarios for the properties that are the focus of redevelopment efforts. The proposed physical layouts depicted on the plans were developed in conjunction with the input from a diverse group of stakeholders, including city residents. Ultimately though, the final configurations of the development plans will change as the level of design progresses. So why is this effort important? Developing a likely build-out scenario for each targeted reuse area allows the City and other public agencies to fully understand the real physical and economic constraints and opportunities for each of the targeted reuse areas and their key sites. Most importantly it provides a tool for working with the private sector as development proposals are prepared and submitted to the City for review and approval.

This effort is not one that can lead directly to bricks and mortar building. Although it does focus on key next steps, it is a plan that organizes an overall strategy with priorities to establish a focused list of actions, especially for public infrastructure. It provides context within which decision-making can occur over time, including for opportunities or issues that might arise that could not be anticipated at the time this plan was developed. The plan also outlines the strategic next steps for the key priority projects, which may include performing the detailed design and engineering required to permit and construct physical improvements.

The plan illustrates market-supported redevelopment which is not consistent with the current zoning of some of the targeted reuse areas. The City will need to evaluate its recent comprehensive city-wide zoning update in relation to the proposed site reuse plans and determine which district designations are most appropriate, as it updates its city-wide zoning map.

Although there is a desire by many to see immediately implementable projects, an effort of such magnitude inevitably results in a series of recommendations that require further effort to advance toward true realization. In the vast majority of cases, the next steps require determining

specific details through a design and engineering process, together with a focused effort to secure financing and other resources needed for implementation. These steps will determine how a project should be realized, its functional refinements, and the exact specifications needed to advance towards construction. This AWP does not, however, go “back to the drawing board” with regard to recommending to conduct further analysis as to whether or not a specific recommendation should be pursued at all. In most cases this planning effort is the culmination of other early efforts, so the time is here to move towards implementation and realization – not to pursue more high-level planning.

THE PRIORITY ACTIONS

Due to the complex nature of all of the inter-related factors and considerations needed to develop an economically viable and physically construct-able list of improvements, it is important to have a focused set of actions needed to support moving the plan from vision to reality. The following is a list of suggested high-priority actions that can serve as a roadmap for what needs to happen first, who is needed to lead each effort, and a potential strategy for how to undertake each effort. Emphasis is placed on those aspects that will be needed by the private sector to be able to prepare an accurate and informed development plan and pro forma, and also considering public infrastructure that will be needed to attract and support private investment. All of the priority actions focus on the Confluence Area of the AWP study area.

The Priority Actions

- 1. Brownfields Environmental Assessments & Remedial Plans** – The former railroad properties now owned by the City require environmental assessment activities. Based on the known previous railroad activities that occurred, it is suspected that there are environmental issues with the existing soils on these parcels. The City should perform a Phase I Environmental Site Assessment (ESA) and likely a Phase II ESA to support soil excavation. The site reuse plans for the Confluence Area recommend development on these parcels that would necessitate significant soil excavation and removal to accommodate underground parking which is facilitated by the topography of the site.
- 2. Traffic Study** – Based on the scale, density, and mix of uses proposed, there is a need to perform a traffic study to determine how to best manage new traffic generation

and mitigate its impact to the downtown. This study should look at an area larger than the Confluence Area itself and include the key intersections along Grand Avenue as well as 8th Street and Midland Avenue. A major challenge for traffic flow is the bottle-neck that is created by the 8th Street bridge over the Roaring Fork River. Due to the bridge’s width, turning movements for traffic travelling east on 8th Street and desiring to turn left onto the proposed Riverside Drive (current location of the 7th Street intersection) cannot be accommodated. Therefore, left turn movements will need to be accommodated at the intersections of 8th Street and Defiance and Colorado Avenues. A traffic study will determine how to facilitate traffic flow, where turning lanes are optimal and their lengths, as well as if other traffic control devices, such as traffic signals, are warranted. In addition, a traffic model will make recommendations to ensure the safe and ample pedestrian flow is accommodated at all intersections, ensuring that automobile flow is not given sole preference in decision-making.

- 3. Riverfront Schematic Programming & Master Plan Design** – Refining the parameters of riverfront park to ensure that private development works seamlessly with the desired park design and conditions will be critical. The development for the entire Confluence Area should be planned from the riverfront inland. The relationship of buildings especially, will be dependent upon the water line, the flood elevation, and the final elevation of the roadways, all of which will be informed by the park design. This effort should include finalizing a recreational facilities program for the park to determine what uses and facilities are most desirable in this location from the perspective of the City’s overall park system.
- 4. Perform a Comprehensive Physical ALTA - Level Survey for the Confluence Area** – The only way all of the various design engineering elements can be advanced is with real survey information based on current conditions. This can be performed in several steps, i.e. topographic and boundary first and then underground utility work later, as necessary. So many aspects of how everything can be located is dependent upon fixed site elements, the only way to ensure that all elements work together is to start with one current and cohesive survey for the area. This includes a collecting bathymetric data along the shoreline of the river to determine how to interface park elements with the water.



View of former Holly Quarry and mountainside from The Meadows.

- 5. Preliminary Engineering of the Street Network** – A major challenge in advancing development in the Confluence Area is the fact that so many different but interconnected elements need to be determined before any buildings can be built. This is especially true for the street network. All of the proposed streets should be taken through a preliminary engineering phase in order to establish final rights-of-way and to set grades for land development purposes, even if all of the roads are not completely engineered and constructed at the same time. Again, this is challenging because no developer will likely be willing to construct all of the public infrastructure, especially in the early phases of development, so this work will need to be led by the City in order to ensure everything works together in the best possible fashion.
- 6. Comprehensive Utility Plan** – Underground utilities in the Confluence Area are especially challenging. As the Constraints Diagram in Chapter 2 illustrates, there is a complex web of underground utilities in this area partially as a result of the former wastewater treatment plant and the newer pumping station. A comprehensive utility plan will evaluate each utility and determine its best location, including if it can remain in its current state, or if it should be relocated. This can only be performed once street rights-of-way are finalized. The site reuse plans will also provide guidance as to the level of utility service needed to support each individual lot and building, based on the likely use and density.
- 7. Downtown Parking Study Update** – A great deal of time and effort during this planning process was spent discussing parking needs and approaches. The reuse plans illustrate various options for how to address the need to provide off-street parking to incrementally serve new development that occurs within the Confluence Area, as well as to support the parking supply needs of existing businesses in the downtown and to serve transit ridership. A Comprehensive Downtown Park Study which updates the 2012-13 study with all of the new conditions should be undertaken. RFTA is also planning to undertake a Corridor Service Study which could include a transit center in the downtown. Parking is an important part of any consideration of transit service, especially for a transit center, so it is important that these efforts work together to ensure that maximum opportunities to link transit service with a downtown parking strategy, is achieved.

- 8. Land Assemblage** – The reuse plans depicted in this report assume that some of the current privately-owned property in the Confluence Area are brought into the redevelopment. There are several ways this could occur. The first step is for the City to resume discussions with individual property owners about their role in the redevelopment. These discussions are not limited to the private sector, since the County owns critical parcels needed to fully achieve the vision of a continuous development connection between the core of downtown and the riverfront, via 7th Street.
- 9. Obtain Voter Approval for Land Transfer** - The Charter of Glenwood Springs requires that publicly-owned property that has been used for a public purpose receive public approval through an election before being sold. The portions of the Confluence Area used as a public wastewater treatment facility are subject to this approval requirement. The remainder of the property has not been put to a public use by the City and is not subject to this requirement. The City should consider transferring the land that has not been put to a public use to the Downtown Development Authority or a similar organization that does not share the same requirement.
- 10. Zoning** – The City has already completed the hard part of updating its zoning ordinance. As a next step in that process, the City will be evaluating its city-wide zoning map. All of the targeted reuse areas in the AWP study area should be carefully evaluated to determine the best district designation to promote the desired development outcome.
- 11. RFTA Right-of-Way** – The reuse alternative considers various ways to approach the RFTA right-of-way through the Confluence Area, north of 8th Street. As a starting point, it is recommended that the City pursue discussions with RFTA to acquire the sliver portions along the river side of the right-of-way (as depicted in Chapter 2) to greatly increase the development potential of the development parcels.
- 12. Transit Service Improvements** – Transit service is critical to the long-term success and vitality of the downtown and development within the Confluence Area. The City should work closely with RFTA on its upcoming Corridor Service Study, especially to consider the potential to include a transit center facility within the downtown, possibly

within the Confluence Area and how it relates to potential structured parking facilities.

- 13. Capital Improvement Programming CIP and Funding/ Financing Plan** – As is depicted in Chapter 3 of this report, all of the follow-up design and engineering, as well as construction, will require significant capital expenditures. The City should prepare a comprehensive CIP that is reviewed annually, at a minimum. The CIP should program capital costs for public investments and determine what will be public and also how private investments relate, in order to maximize the ability to leverage all expenditures as match for public funding applications. This work should be done in conjunction with the City’s public funding and advocacy team to ensure the programming of capital projects is timed with the development phasing and the ability to maximize the ability to garner public funds to undertake all of the required investments.
- 14. Master Developer Request for Proposals (RFP) and Developer Agreement Process** – Using the AWP as basis for soliciting developer proposals will aid in determining modifications to the plan that may be required to fully respond to market conditions, understanding that the overall development goals should not be significantly compromised. Ultimately, a preferred developer could be selected as the master developer for the entire area, including the Vogelaar Park redevelopment south of 8th Street, and a formal master agreement between the City and developer could be executed. This agreement would initially define the parameters of what elements the developer will be responsible to design and construct and those that the City would do the same.
- 15. Project Action Team and Dedicated Project Manager** – Finally, a project of this scale and magnitude requires a dedicated team to oversee and coordinate. A dedicated project manager within the City should be identified to coordinate all activities, both public and ultimately private. This person would also serve as the leader of a Project Action Team consisting of key department representatives that meet on a regular basis. In addition, it is likely that outside consultants will be needed for specialty expertise beyond the typical disciplines of design and engineering. This could include experts in public financing, negotiating developer agreements, etc.

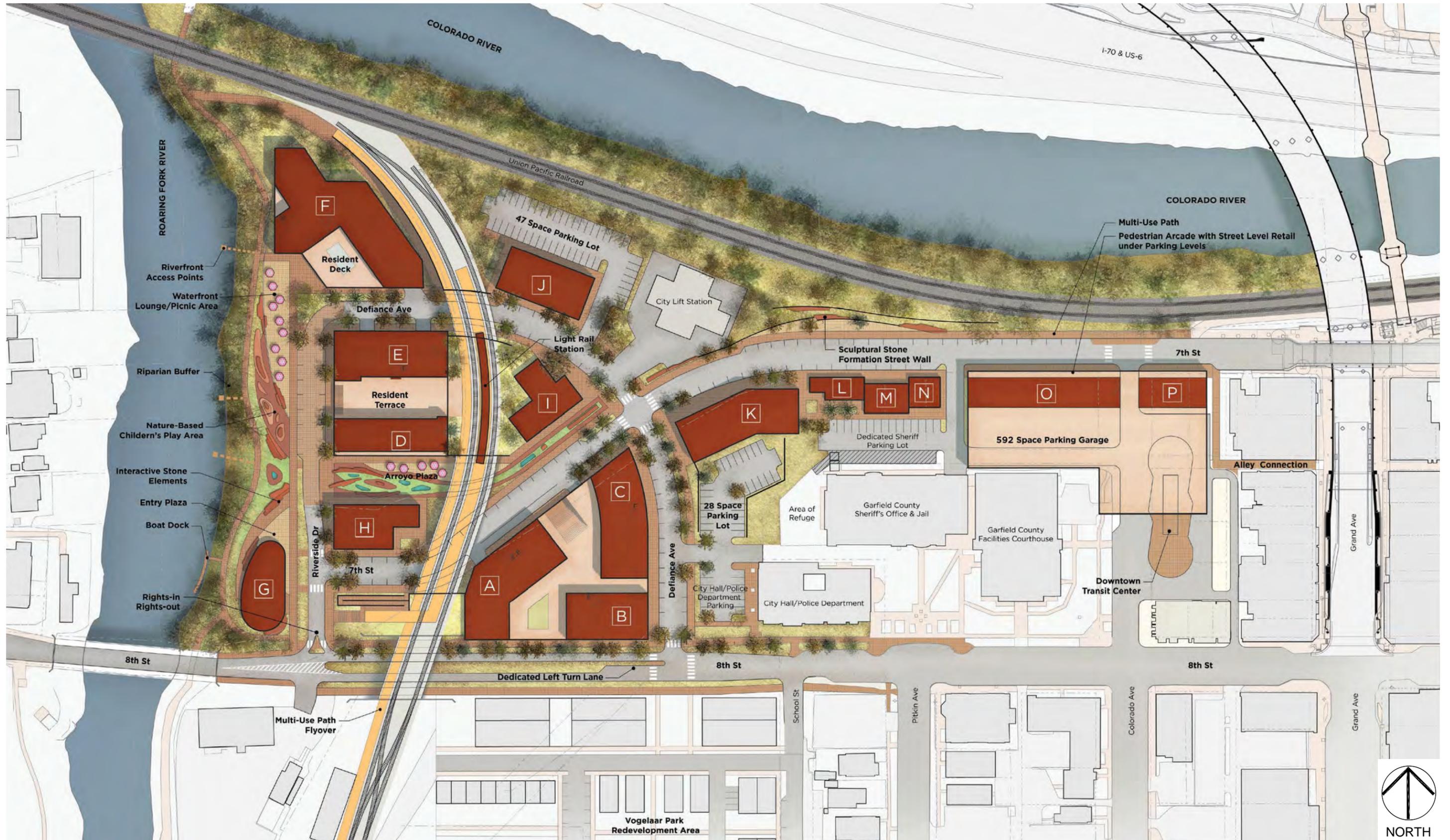
COMMUNICATION AND COORDINATION

Building on the notion of a creating a dedicated team focused on the implementation of the recommendations in this plan there are three key elements that will be important to that group’s success.

Communication - In order to fully realize this plan, it is recommended that a formal communication strategy be considered that provides regular community updates on all of the steps and projects. This includes requiring that private developers provide public engagement as a part of their development process, including more than just the meetings required for plan and permit approvals.

Coordination - It is also recommended that this project coordinates closely with all of the partners required to make the ultimate realization of the development truly great; this includes the DDA, RFTA, and Garfield County, as well as many others.

A Guiding Document - This AWP plan is purely meant to guide decision-makers in the redevelopment of the study area, it is not the letter of the law. This makes coordination and communication critical. Key stakeholders are wide-ranging, both public and private, and so it is important that this document serves as a common reference and a starting point for decision making. It will need to be regularly review and modified so the recommendations and proposed reuse strategies respond to conditions based on greater technical data and design activities.







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THE AREA-WIDE PLAN

1.1 BACKGROUND

The City of Glenwood Springs in partnership with the Downtown Development Authority (DDA), was awarded a Brownfields Area-Wide Planning (AWP) Grant by the U.S. Environmental Protection Agency in 2016. This AWP project advances recent planning efforts to address long-term redevelopment planning needs for a large area of the downtown, with special emphasis on the Confluence Area of the Colorado and Roaring Fork Rivers. This AWP effort focuses on determining the overall public infrastructure and actions needed to advance private investment and vertical construction.

1.2 TARGET REUSE PLANNING AREAS

Based on the location of the three catalyst brownfield sites, targeted reuse use planning areas were identified. The Confluence Area includes the former wastewater treatment plant as well as several other parcels, including the former railroad rights-of-way. The reuse plan alternatives in this AWP report advance the concepts developed in the 2017 Confluence Redevelopment Plan. The West 6th Street Area was identified based on its relationship between the CDOT site and the downtown, specifically the efforts to promote mixed-use infill redevelopment along the entire 6th Street Corridor as identified in the 2017 6th Street Corridor Master Plan. A cursory evaluation of the Holly Quarry was also performed, considered it mostly as an independent site from downtown and the rest of the study area.

1.3 MARKET SUMMARY – WHAT IS DRIVING REUSE OPPORTUNITIES?

The market analysis work performed as a part of the AWP planning process informed the reuse planning alternative developed for each of the targeted reuse areas. It also informed City leaders, City staff, business and property owners, and residents on economic assets, opportunities, and challenges.

This market study evaluated the retail-commercial, housing, and hospitality markets. It assessed:

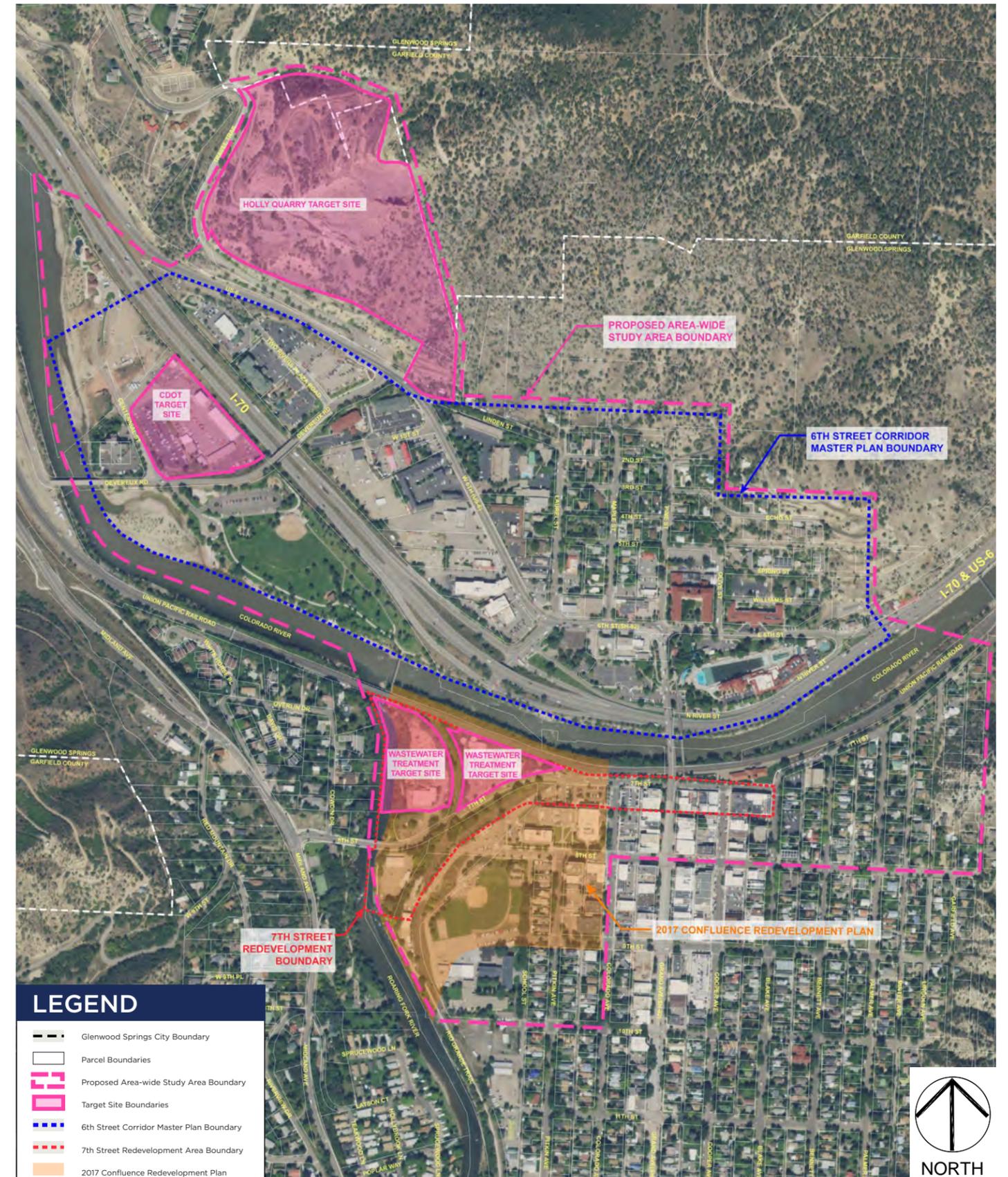
- The current baseline market conditions.
- Market assets, challenges, and opportunities.
- Market drivers.
- Market demand and supply including current unmet demand.
- Market trends and opportunities for retail, commercial, and residential development opportunities.

Note: The Regional Market includes Garfield and Eagle Counties.

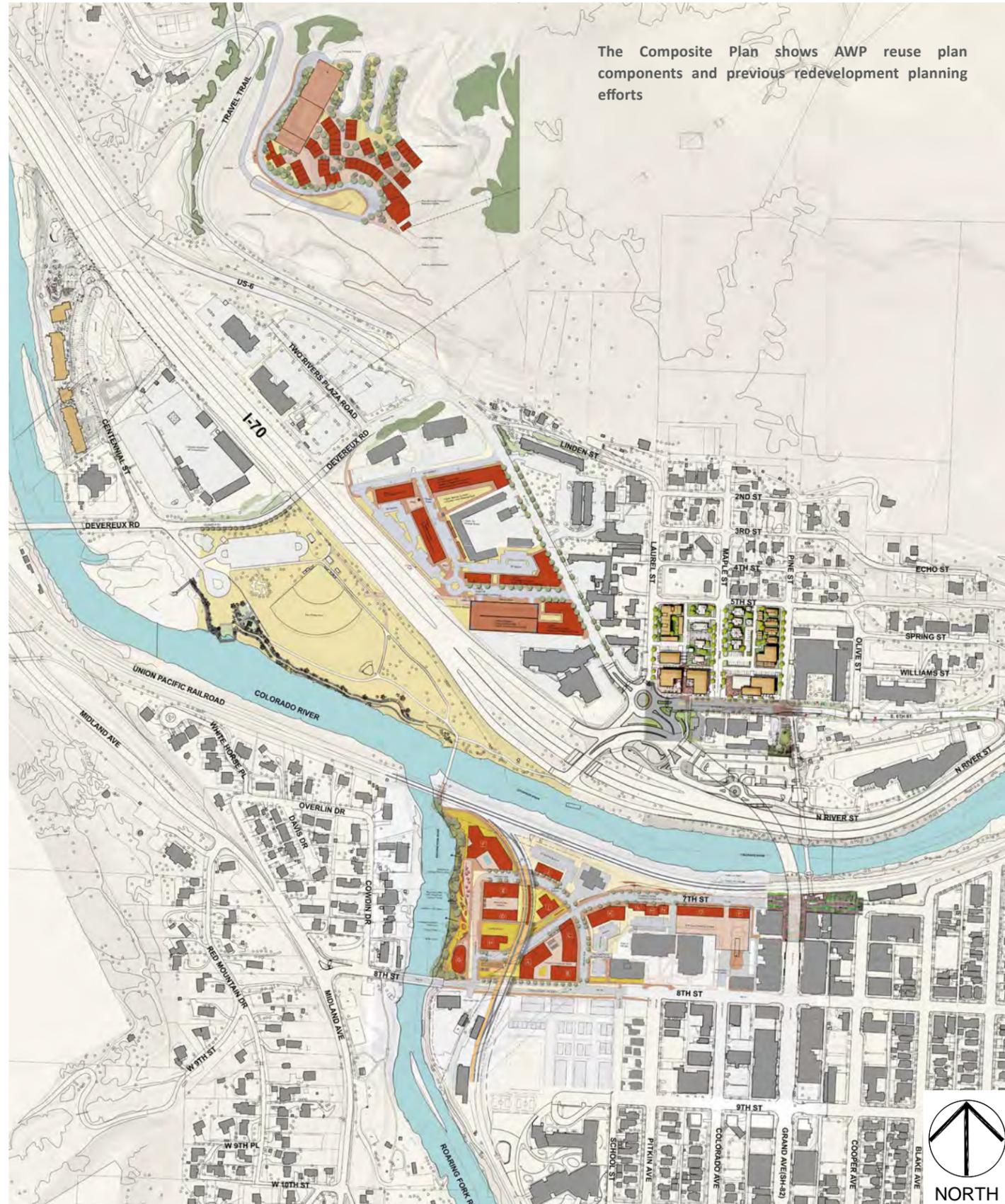
KEY MARKET SECTOR CHARACTERISTICS, OPPORTUNITIES, AND CONCLUSIONS:

- A. Glenwood Springs is a hub for the Garfield/Eagle County/ Highway 82 Region.** There is an opportunity to grow businesses providing diverse goods and services. Local spending is leaving the City for: books and periodicals; music and instruments; office supplies, stationary and gifts, furniture, shoes, specialty food, vehicle dealerships, sporting goods and hobbies, and beverages. Not all of these items represent an opportunity within the AWP study but inform potential retail opportunities.
- B. Glenwood Springs captures an estimated 16% of regional household consumption spent within the region.** Regional consumers are especially coming to Glenwood Springs for: auto parts; clothing, health, and personal care; florists; groceries; restaurants; jewelry and leather goods, lawn and garden supplies, used merchandise; building materials and supplies; and home furnishings.
- C. Increased economic opportunity in Glenwood Springs is primarily driven by population growth and new destination tourism.** More residents, many of which would locate in the Confluence Area, would support Glenwood Springs businesses especially within the downtown. More residents will also enable more diverse goods and services to be provided including both necessities and lifestyle products. More choices will also improve the local shopping experience which will also bring more regional shoppers.

Study Area



Composite Plan



The Composite Plan shows AWP reuse plan components and previous redevelopment planning efforts

D. Growing Glenwood Springs’ “economic pie” provides the City increased revenue that enables the City to further improve infrastructure and services. With the addition of a new and complimenting business, the downtown becomes a stronger regional destination.

E. The downtown and the 6th Street Corridor can complement each other. There is an opportunity to serve residents and visitors with recreation, arts, evening entertainment, and family activities. Glenwood Springs can grow as a regional destination for experiential-oriented goods and services such as food, beverage, and entertainment by adding to the supply of existing attractions. This includes thinking about all segments of the market, allowing the City to continue to serve the budget-minded visitors seeking outdoor recreation and experiential-oriented goods and services.

F. The City’s unique living experience can provide an enhanced local lifestyle that will be attractive to entrepreneurs, diverse employers, workers, and families. The more Glenwood Springs can promote is brand as a desirable and attractive place to be, the more it will be able to sustain and support long-term economic goals

SUMMARY OF REAL ESTATE MARKET OPPORTUNITIES

The market sector opportunities and conclusions provide the basis to determine real estate market opportunities that can drive a redevelopment program. The following elements were determined to inform the development scale, type, and potential phasing over time and were used as the basis for the AWP site reuse plans.

Housing Market

The City of Glenwood Springs is the largest population center in Garfield County and is located at the crossroads of Interstate 70 and Colorado Highway 82, providing access to Aspen and U.S. Highway 24. Garfield County population is anticipated to grow by about 5% to 6% annually, representing approximately 500 more households and 1,200 additional persons per year. Glenwood Springs is anticipated to capture about 17% of the growth in the County.

Glenwood Springs’ housing vacancy has been below 4% since 2014 and below 3% since 2015. Detached single-family housing has seen a steady price increase and virtually zero vacancy. Attached ownership housing has seen steady demand with rising prices and low vacancy. Similarly, multi-

family rentals have also been experiencing rising rental rates and low vacancy.

This indicates not only a residential undersupply, but pent up demand for new units. Housing demand by residents is augmented by demand from second-home owners and those seeking vacation rent-by-owner investment opportunities.

This translates into demand for 80 to 100 units annually. Pent up demand is expected to bring absorption 25% to 50% higher than the average demand in a normalized market. Glenwood Springs could absorb an estimated 120 residential units annually for the next five years, and then settle into about 80 units annually in the long-term.

Commercial Market

Glenwood Springs serves as a commercial and retail hub for Garfield and Eagle Counties, and is a lifestyle and tourist destination for experience seekers. Businesses that provide shopping, recreational, and entertainment experiences will complement Glenwood Springs’ character.

Data related to retail market opportunities was gathered in several ways, ranging from anecdotal to quantitative. Needed goods and services stated by various residents in the Community Survey match closely with what the Capture-Leakage analysis showed to be under-served in the City, validating both methodologies. Glenwood Springs is well suited for experiential retailers such as:

Food & Beverage	Destinations	Entertainment
Specialty Food	Books	Sports & Crafts
Butcher Shops	Music	Performing Arts
Bakeries	Culinary Arts	Evenings Out
Fish and Seafood	Attractions	
Spice Shops		
Craft		

Local household-serving business categories were also evaluated, such as doctors, dentists, optometrists, lawyers, banks, and computer systems design. Sources for retail goods and household services demand were evaluated and business development opportunities were translated into demand for real estate space.

Projected Commercial Absorption in Glenwood Springs (SF)

Time Period	Years 1 to 5	Years 6+ (annually)
Regional Retail Demand in Glenwood Springs Real Estate Product Type: Retail Storefront		
Estimated Absorption(sf):	Over 5 years	Annually starting year 6
Latent Local Demand:	57,000 sf	8,000 sf
Household Growth:	84,000 sf	11,000 sf
Visitors:	54,000 sf	19,000 sf
Total Retail Absorption:	195,000 sf	
Regional Household Services Demand in Glenwood Springs Real Estate Product Type: Office Space and/or Office-Storefront		
Estimated Absorption(sf):	Over 5 years	Annually starting year 6
Latent Local Demand:	61,000 sf	na
Household Growth:	28,000 sf	6,000 sf
Visitors:	na	na
Total Household Services Absorption:	89,000 sf	6,000 sf
Total Projected Commercial Absorption in Glenwood Springs (SF)		
Absorption (SF):	284,000 sf	25,000 sf

The analysis concluded that Glenwood Springs could absorb 284,000 square feet of commercial space during the next five years, and then an additional 25,000 square feet per year in year 6 and beyond, as indicated in the following table.

Projected Commercial Absorption in Glenwood Springs (SF)

Lodging Market

The lodging market has been slowly gaining strength over the past five years with both rental rates and occupancy trending higher each year. Overall occupancy is around 65%, similar to the national average, but still leaving notable capacity to fill rooms. Average daily rates are now hovering around \$112 per room night, which is also in line with the national average.

Glenwood Springs has accommodations for business, historical-stay, and budget travelers. However, while the occupancy rates indicate surplus capacity, the research

survey shows many aging low-budget motels and expensive historic hotels. There is a lack of lodging diversity that easily integrates with Downtown and 6th Street attractions. Glenwood Springs should retain its independent and historic hotels and budget-minded accommodations. However, adding modern mid-priced lodging options, walkable from downtown and 6th Street, would fill a market niche missing in the market. Perhaps even diversifying this market niche would support multiple properties over time. The City may be more attractive for a wider variety of visitors and would bring visitor dollars right to the core commercial district.

More focused market analysis is required to estimate an exact number of new lodging rooms that are feasible. **Based on accessibility to the City’s destinations, it seems likely that a mid-priced boutique hotel could be supported in the 6th Street Corridor, and that new development in the Confluence Area would support a boutique hotel as part of that project.**

1.4 COMMUNITY ENGAGEMENT & GUIDING PRINCIPLES FOR REUSE PLANNING

At the commencement of this project, City leaders and stakeholders agreed that this project must be focused on action, especially in light of the fact that momentum has been created by the completion of the 2017 Confluence Redevelopment Plan and all of the recent downtown improvements completed or underway, especially the Grand Avenue bridge project, improvements to 7th Street, and demolition activities at the former wastewater treatment plant site. The AWP strives to achieve both a visionary future, firmly reinforcing the community as a diverse and vibrant, while addressing fundamental issues of available resources to achieve real results and specifically advancing the effort to get new development occurring in the Confluence Area.

Developing a successful brownfields redevelopment plan requires an understanding of physical characteristics, market factors, and buy-in from the community, including residents, business owners, and property owners. From the outset of this effort the City decided that public involvement, at all levels, should form the basis of the recommendations of the plan. Considering the magnitude of reinvestment and transformation that will occur, to ensure that there is a formation of a strategy that has specific “tangible” outcomes based on broad community desires for the future of the downtown and the redevelopment within the target reuse areas.

The planning process employed a strategy of inclusiveness, transparency, education, careful design, and a commitment to identifying real and implementable actions. Over the course of the AWP planning process started in October 2017, the project brought together public, private, and civic interests to give form to a vision and to prioritize the numerous elements needed to ultimately achieve the vision. The over-arching intent is to create a comprehensive redevelopment strategy that includes the redevelopment of catalyst brownfield sites in a manner that is fully inter-connected with the surrounding context, is complimentary between the existing downtown and the redevelopment (so they are not in essence competing with each other for market share), and compliments the overall economy of the City.

The public engagement process provided community input that informed the planning processes, especially as the plans evolved and were refined from the 2017 Confluence Redevelopment Plan starting point. In the end, the Community

Goals defined in the 2017 plan were confirmed and remain the primary guidance for reuse plan development.

Guiding Principles for Reuse Planning

In addition to the Community Goals, specific reuse planning principles were defined through the community engagement process of the AWP.

Overall Design

- A. The new development should form a logical extension of the City’s downtown street network to establish a block-like structure as the basis of a connected yet distinct neighborhood within downtown.
- B. Buildings should be grouped so they form varying types of public spaces and re-enforce the street wall and pedestrian experience along sidewalks.
- C. Landscape/urban design elements should expand the reach of the river’s edge qualities through the Confluence Area and into downtown and also beckon people along 7th Street, from the downtown to the riverfront.
- D. Locations along 7th Street that provide a clear transition threshold between the downtown core and the riverfront should occur. Based on topography, the most likely location for this to occur is the area around the Defiance Avenue intersection, where the first glimpses of the riverfront can occur.

Building Type, Scale, Form, and Massing

- E. Although a mix of uses should be promoted, the predominate use should be residential to give the area a neighborhood feeling. Residential unit types should vary as much as possible in terms of type, size, and income level to provide diversity and broad economic opportunity.
- F. Commercial and retail uses should be sensitively inter-mixed within the neighborhood, with the emphasis on the south side of 7th Street from Colorado Street to the river.
- G. Buildings should vary in height, scale, and character to avoid an overt uniformity as the resultant effect once the neighborhood has been built-out. Variation, however, should not rely on over-burdening each building’s architectural design with cliché elements such as multiple

dormers, excessive use of varying materials, etc.

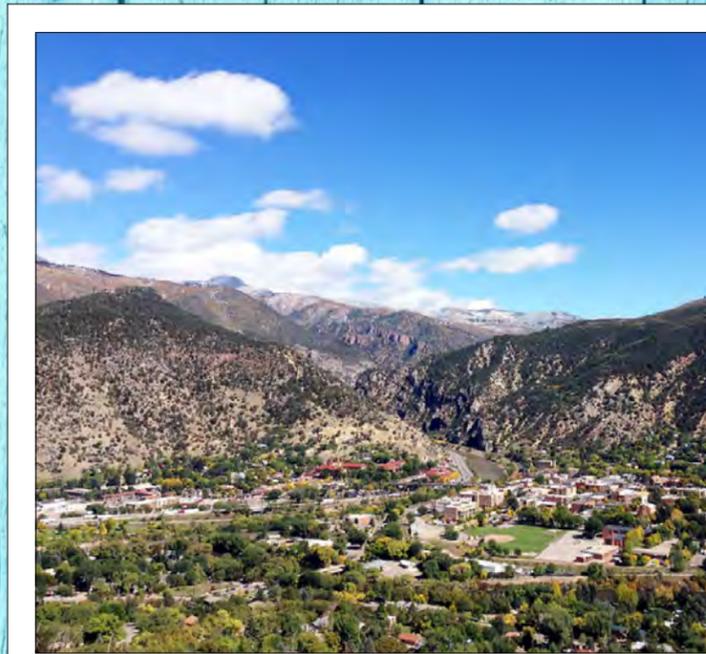
- H. Buildings can be multi-story but great care should be placed on nestling buildings into the site and the landscape to visually minimize their scale. Buildings should respond to the elevations of the topography with the larger buildings in the lower areas. This will also be necessary within the flood zones which may have slightly elevated ground floor elevations to achieve flood resiliency.

Public and Open Spaces

- I. A clearly defined and purely publicly-accessible and publicly-owned band of naturalized landscape should occur along the riverfront and function as part of the City's park system.
- J. A signature events space(s) should be provided within the core of the Confluence neighborhood that may or may not be publicly-owned but must be publicly accessible every day, all day, and year-round.
- K. Varying types of smaller scale public spaces should also occur, most likely privately-owned and with a mix of private spaces to serve the needs of local residents. Semi-private areas may or may not be accessible by the public, dependent upon defined parameters and adjacent uses and conditions.

2017 CONFLUENCE REDEVELOPMENT PLAN

Glenwood Springs, Colorado



Community Goals from the 2017 Confluence Redevelopment Plan



Connect to the River

Embrace and enhance the rivers, and improve access and recreation.



Create Connections

Improve circulation and connectivity within the area and to nearby commercial centers, parks, and neighborhoods.



Prioritize the Pedestrian

Design for complete streets to create safe, walkable and bikeable connections within and to the area.



Promote Catalytic Development

Provide a mix of uses and development types to activate the area and create economic vitality.



Authentic Design

Incorporate authentic, visually appealing design that complements the historic character of the downtown.



Create Community Spaces

Design public spaces and facilities where people can gather, relax and recreate.



Complement the Downtown

Encourage uses and amenities that support the downtown.



Expand Housing Choices

Expand and diversify local housing options.





02

I Executive Summary

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02 Site Reuse Planning

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Appendix B Business Development Opportunities Report

SITE REUSE PLANNING

2.1 PLACEMAKING AND BROWNFIELDS REDEVELOPMENT

The Confluence Area Design Considerations

The proposed reuse strategy for the Confluence Area follows specific placemaking principals and speculates a potential build-out based on a physical assessment of all of the study areas, the context, and the overall intention to create a high quality-of-life mixed-use neighborhood as a seamless extension of downtown. This action, in turn, will support the broader goal of continuing to increase vibrancy in the downtown as a residential, commercial, cultural, and social hub of Glenwood Springs and the region.

The reuse plan for the entire AWP study area and especially the Confluence Area is based on a fundamental approach emphasizing the notion of the creation of new “places” versus parcel-by-parcel “developments.” The foundation of this idea is the desired outcome that both public and private activities should result in the creation of highly desirable places for people, and as they are expanded, ones that mesh seamlessly with the surrounding context. This will be especially challenging in the Confluence Area because there is a potential disconnection between the desire to achieve

significant economic impact, especially through residential density, as well as promoting commercial development. Of all of the factors, the most critical is to ensure that how development occurs is balanced with how much. Specifically, the balance between the scale, mass, height, and form of buildings and their relationship to each other, public spaces, streets, and the existing downtown, will determine how successful the future development will be viewed once completed.

The creation of successful places is a function of a thoughtfully considered mix of uses, and the location, design, and supporting infrastructure systems; working together these two elements form economically vibrant and sustainable building blocks of an overall town. As Glenwood Springs grows from within, new development should feel like an expansion of the historic, well-established and highly functional pattern of the city versus an older downtown core adjacent to a dramatically larger-scaled development with little physical, functional, or social connection to the core of downtown and the City’s traditional sense of its identity.

Great places are not easily formed. For projects such as those proposed within the AWP, they are certainly not created by policy alone, but rely on strong partnerships between many



The ability to shape development that connects the Roaring Fork Riverfront to the core of downtown, must be a signature aspect of any redevelopment within the Confluence Area.



The RFTA Right-of-Way, referred to as the “berm” is a major element that any redevelopment plan must address.

public-sector partners, at all levels of government, combined with private land owners and the development and business communities. The overall reuse and redevelopment strategies presented, including for the catalyst brownfield sites, considers all aspects of the placemaking equation. They include those aspects that can be most defined and shaped by the public sector and the elements that will mostly be the purview of the private developers. These components must work together, so the follow design considerations are presented to aid the City in evaluating each project, whether lead by the City or by a private sector partner. In some cases, the division between public and private sector activities are well defined, but in other instances they are a function of inter-related aspects which when combined, add up to a result that is greater than the sum of the individual pieces; serving the notion of forming truly great places that further elevates Glenwood Springs' reputation as an attractive and desirable community to live, work, and play.

The public engagement process employed in the preparation of this AWP included many voices and opinions regarding all aspects of the planning, and ultimately the character of what is achieved in the Confluence Area. Overall, the feedback received through the AWP planning process is consistent with the community expressions and conclusions presented in the 2017 Confluence Redevelopment Plan. The following design considerations build upon the eight guiding principles defined in the Community Goals and the key Placemaking Framework Strategies described in the 2017 Plan and in Chapter 1 of this report. They reflect the continued evolution of the reuse plan based on more detailed level of study and design. These design elements reinforce the notion that in order to achieve the full potential of the area, emphasis needs to focus on the big picture and the details. A good plan will only achieve a certain amount of success on its own; the attention to details at each step in the process will ensure the most desirable outcome, especially considering that this development could be the largest development activity to occur in the downtown for the next 100 years. Decisions made now will have long-standing impacts, good and bad.

Building Scale and Orientation

1. Buildings need to be large enough to achieve adequate density yet not be out of proportion with the character of downtown. Because of the descending grade from downtown to the river, the Confluence Area has the ability to accommodate taller buildings in a manner that mitigates their scale in relationship to existing buildings. This is also supported by the fact that the City Hall and County buildings are some of the largest buildings in the downtown and are part of the immediate context.
2. Roof lines may be as important of a design feature as building heights, as result of the lowering of the grade as the buildings get closer to the river. Building roof lines can be within a consistent range, yet an additional floor can be accommodated as grades lower towards the river, reducing the potential that taller buildings will overwhelm the place.
3. In general, the taller buildings should front onto larger public spaces or more significant streets. Tall buildings on narrow streets are out of character for the City and will lead to dark streetscapes, especially in the winter. The City and developers should look at some of the more monumental buildings in the downtown and evaluate them for what works and what doesn't to determine how to respond to building scale in the Confluence Area. For example, there are very few buildings that exceed three stories in or near the downtown and most of them are hotels ranging from the Hotel Colorado, the LaQuinta Inn, and the newer Marriott buildings in the Meadows development.
4. The scale and placement of buildings should be evaluated based on the actual design of structures for each lot. Great care should be given to ensure that taller buildings do not create a "crammed" effect along the riverfront. Alternative A especially orients the narrow ends of buildings along the frontage of the riverfront to reduce the potential of creating a long and continuous wall of buildings along the river's edge. There will be a temptation by developers to turn buildings so their long facades front the river to capitalize on views in order to create greater perceived tenant value. If the overall Confluence Area is as desirable as is expected, with high quality public space throughout and an equitable approach to the riverfront, the desirability will be so high that the orientation of views does not need to be pursued and would actually compromise the quality of the place.

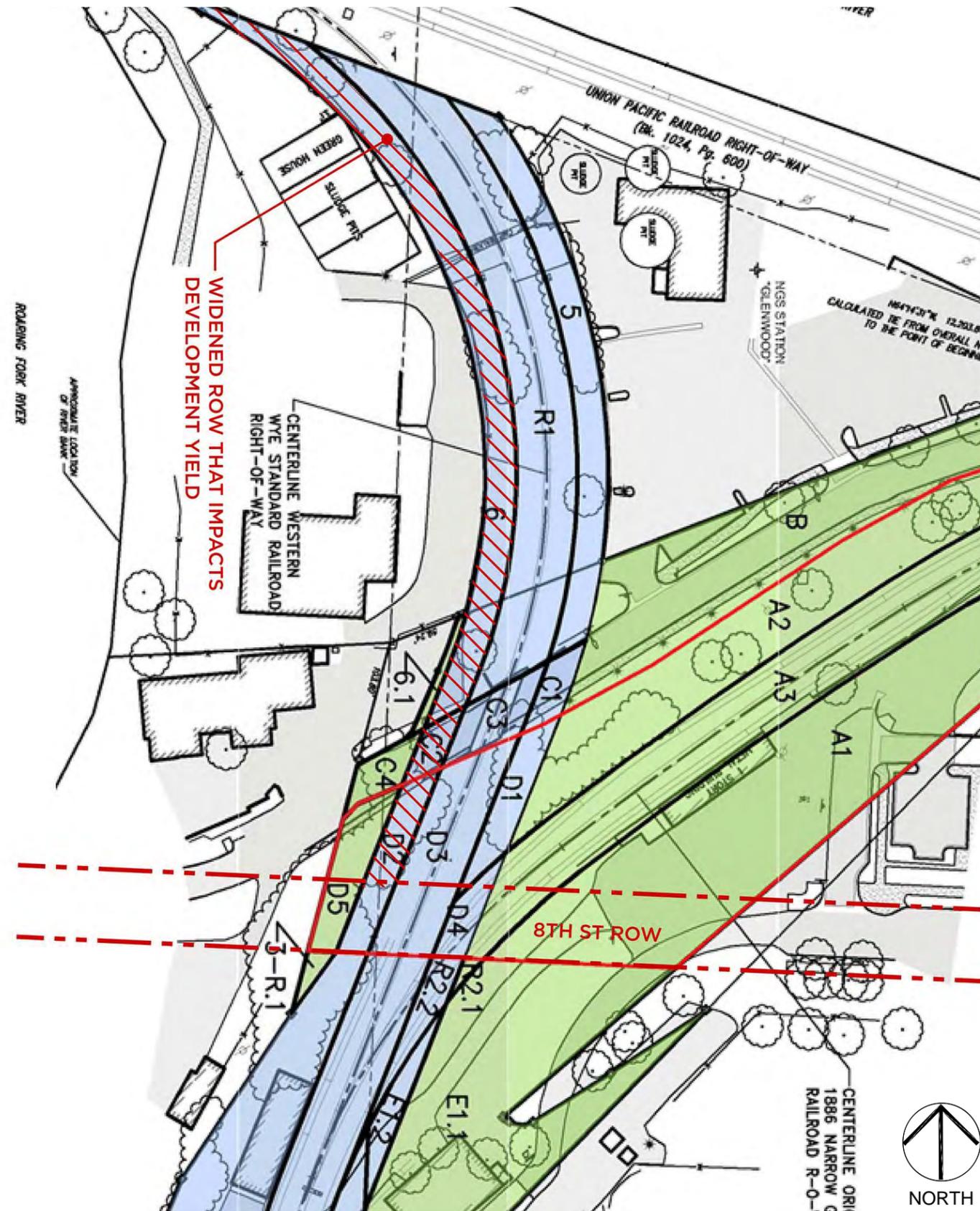
5. The design of the street wall of buildings should be given primary attention, however, in the case of the Confluence Area, for many of the buildings each face of the building has some aspect of important frontage. They either face internal public spaces, courtyards, or are at least very visible from another significant structure. Very few of the buildings will have what could functionally or visually be defined as a "back."

Building Form and Architectural Elements

6. The plan promotes mixed-use buildings as much as possible, with parcel specific constraints being the primary factor limiting the ability to achieve the mixing of uses within a single building. Equally important to the mix of uses is the mixing of building forms and types. This means that buildings should have a fairly eclectic mix of building styles. This will achieve an aggregation of effect that will make the place feel like it evolved over time by multiple parties, the way the existing downtown evolved and appears today.
7. Due to building codes and fire rating requirements, building construction techniques, combined with the desire for efficient unit yields, tends to result in fairly "boxy" forms of architecture. Examples of boxy multi-family buildings have become very prevalent and ubiquitous in places like Denver. A mix of flat and pitch roofs should be considered, although false, non-functional roof effects are general not ideal. The over use of redundant architectural elements such as roof dormers, should be discouraged.
8. A mix of traditional and modern window systems should be considered since that can greatly influence the character and mix of building types.
9. There may be a tendency to promote a uniform palette of building materials. This can be helpful to achieve visual relationships, but it should be considered sparingly. Too much reliance on prescribed materials can result in overt attempt to create character that can actually make a place too visually rigid, forced, and uniform and could promote an unintended "housing complex" effect. One option might be to promote the uniform use of native stone on the bottom story of buildings, where there will be a high-use of glass as the dominant material, and then allow as much open design expression in the architecture and materials for the upper floors.

The Public Realm

10. The riverfront and 7th Street are the priorities with regards to creating an active and inviting public realm. These two elements form the spine of connectivity upon which all of the development is structured. Care should be taken to ensure that the pedestrian-level experience along 7th Street is extremely inviting and promotes walking and movement. The riverfront is the signature public space and attraction within the Confluence Area and the downtown.
11. With regards to treatment, there should be a gradation of formality and design aesthetic within the public space(s), starting from the riverfront and ascending east on 7th Street. The riverfront park should be about the broadest audience, meaning it is about the environmental aspects of the river and ecology and river-oriented recreation of all kinds, including just sitting and experiencing the place. The farther away from the river the public spaces are located, the more formal they can be in terms of design programming and treatment. They may be more accommodating for major gatherings and intense use or service for the immediate residents of the neighborhood.
12. The interface of the development with the riverfront park should be carefully considered. Although this will also likely be the interface of the public with the private in terms of ownership, they should feel seamless and be fully functional as one overall unit.
13. Opportunities to address flood zones and stormwater management should be integrated into the design of the public spaces. This includes integrating resiliency aspects as well as considering grading of the site to mitigate the elevated grades of some of the building floor elevations to make them seem naturally-occurring and not artificially elevated.
14. A diversity of public spaces from large to small should be promoted with the goal of interconnectivity even for smaller, more resident used courtyards, for example. All of the spaces should be interconnected as much as possible, including spaces between buildings and elevated terraces above parking levels.
15. The proposed multi-use path "flyover" has the potential to become a truly unique asset. If designed properly it could be a cool landscaped park/promenade in the air, creating a multi-layered park event space. It would



The area hatched in red depicts widened RFTA right-of-way that has a major impact on the development potential of land on the riverside of the berm (Base exhibit from Intergovernmental Agreement Between the City of Glenwood Springs and the Roaring Fork Transportation Authority to Acquire Easements and Develop Transportation Infrastructure).

also afford great views through the adjacent plazas and terraces to the riverfront and beyond. As people walk down 7th Street, from the core of downtown, they would catch views of bikes and pedestrians strolling along the elevated park. The multi-use path can be constructed so it does not preclude future rail re-activation.

Transportation Connectivity

16. The existing street grid of the downtown provides the basis for a sound transportation network. The challenge is the configuration of the Confluence area and specifically the RFTA ROW severally impact the ability to logically extend the overall grid pattern into the Area. Creating a connected network of streets and thoroughfares that establishes a sense of a block and grid structure through the new development is very desirable. Having more than one street access to the riverfront provides greater connectivity and circulation choices and reduces the effect of the riverfront being an out-of-the-way place at the end of the line. It also provides greater safety for emergency and fire vehicles, especially when considering the number of residential units proposed in the multi-story buildings.

17. Street and thoroughfare typologies should be determined in relation to both multi-modal transportation needs and urban design consideration for ground floor uses in buildings that front onto each street. Employing a “complete streets” approach to the design of all streets and thoroughfares will provide the maximum opportunity of a balanced benefit to all modes. Ensuring that streets are constructed to include the appropriate number and limited widths of travel/parking lanes, bicycle and pedestrian facilities, as well as supporting streetscaping and green infrastructure elements such as street trees, landscaping, street fixtures, flow-through stormwater planters, etc. will support the redevelopment goals of this plan.

18. In the context of the Confluence, a complete streets approach should be broadened to consider ways that streets can also function as quality public spaces. The proposed Riverside Drive, with its proximity to the riverfront park, should be functional on a day-to-day basis and provide valuable connectivity through the area. On weekends and during special events, portions of this street should function more like a public plaza and designed accordingly.

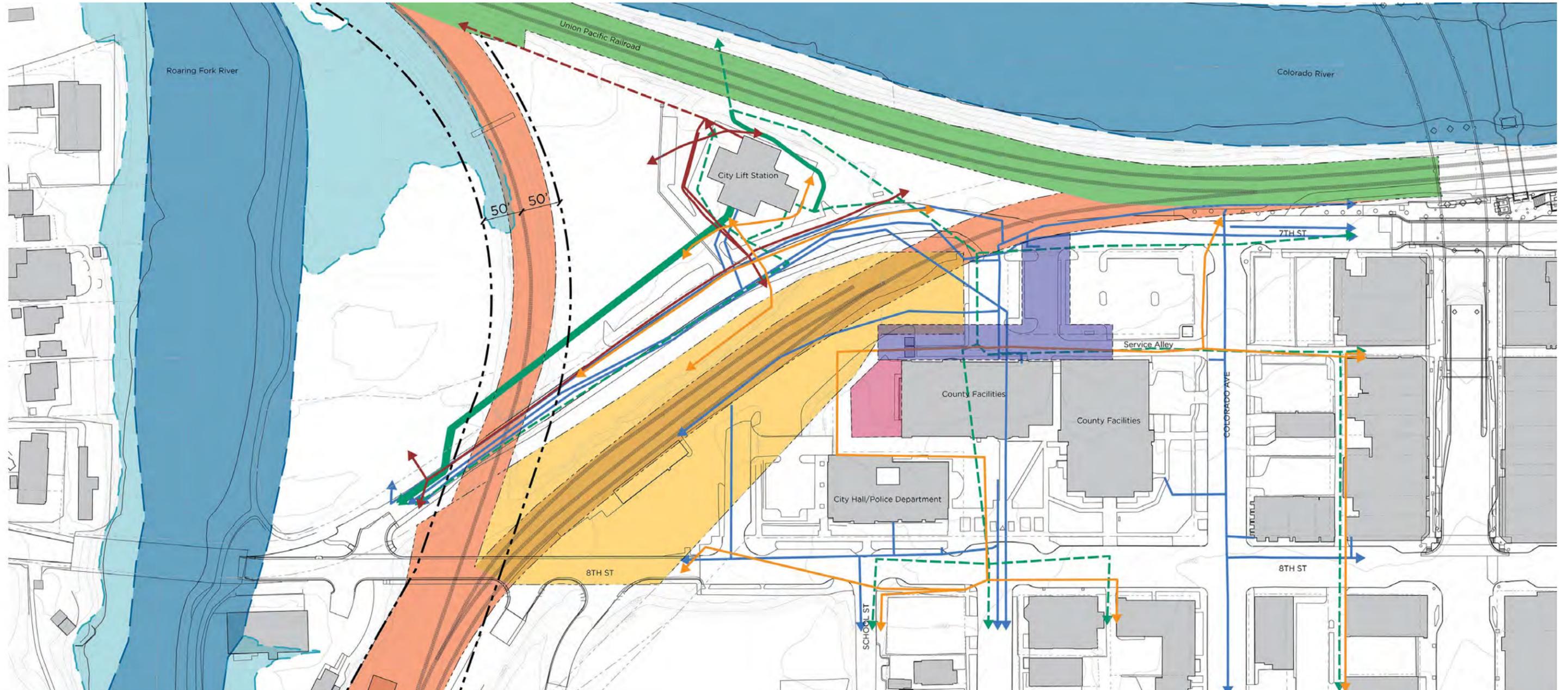
2.2 THE CONFLUENCE AREA

Three different schematic plan alternatives were developed for the Confluence Area through the AWP planning effort. Typically, several alternatives would be developed and reviewed for pros and cons and a “preferred” plan would be selected. In this case there are several variables to consider, all of which cannot be fully decided upon within the timeline of this planning effort. Depending on the outcomes of decisions, many of which include significant and highly varied short and long-term cost implications, very different development configurations can be achieved. In addition, some of the conclusions, for example the location of parking structures, will require input from separate processes such as RFTA’s study of a downtown transit center facilities and feedback from the private development community. Therefore, it was decided to present three alternatives based on several key variables/factors, including but not limited to, the future of the RFTA right-of-way (ROW) north of the 8th Street, the ultimate width of the RFTA ROW, the preferred location of parking structure, the supply of off-street parking needed, and ideal location for a multi-modal transit center within the downtown.

During the vetting of conceptual reuse plans, variables mostly related to the discovery of additional, previously unknown underground utilities, significant factors related to the RFTA right-of-way (ROW) (as result of multiple follow-up meetings including with RFTA’s rail counsel), and special design parameters related to the County’s jail facility and courthouse, were discovered.

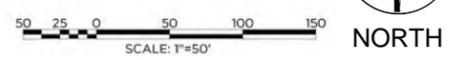
The three alternatives illustrate options for the variables and provide to the City with an understanding of the potential benefits and limitations of the various options in terms of several over-arching decision-making considerations, including but not limited to: costs, timeframe, qualitative outcomes, and short and long-term economic costs versus benefits. All of the alternatives are based on achieving the vision and goals determined through the planning process. The ability to achieve these and other benefits as well as potential limitations are described for each plan alternative.

The outcome of this effort illustrates that Alternative A achieves the core goals identified through planning process and represents a realistic middle-ground in terms of development yield and infrastructure hurdles to be overcome so it is generally the best plan to follow for decision-making guidance. The real value of this effort, however, is the series



LEGEND

- | | | | |
|---|--|---|----------------------------------|
|  | Building Footprint |  | Railroad |
|  | Existing Union Pacific Railroad Right-of-Way (ROW) |  | Ex. Underground Electric Utility |
|  | Existing Railroad ROW Property Owned by City |  | Ex. Gas Utility |
|  | Proposed Railroad ROW Owned by RFTA |  | Ex. Water Utility |
|  | Floodway Areas in Zone AE |  | Ex. Sanitary Sewer Utility |
|  | Special Flood Hazard Areas (SFHAs) Subject to Inundation by the 1% Annual Chance Flood |  | Ex. Sanitary Force Main |



of universal recommended design considerations, actions, and projects which in themselves will require significant effort to advance the overall effort.

Site Reuse Planning Variables

A few specific factors are important to note related to the development of these plan alternatives, including:

- Various approaches were taken related to the RFTA ROW. In addition to physical modifications to the ROW boundaries and the berm, various scenarios for freight or passenger rail were considered and depicted.
- Each of the alternatives takes into account issues related to flooding and the need for resiliency.
- Underground utilities represent a major challenge for the redevelopment of the area. Each of the alternatives took a different approach to the complicated network of crisscrossing utility lines, ranging from avoid moving any lines to assume all will be relocated to new public rights-of-way within new street configurations.
- The desire for a multi-use trail “flyover” of 8th Street to enhance the Rio Grande Trail, as well as a bicycle-friendly connection from the riverside into downtown, were included.
- All alternatives assume a 50’ setback from the ROW line is not required for residential uses along the inactive RFTA ROW but is required from the UPRR active ROW.
- The inclusion of affordable housing units is considered in each alternative and is reflected in the unit yield counts.
- The accommodation of various safety, regulatory, functional, and procedural-related requirements provided by Garfield County associated with any future modification to their complex, were made.
- Potential building heights are listed in the yield tables to show how they relate to the requirements of the recently adopted zoning ordinance.

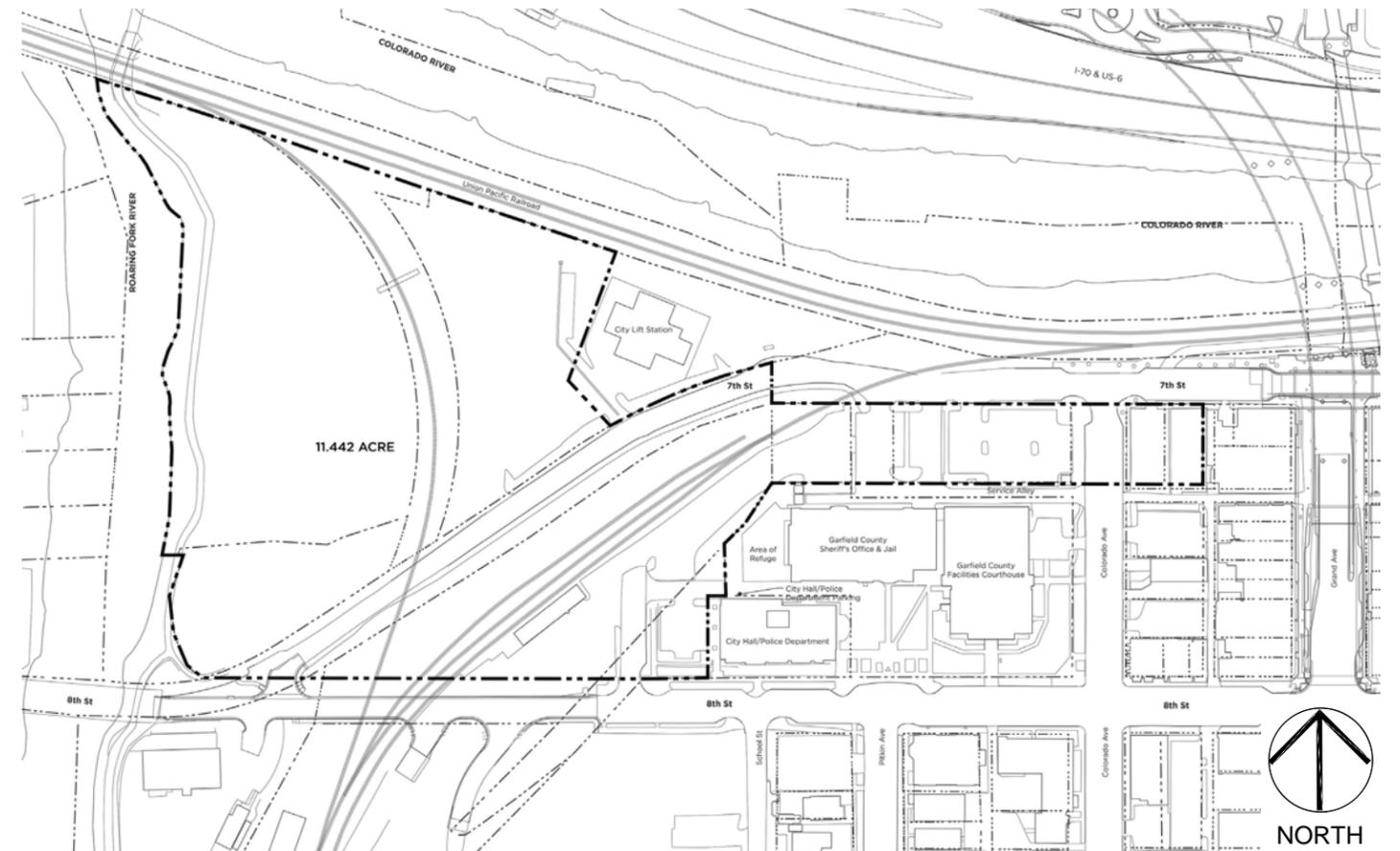
The conclusion of this effort illustrates that all three alternatives provide a significant amount of new development square footage as an extension of the downtown, although the ultimate range of the total square footage for each alternative varies widely; ranging from approximately 260,000 SF to 500,000 SF of total building space. Specific development program yields range from approximately 100 to 300 residential units, 76,000 SF to 113,000 SF of new

commercial/retail space, and a 35 to 50 room boutique hotel. Schematic Reuse Plan alternatives and corresponding Development Parcel Maps with proposed development lots and area calculations are provided for comparison and referenced throughout.

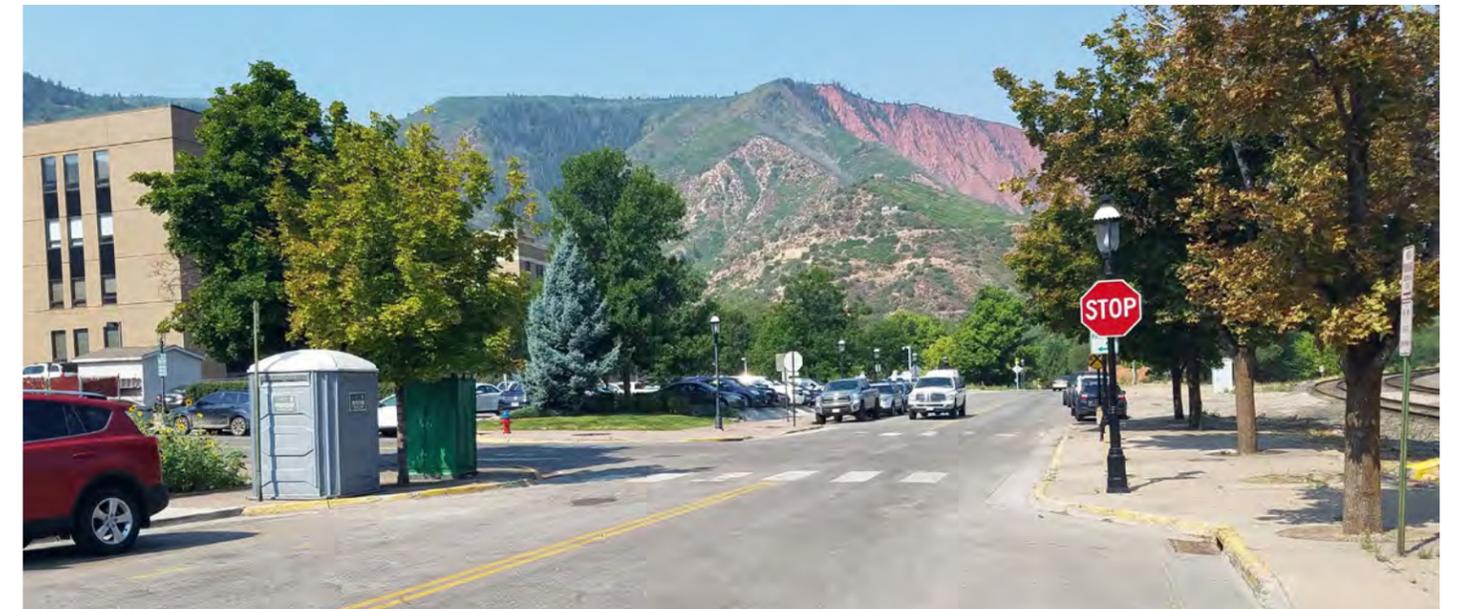
In the end, the best course of action moving forward will be determined as the City weighs the costs to gain greater development yield against the long-term economic and tax benefit from the additional development created for those costs. The findings of this AWP can serve as a basis to evaluate private development proposals based on parameters defined by the plan alternatives. It will also aid the City analyzing, in detail, the true cost-benefit of the three plan alternatives and therefore the likely real costs, especially for cost-intense items such as the modifications to the existing RFTA ROW north of 8th Street. In addition, there is the ability to mix some of the flexible recommendations of the three alternatives based on other potential driving factors.

Factors Informing Site Reuse Elements

- The ability to work-out agreements with the County to develop mixed-use buildings of their properties along 7th Street and create the needed activity connection between the downtown and the Confluence Area.
- The operational and ridership evaluations by RFTA as to which location is most suitable and the type facilities required for a transit center (including the need for a park-and-ride facility). RFTA is planning on commencing a Corridor Service Study that focuses on service and facilities within the downtown, including improved BRT facilities. This study should be done with close coordination between the RFTA and the City to ensure that goals and opportunities are well defined at the outcome of the effort since the future build-out of the Confluence Area could dramatically impact transit demand and ridership.
- More detailed feasibility and traffic analysis information regarding the preferred location of a parking structure and the location’s impact on levels-of-service.
- The potential build-out of the Vogelaar Park development and its needs as it relates to the Confluence, for items such as parking supply, connectivity, and the future character of 8th Street.



Approximate development area used as the basis of developable land calculations. It includes both City, County, and privately-owned properties. The planned redevelopment of the land south of 8th Street referred to as Vogelaar Park is not included in the area and yield calculations.



The ability to promote retail/commercial development along the south side of 7th Street, on mostly Garfield County-owned land, will be one of the factors that will inform the overall development pattern and the ability to create a land use connection between the downtown and the Confluence Area.

ALTERNATIVE A

This alternative can be considered the “middle ground” alternative in terms of development yield and the ability to achieve the overall community-desired character for the area. The approach of this alternative works with the RFTA ROW to create a logical interconnected city block/street structure. This is important in the creation of an urban design relationship between the development that occurs at the Confluence Area and the existing character of the downtown. The two places will clearly be distinct, however, the ability to formulate a sense of street blocks with intersecting streets and multiple ways to circulate are both critical elements in forging a strong relationship between the two and also for promoting walkability. Street blocks, especially one with short distances between intersections, are effective in creating a sense of walkability because they provide pedestrians with a sense of progress, i.e. getting somewhere they can see in the distance, as they walk.

Key Design Parameters

- RFTA ROW – The ROW is reduced back to 55’ wide as it was originally and how it is depicted in the City’s GIS data. This would require a transfer back from RFTA to the City of several slivers of property along the western side of the ROW. In this scenario a future restoration of a single-track freight rail line with a parallel multi-use trail as a “flyover” via the berm, is shown. This would create a rail-and-trail scenario and an improved routing of the Rio Grande Trail through the Confluence.**
- County Complex - The alternative is updated to include requirements provided by Garfield County regarding the Courthouse and Sheriff’s/jail complexes. Specifically, it adjusts the layout of frontage buildings along 7th Street on lot 9 (see Alternative A Development Parcel Diagram) to accommodate the specific safety, access, parking, and utility conditions within the government complex block.**
- Structured Parking - A parking structure is proposed on County-owned land at the intersection of 7th Street and Colorado Avenue.**
- Street Pattern/Vehicular Circulation - The concept of a proposed street “grid” is maintained as previously presented, via the Defiance Avenue extension to the riverfront. This plan alternative assumes that the vertical clearance of the Defiance Avenue extension under the rail line can be achieved. The feasibility can only be determined, however, by performing a detailed engineering study of both the future top of rail elevation based on railroad engineering requirements in terms of grade, and in this rail scenario, the ability to meet the existing railbed grade of the UPRR. This determination will also be a function of the site regrading required to accommodate the extension of Defiance Avenue towards the river. The approach looked at the ability to lower the grade of Defiance Avenue as much as possible, at the point it crosses the RFTA ROW to gain overhead clearance, understanding that flooding issues will also need to be considered if the grade is too low.**
- Utilities – This plan alternative takes the approach that conflicts with existing underground utilities are to be avoided so the location and shape of lots and buildings respond to the location of underground utilities. These determinations, however, as based on a combination of actual site survey information combined with GIS data, so a comprehensive site survey locating all of the underground utilities will be needed to fully validate the plan’s configuration.**

Alternative A Yield Table

Map Key	Uses	Building Footprint S.F.	Stories/ Levels	Commercial S.F.	Total S.F.	Dwelling Units	Notes
A	Boutique Hotel	11,390	4	3,000	45,560		40 - 45 Unit Hotel over lobby, retail, and parking. Total Building Height 42’.
B	Mixed-Use: Multi-Family Housing & Limited Commercial/Retail	6,930	5	3,000	37,650	24	Ground Floor retail with building amenities for the remainder. Total Building Height 52’.
C	Mixed-Use: Multi-Family Housing & Commercial/Retail	11,240	5	8,000	64,200	30	Ground Floor retail with building amenities for the remainder. Stepped building grade will require retail on 1st and 2nd levels. Total Building Height 52’.
D	Mixed-Use: Town Houses & Commercial/Retail	6,800	3	4,000	17,090	10	Park level restaurant/retail. Two story loft-style townhouse units above. Total Building Height 32’.
E	Mixed-Use: Multi-Family Housing & Limited Commercial/Retail	9,670	4	1,800	38,680	24	Units overlooking semi-private terrace
F	Mixed-Use: Multi-Family Housing & Limited Commercial/Retail	19,380	5	3,200	96,900	60	Parkside dining/ entertainment/commercial
G	Commercial/Restaurant	6,000	1	6,000	6,000		Signature riverfront dining venue with river access.
H	Mixed-Use: Multi-Family Housing & Commercial/Retail	4,800	4	2,000	19,200	15	Four signature units per floor on the upper three floors.
I	Commercial/Retail	5,400	1	5,400	5,400		This could be a private recreation entertainment venue, like a beer or banquet hall.
J	Mixed-Use: Affordable Housing & Commercial/Retail	4,800	5	4,800	24,000	24	Total Building Height 52’.
K	Mixed-Use: Affordable Housing & Commercial/Retail	9,780	4	39,120	39,120	39	Total Building Height 42’.
L	Commercial/Retail	2,000	1	2,000	2,000		Simple one-story infill. Due to Sheriff/Jail Complex, rear access very limited.
M	Commercial/Retail	2,400	1	2,400	2,400		Simple one-story infill. Due to Sheriff/Jail Complex, rear access very limited.
N	Commercial/Retail	1,700	1	1,700	1,700		Simple one-story infill. Due to Sheriff/Jail Complex, rear access very limited.
O	7th and Colorado Parking Garage w/Retail	8,220	1	8,220	8,220		Ground Floor retail arcade under parking along 7th Street.
P	7th and Colorado Parking Garage w/Retail	3,650	1	3,650	3,650		Ground Floor retail arcade under parking along 7th Street.
Totals		114,160		98,290	411,770	226	

Development Yield

An estimated development yield, by building and end-use, was generated to determine the potential development that can be achieved. This alternative yields a moderate level of development when compared to Alternatives B and C. See yield table above.

Plan Benefits

- Overall Urban Form & Street Pattern – The proposed site reuse plans within the Confluence Area explore opportunities to re-establish a full street grid. This is challenging throughout the AWP study area and especially within the Confluence Area as result of the RFTA right-of-way and its shape. The “Figure/Ground” diagrams shown with the proposed site reuse plans are very basic but valuable comparative tools that illustrate the relationship the proposed block structures create within the redevelopment area, versus the surrounding context. The more the patterns match, the more likely the new development will function and appear to complement the**

existing. The patterns can be further evaluated when the building footprints that would occur within each block are compared. Again, the comparative scale, form, and overall pattern illustrates how the new and the existing may relate, once constructed. The “form” of the development is primarily a response to the street pattern upon which the development is structured. In this alternative a logical and complete block structure is achieved by extending Defiance Avenue down, descending towards the river and underneath the RFTA ROW. A new “events” street would be created (referred to as Riverside Drive on the plans) that parallels the Roaring Fork River. This street provides a valuable vehicular and emergency vehicle connection to buildings and creates a clear distinction between the public riverfront and the private development.

Beyond the street pattern, the layout of public spaces provides a secondary organizational structure to the area. The concept focuses on pulling public space into the development from the river, with an Events Green in the lower area of the development (riverside of the berm),

and extending up, underneath a widened structure providing continuity for the rail, and along 7th Street towards the downtown. The linear alignment of the public space is placed on top of the underground utilities along 7th Street.

2. Connectivity to Downtown – As with all of the alternatives, Alternative A focuses on 7th Street as the primary connection corridor between the downtown and the Confluence. The metric of this connection is the ability to load the corridor with ground floor commercial/retail uses and an inviting pedestrian realm, including signature places (or moments) along the way. Travelling from Grand Avenue, a pedestrian arcade would be created along the sidewalk underneath the structured parking garage along the south side of 7th Street, on both sides of Colorado Avenue. Special architectural care will be needed to make this a special and inviting space because of the overhanging aspect of the upper floors of the garage. Further down 7th Street from the intersection of Defiance Avenue and the berm, there would be a variety of ground floor retail spaces, as well as public space amenities, including the lobby entrance to the hotel and an outdoor staircase to the quadrangle of buildings created by buildings A, B, and C on lot 1. The ability to have a generous ground level opening underneath the rail line, opening a wide view towards the river will be important from a functional and visual standpoint. The concept focuses on the idea that as pedestrians travel down 7th Street the public spaces continually widens until they crescendo at the river’s edge.

3. Relationship of Development to the Riverfront – The concept allows buildings fronting along the riverfront to have varied setbacks and scales in order to provide greater visual variability. Building F is depicted as the tallest building, located in a way that it creates a backdrop as one views the area from Riverside Drive and blocks views of the active UPRR railroad and the berm. The treatment of the landscape from the river’s edge could vary from highly naturalized to more manicured, the further away from the river the spaces are located. At the core of the area, Riverside Drive should be thought of not as a street, but as a public plaza that allows for vehicles to traverse when not used for events. The extension of Defiance Avenue to Buildings E and F would allow for Riverside Drive to be closed for events north of 7th Street, and still provide resident and emergency vehicle access to the buildings.

4. Public Space – This plan alternative proposes that all of the land between the river and Riverside Drive remain in public ownership. Building G could either be a leased pad to a private developer/business or be developed by the City with leased tenancy. All of the remaining public open space would be privately developed and maintained with the stipulation of public access.

5. Parking Supply and Service – This plan alternative focuses on creating one large parking structure, integrated into a downtown transit hub, at the intersection of Colorado Avenue and 7th Streets. The plan allows for the creation of 592 space garage with ground floor retail along 7th Street and a transit center along Colorado Avenue. It also provides for the ability to set back the structure from the rear windows of the County Courthouse. A large parking facility in this location would serve the core of downtown, the City and County Complex, and the new development at the Confluence.

6. Major Centralized Downtown Transit Center(s) – There is a desire by the City and RFTA to create a downtown transit center. In the preparation of the reuse alternatives several factors were considered including: the ability to locate a facility that would be functionally efficient in terms of transit operations (i.e. easily accessible by the primary transit routes along Grand Avenue and 8th Street); the ability to have signalized access to allow for signal preemption or privatization to maintain schedules and headways; and especially important, be geographically convenient to serve all of the downtown and the Confluence Area. The proposed location on the existing parking lot along Colorado Avenue between 7th and 8th Streets achieves all of these locational criteria. With the proposed integration of the large parking structure with the transit center, the ability to provide park-and-ride facilities at this location is also possible.

In addition to the bus transit center, this plan depicts a potential future elevated light rail transit station on the top of the berm. This would make the Confluence Area a highly functional transit-oriented development, with excellent rail and bus transit within an 1/8 mile walk of the entire development and downtown.

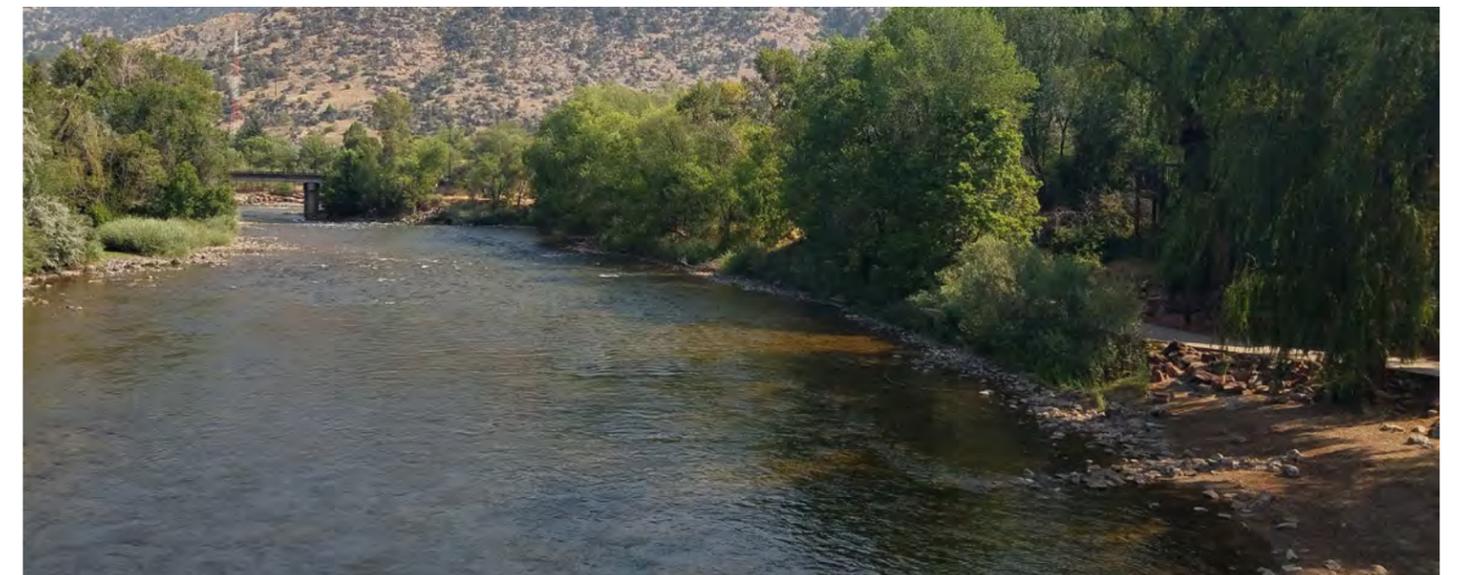
7. Ability to Phase Development – This plan alternative provides for a highly flexible phasing of development. Buildings A, B, and C located on lot 1 could be advanced

towards development with the only major limiting factor being the environmental status of the site as a former railroad property. Prior to development, Defiance Avenue from 7th to 8th Streets will need to be upgraded. In order for the new development to accommodate the grade changes from the high point at the intersection of 8th Street and Defiance Avenue to the lot’s frontage along 7th Street, the entire roadway system within the Confluence Area should be engineered to a level to determine that all grading related to the underpasses meets design requirements. 7th Street and the portion of Defiance Avenue between 7th and 8th Streets will need to be constructed.

As with all three alternatives, buildings K through N, on lots 2 and 9 should be advanced to create continuous development along 7th Street from the downtown to the Confluence.

Development of lots 5, 6, and 8 will necessitate the acquisition of private property, either by a developer directly or by the City. The proposed Riverside Drive would bisect the private property and require public right-of-way.

8. Existing Utilities – Based on the information provided, this plan configuration would not require significant relocation of underground utilities although re-routing into new street rights-of-way may be desirable.



The naturalized aspects of the river’s edge will need to be maintained through creative design and ecologic enhancement, while providing public access to the water.

Plan Limitations

1. Reduction in RFTA ROW Width – The awkward shape of lots 5 and 8 makes them challenging to develop. The ability to obtain the additional parcels amended to the RFTA ROW to create the 100’ ROW width provides great value in achieving additional building yield, especially on lot 5.

2. Modification to RFTA Berm – In order to create a street grid, two underpasses of the railroad are required. The underpass at 7th Street is proposed to be significantly widened, likely achieved by two bridge spans with a central pier. A new underpass would be required at the location where the Defiance Avenue is extended to meet the proposed Riverside Drive.

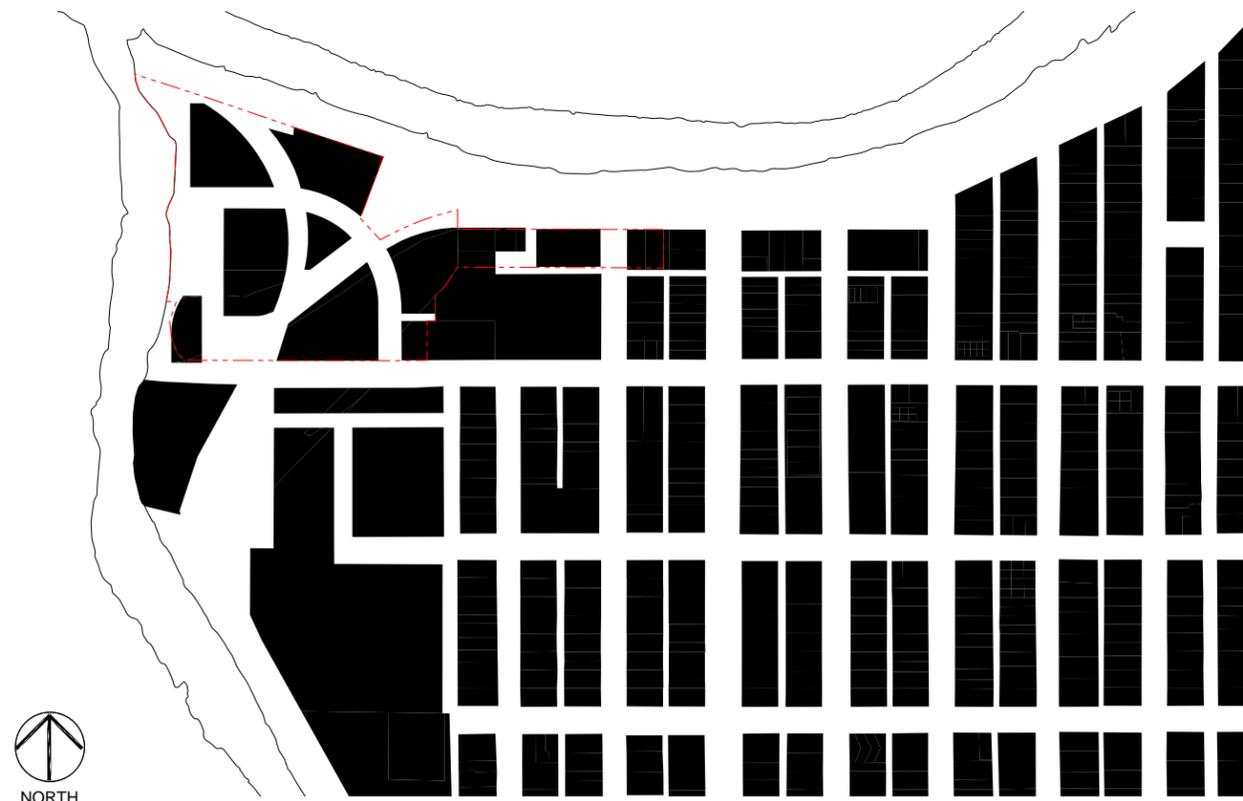
3. Existing Utilities – Keeping the underground utilities in the current configuration reduces the overall development potential of this layout. If some utilities can be relocated, the footprints of buildings H and I may be increased. In addition, the recently identified sewer line paralleling the UPRR ROW on lot 3 precludes the ability to create a practical parking structure in this location, as previously proposed. This plan alternative depicts a potential light rail transit station in the center of the Confluence Area on top of the berm. Ideally, if a parking structure could be located on lot 3 it would provide park-and-ride facilities with direct access to platform elevation if rail transit were constructed in the future .



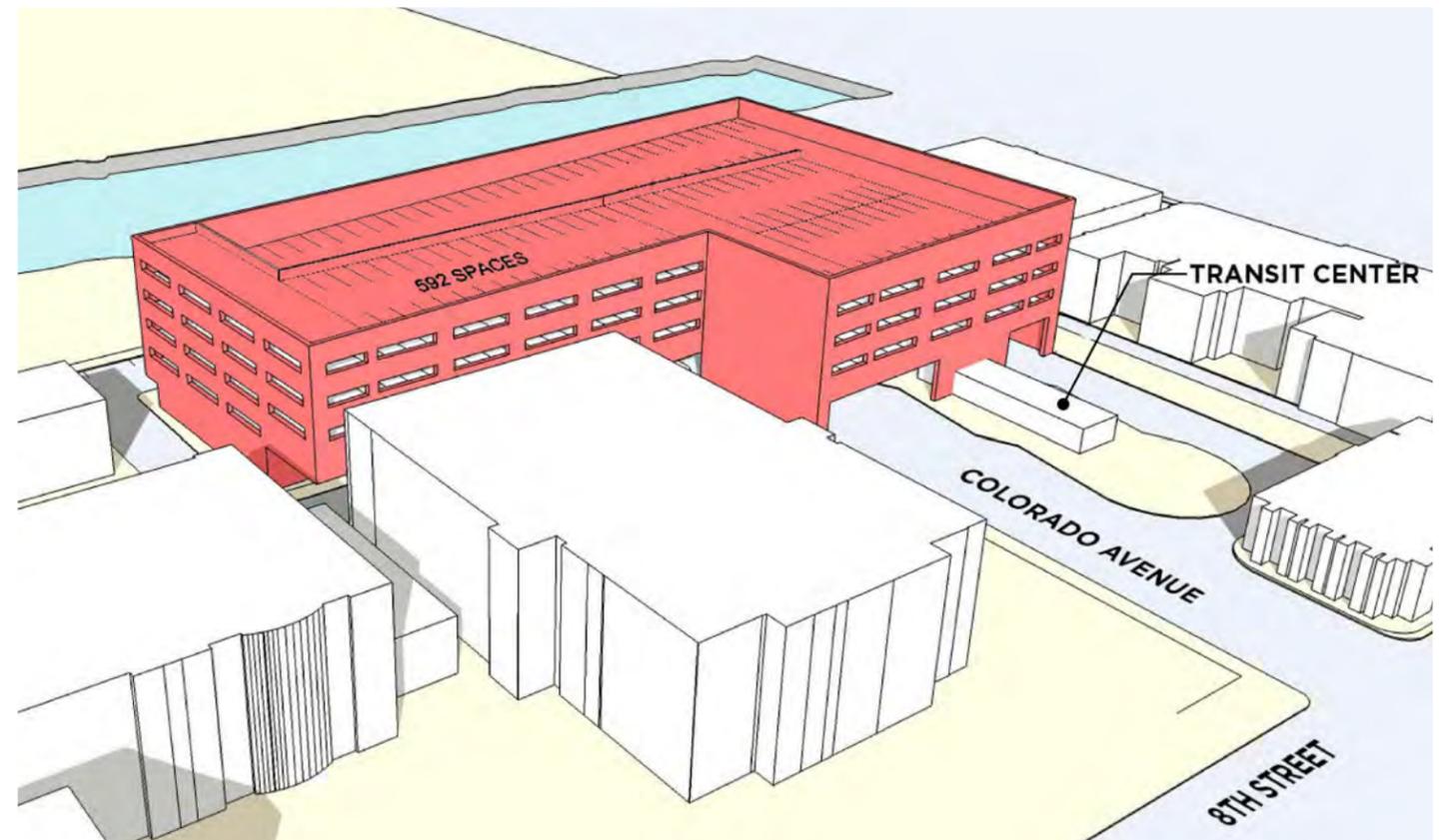
Alternative A - Building Footprint Figure/Ground Diagram



Plan view of parking structure spanning Colorado Avenue and incorporating a potential RFTA Transit Center

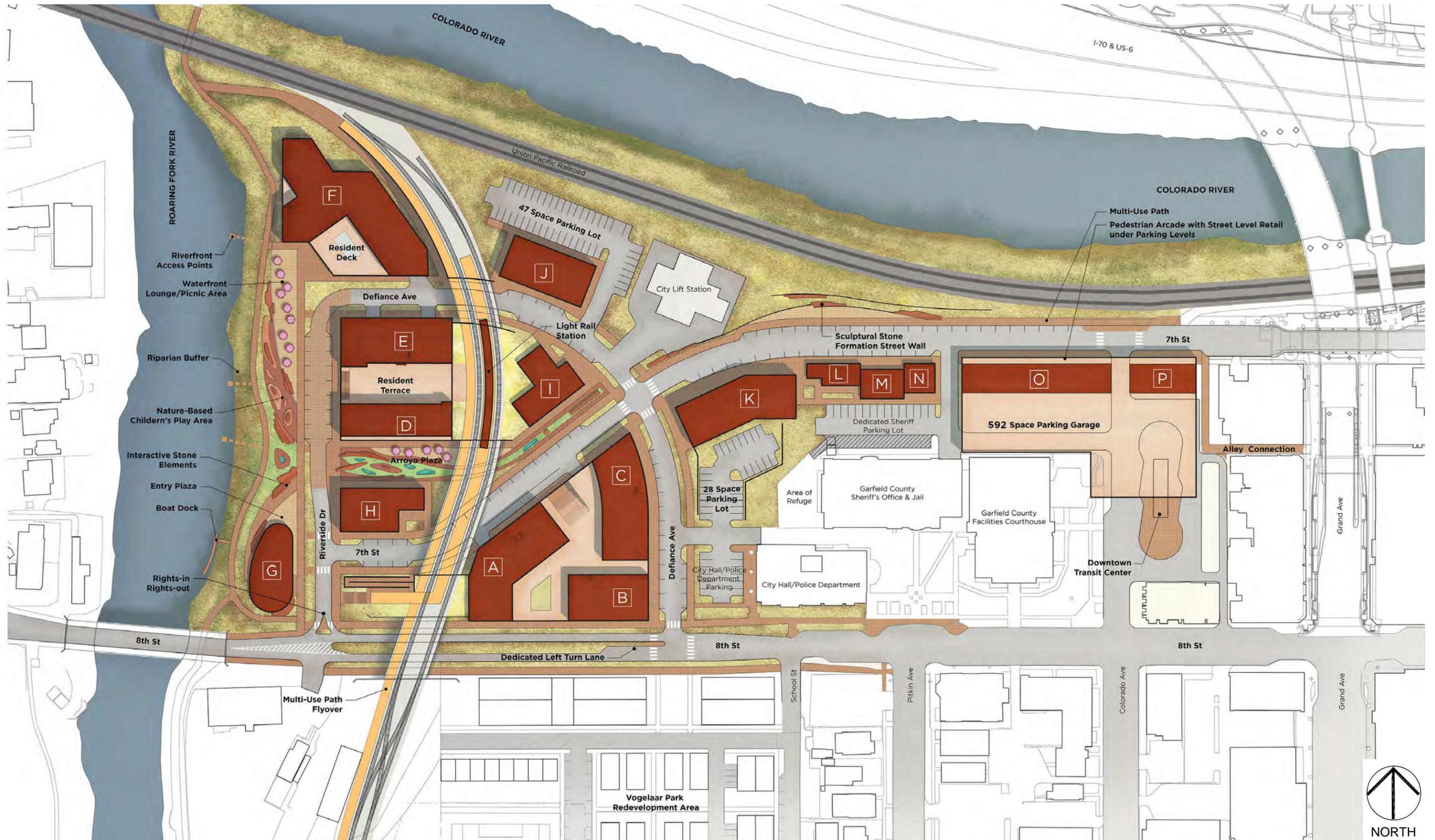


Alternative A - Block Structure Figure/Ground Diagram

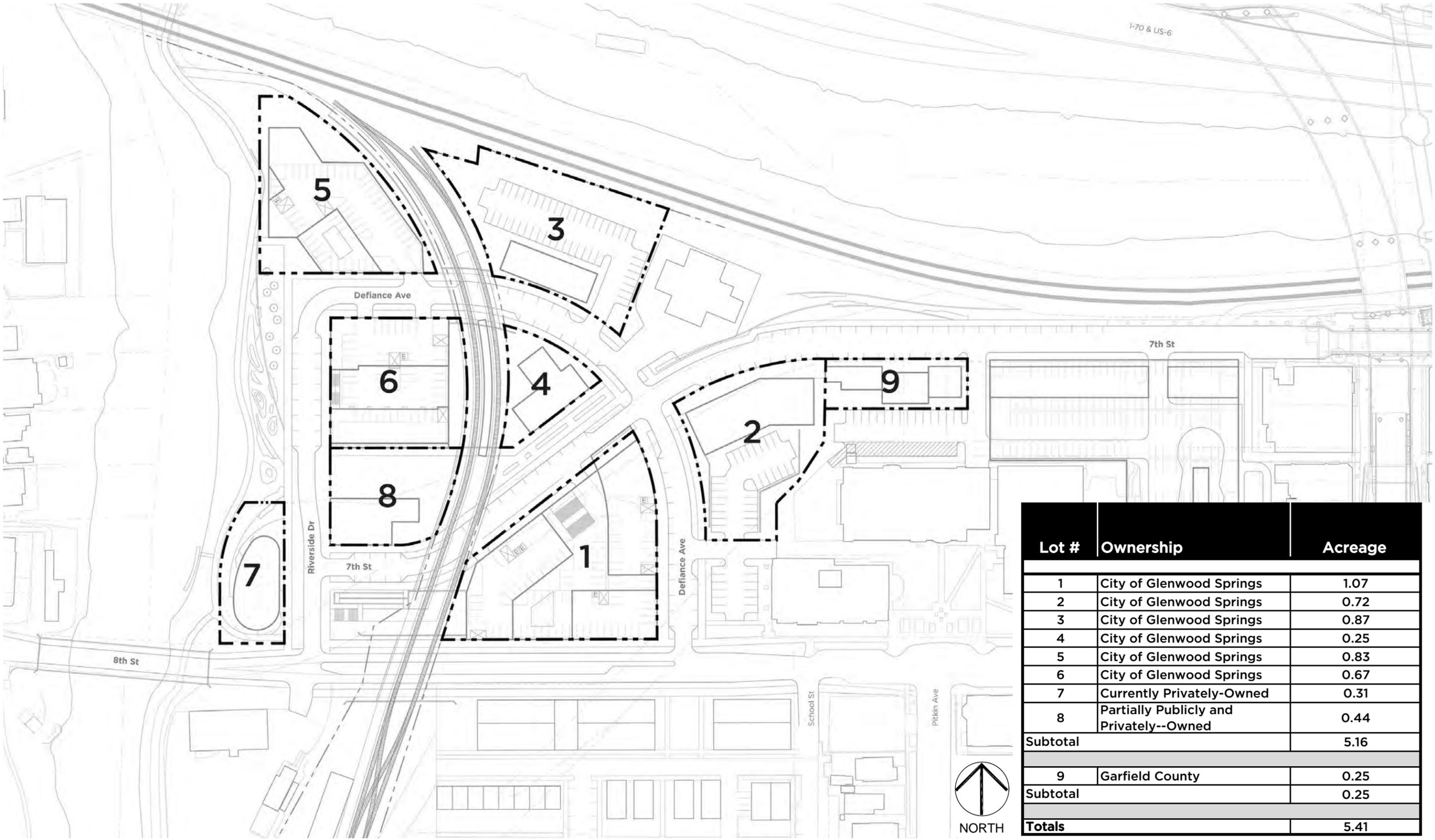


Oblique view of parking structure spanning Colorado Avenue and incorporating a proposed RFTA Transit Center.

Alternative A - Site Reuse Plan



Alternative A - Potential Development Parcels Diagram



Lot #	Ownership	Acreage
1	City of Glenwood Springs	1.07
2	City of Glenwood Springs	0.72
3	City of Glenwood Springs	0.87
4	City of Glenwood Springs	0.25
5	City of Glenwood Springs	0.83
6	City of Glenwood Springs	0.67
7	Currently Privately-Owned	0.31
8	Partially Publicly and Privately--Owned	0.44
Subtotal		5.16
9	Garfield County	0.25
Subtotal		0.25
Totals		5.41

ALTERNATIVE B

This alternative considers the potential future elimination of the RFTA ROW, i.e. removal of the berm entirely from 8th Street to the UPRR ROW. The elimination of this major physical impediment, especially due to its central location and awkward shape, allows for a dramatically different development in terms of character, efficiency, and density, all of which are improved in this plan alternative.

Key Design Parameters

- **RFTA ROW – This alternative explores the potential value of eliminating the RFTA ROW north of 8th Street and the berm within it.**
- **Structured Parking - A parking structure is located adjacent to the City Building, at Defiance Avenue and 7th Street. A percentage of the parking within this structure could be dedicated to the Vogelaar Park redevelopment south of 8th Street as well as serving the City and County Complex.**
- **Street Pattern/Vehicular Circulation – A street pattern that extends and replicates the typical block dimensions and pattern of the downtown is utilized as the basis of the street grid and the urban block form.**
- **Rail Transit - This alternative is based on a future rail transit line and station terminating at 8th Street and the RFTA ROW.**
- **Utilities – This alternative assumes that significant utility relocation would be possible and therefore, not a limiting constraint.**

Plan Benefits

1. Overall Urban Form & Street Pattern – What the community expressed that they desired is the creation of a neighborhood that evokes a consistent character of Glenwood Springs’ downtown, yet also takes advantage of unique aspects of the Confluence Area. In essence, this means - unique yet complimentary. Once the berm and its related impacts are removed from the equation, a geometry that follows the traditional form and pattern of the downtown can be easily extended into the area. A major opportunity that opens up in this alternative is the ability to relocate Defiance Avenue to the west, aligning it with the proposed north-south street on the Vogelaar Park site and making blocks along 8th Street that are closer to the typical 250’ east-west length.

At the point that 7th Street intersects with Defiance Avenue; a central cobblestone courtyard can be created as a defining urban design entrance feature. From this point, a triangular public space expands towards the riverfront. This central public space could be lined with mixed-use buildings creating a well-organized development plan focused on a logical progression of public spaces. This approach provides for abundant and flexible opportunities for special events and daily use by local residents. In essence the space would function as a formal central square and then transitions into a naturalized park experience as it progresses to the river’s edge.

Another benefit of the elimination of the berm is the ability to fully engage 8th Street with active and vibrant ground floor frontage. Due to the grade implications of the berm, it would be very difficult to create an activated retail and pedestrian realm along this frontage in other scenarios. In this case, the 8th Street frontage could be a “complete street” from an urban design perspective with ground floor retail storefronts. In this scenario a central median along 8th Street is less desirable in order to reduce the width of the street to promote the relationship of development on both sides of the street.

Finally, the resultant street layout creates numerous rectilinear development lots (see Alternative B Development Parcel Diagram) that form efficient development parcels of varying sizes.

- 2. Development Yield** – This plan alternative provides the greatest potential development yield compared to alternatives A and C, for both housing units and commercial/retail square footage.
- 3. RFTA ROW** – With the elimination of the RFTA ROW and the berm within it, the most ideal location and configuration of streets and circulation through the area can be achieved. Not only does this plan create a highly functional street pattern for traffic flow, it provides for highly efficient block dimensions. This results in a denser development in a manner that does not feel out of proportion or scale with its context. The cost per foot to construct many of the buildings would also likely be lower because larger footplates with simple geometries can be achieved. It also allows for substantial buildings to be located as bookends in a highly valuable location near the riverfront, yet provides the opportunity for an expansive stretch of public open space to extend back from the

Alternative B Yield Table

Map Key	Uses	Building Footprint S.F.	Stories/ Levels	Commercial S.F.	Total S.F.	Dwelling Units	Notes
A	Mixed-Use: Multi-Family Housing & Commercial/Restaurant	13,550	5	6,000	67,750	40	Ground Floor retail with building amenities for the remainder. Total Building Height 52’.
B	Mixed-Use: Multi-Family Housing & Limited Commercial/Retail	13,200	5	11,200	66,000	40	Ground Floor retail with building amenities for the remainder. Total Building Height 52’.
C	Mixed-Use: Multi-Family Housing & Commercial/Restaurant	14,400	5	12,600	72,000	48	Ground Floor signature riverfront dining with dock and building amenities for the remainder. Total Building Height 52’.
D	Mixed-Use: Multi-Family Housing & Commercial/Retail	16,545	5	12,000	79,725	56	Ground Floor retail with building amenities for the remainder. Could have retail on 2nd floor facing courtyard. Total Building Height 52’.
E	Boutique Hotel & Commercial/Restaurant	7,690	5	1,500	38,450		35 - 40 Room Hotel with Ground Floor Lobby and Retail. Total Building Height 52’.
F	Mixed-Use: Multi-Family Housing & Commercial/Retail	9,200	4	7,000	36,800	24	Ground Floor retail with building amenities for the remainder. Could have retail facing courtyard. Total Building Height 42’.
G	Mixed-Use: Multi-Family Housing & Commercial/Retail	6,600	4	3,000	26,400	24	Ground Floor retail with building amenities for the remainder. Could be affordable units which would increase unit yield. Total Building Height 42’.
H	Mixed-Use: Multi-Family Housing & Commercial/Retail	6,000	4	2,800	24,000	21	Ground Floor retail with building amenities for the remainder. Could be affordable units which would increase unit yield. Total Building Height 42’.
I	Mixed-Use: Affordable Housing & Commercial/Retail	11,110	4	9,000	44,440	27	Ground Floor retail with building amenities for the remainder. Total Building Height 42’.
J	Commercial/Retail	4,000	1	4,000	4,000		
K	Commercial/Retail	2,400	1	2,400	2,400		
L	Commercial/Retail	1,700	1	1,700	1,700		
M	Commercial/Retail	2,400	1	2,400	2,400		
N	Commercial/Retail/Office	7,500	3	22,500	22,500		Ground floor retail with office space on two floors above. Could provide office space for County Complex. Total Building Height 32’.
O	Commercial/Retail/Office	5,000	3	15,000	15,000		Ground floor retail with office space on two floors above. Could provide office space for County Complex. Total Building Height 32’.
Totals		121,295		113,100	503,565	280	

riverfront into the core of the development, along the 7th Street axis.

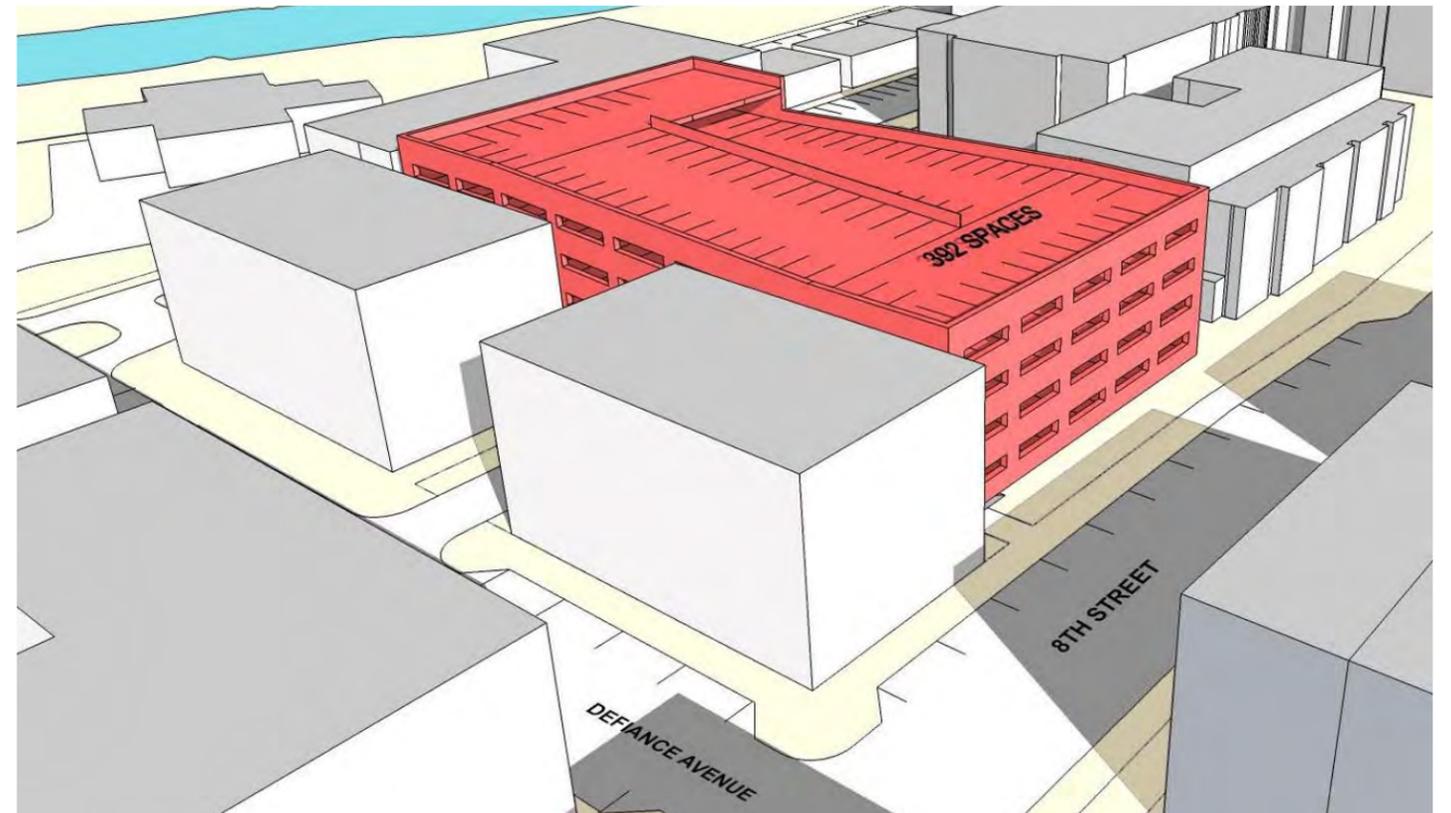
- 4. County Complex** – All of the criteria provided from the County related to its complex are accommodated. As a result of shifting Defiance Avenue to the west, a highly efficient parking structure is to be provided adjacent to City Hall. The garage can be located to provide surface parking for the police department and also provide additional buffer for the area of exterior emergency refuge for the jail.
- 5. Major Centralized Downtown Transit Hubs** – This alternative depicts a regional commuter rail facility terminating at a station on the south side of 8th Street. This station would be within a 1/4-mile walking radius of most of the downtown.
- 6. Parking Supply and Service** – Two parking structures are provided in this plan alternative. They are located in areas that are least desirable for higher valued land uses. The first is located on lot 4 adjacent to the police department entrance to City Hall, creating a physical buffer between that use/activity and new mixed-use development. The

second is located on lot 7, adjacent to the active UPRR ROW. In both cases, the structures can be configured in standard garage modular depths to create cost-effective and efficient layouts for each facility. The structures also provides ample parking for both the new development and the existing downtown. The structure on lot 4 could serve the adjacent housing, the government complex, and provide commercial/retail parking. The structure on lot 7 could be primarily for residential parking and also provide overflow commercial/retail parking. It is also located close enough to the Rio Grande Trail it could provide off-site parking for events in Two Rivers Park. Both structures could be wrapped with development on their primary sides.

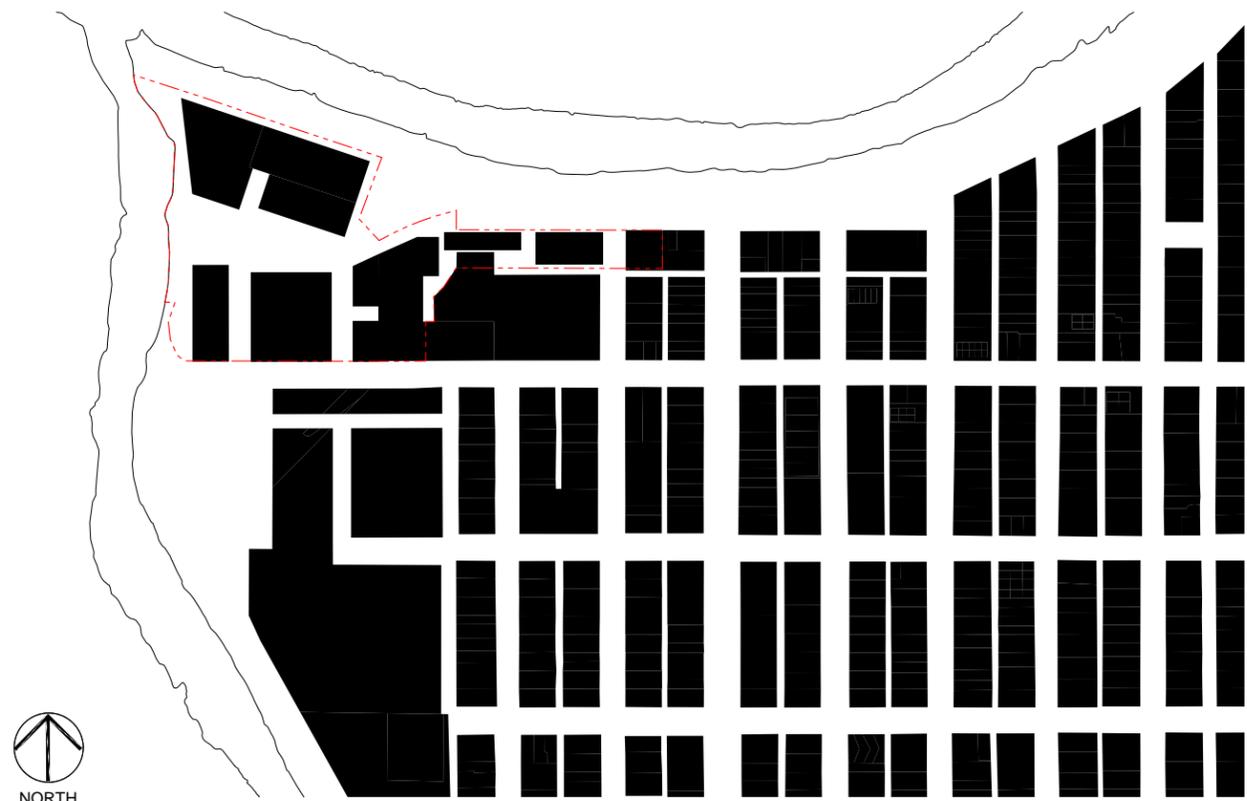
- 7. Costs and Time** – This alternative potentially yields an additional 100,000 SF of development yield and 50 to 60 additional residential units. However, the likely costs to achieve this additional development yield will be substantial. In addition to the direct acquisition costs of the RFTA ROW in this area, the value of the time it takes to achieve and the value of the lost return from development that could occur sooner, will need to be taken into account.



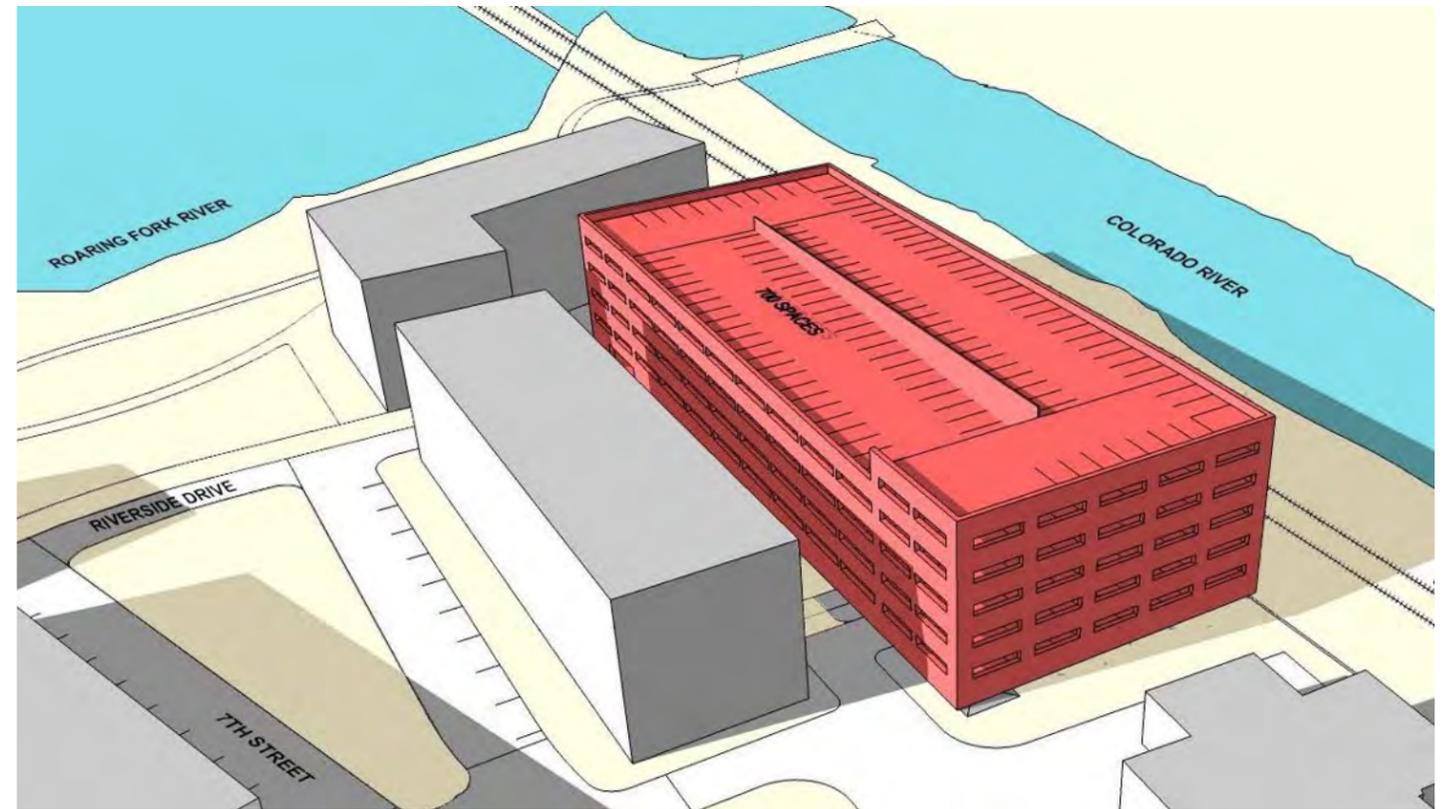
Alternative B - Building Footprint Figure/Ground Diagram



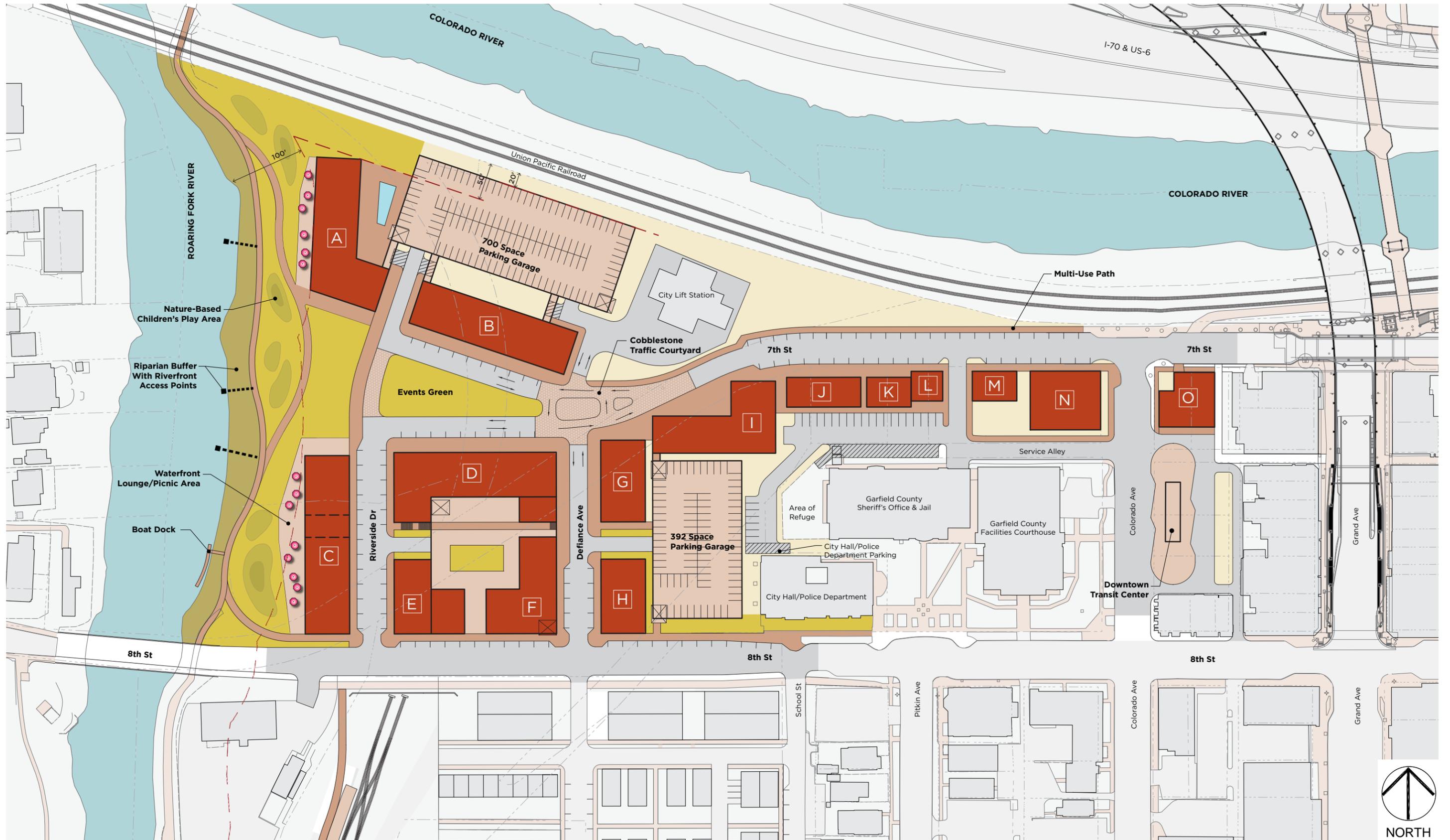
Oblique view of parking structures on lot 1 showing City Hall and new housing fronting a relocated Defiance Avenue.



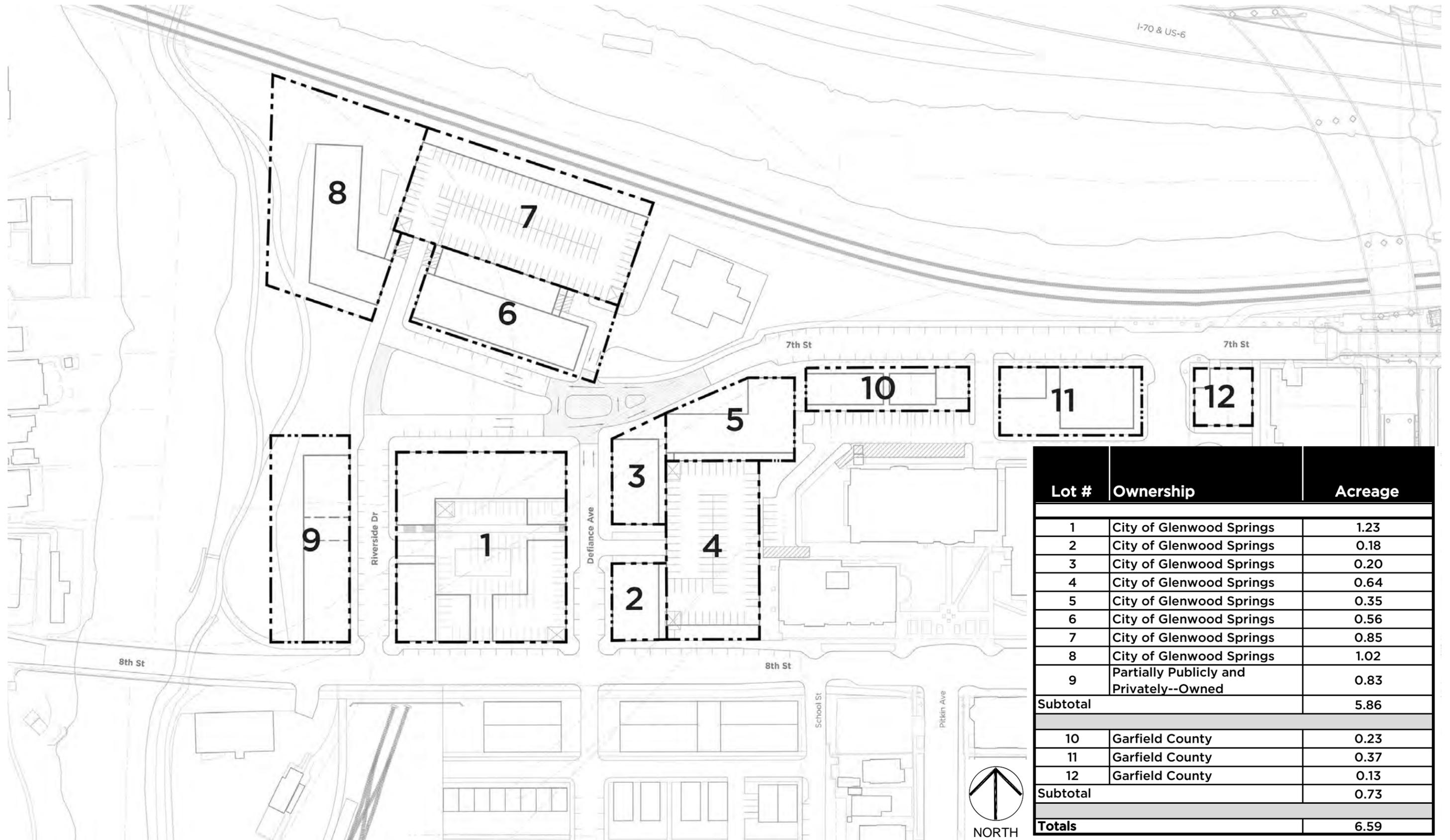
Alternative B - Block Structure Figure/Ground Diagram



Oblique view of parking structure on Lot 7 showing buildings wrapping the facility.



Alternative B - Potential Development Parcels Diagram



Lot #	Ownership	Acreage
1	City of Glenwood Springs	1.23
2	City of Glenwood Springs	0.18
3	City of Glenwood Springs	0.20
4	City of Glenwood Springs	0.64
5	City of Glenwood Springs	0.35
6	City of Glenwood Springs	0.56
7	City of Glenwood Springs	0.85
8	City of Glenwood Springs	1.02
9	Partially Publicly and Privately--Owned	0.83
Subtotal		5.86
10	Garfield County	0.23
11	Garfield County	0.37
12	Garfield County	0.13
Subtotal		0.73
Totals		6.59

ALTERNATIVE C

This alternative shows what could be achieved if the current 100' RFTA ROW is maintained and the existing 7th Street underpass of the rail is upgraded but not widened. It also assumes that the relocation of underground utilities is avoided as much as possible. The suggestion to have a series of buildings fronting on the riverfront that are serviced by access drive on the berm side of the development is incorporated. This alternative represents what might be able to occur with the least amount of upfront actions on the part of the City or a developer.

Key Parameters

- **Overall Urban Design Approach** – Since the berm is left essentially intact as it exists today, the area is significantly divided by this major landform element. As a result, instead of trying to create one cohesive design approach each area is made to be very distinctive with the hopes that these aspects make them destinations worth “seeking out.” Emphasis is placed on two areas: the river frontage (as an elevated promenade with terraces) and the intersection of 7th Street and Defiance Avenue.
- **RFTA ROW** – With the exception of minor functional, safety, and aesthetic modifications, and the inclusion of a multi-use path, the RFTA ROW berm is left intact.
- **Structured Parking** – These alternative focuses on creating a single, large structured parking facility on lot 1 at Defiance Avenue between 7th and 8th Streets. Minimal ground floor retail options for the structure are considered in order to maximize the parking yield within the structure.
- **Street Pattern/Vehicular Circulation** – The notion of a gridded street layout is abandoned and Defiance Avenue terminates at a surface parking lot on lot 3. 7th Street follows its current alignment terminating at a “rights-in, rights-out” intersection with 8th Street. Development between the RFTA ROW and the river’s edge is accessed via a service drive that parallels the RFTA ROW line.

Plan Benefits

1. Overall Urban Form & Street Pattern – This alternative creates a very strong emphasis directly onto the riverfront. Three of the largest buildings line the river’s edge. This alternative relies heavily on creating a seamless transition between the character and design of the riverfront public park and the elevated promenade and terraces that would be part of the private development. If successful, this area would be very intensely utilized with high concentration events, etc. so great care would be needed to balance the desire of the community to see the river’s edge be naturalized while providing ample hardscaping to support intense use.

2. RFTA ROW – No major actions are required to implement this plan alternative. The alternative depicts the potential restoration of freight rail along with a multi-use path on the top of the berm, creating a rail-and-trail condition.

3. Relationship of Development to the Riverfront – The “front” of the development actually faces the riverfront with an elevated promenade fronted with commercial/retail uses overlooking the river.

4. Parking Supply and Service – The proposed parking structure on lot 1 allows for the creation of a large parking supply that can service the commercial/retail riverfront demand from the development on lot 4, as well as the other mixed-use development along 7th Street. It could also provide supplemental parking for the development south of 8th Street at Vogelaar Park and the City and County Complex. Parking for buildings A, B, and C on lot 4 is provided in one interconnected at-grade parking area below the promenade and is supplemented with a surface lot on the RFTA ROW side of the building complex. An additional surface lot, primarily to serve the housing in building D on lot 3, is provided adjacent to the UPRR active rail line.

It is possible to integrate the structured parking garage scenario from Alternative C with the remainder of the Alternative A reuse plan. This determination could be an outcome of the RFTA Corridor Service Study.

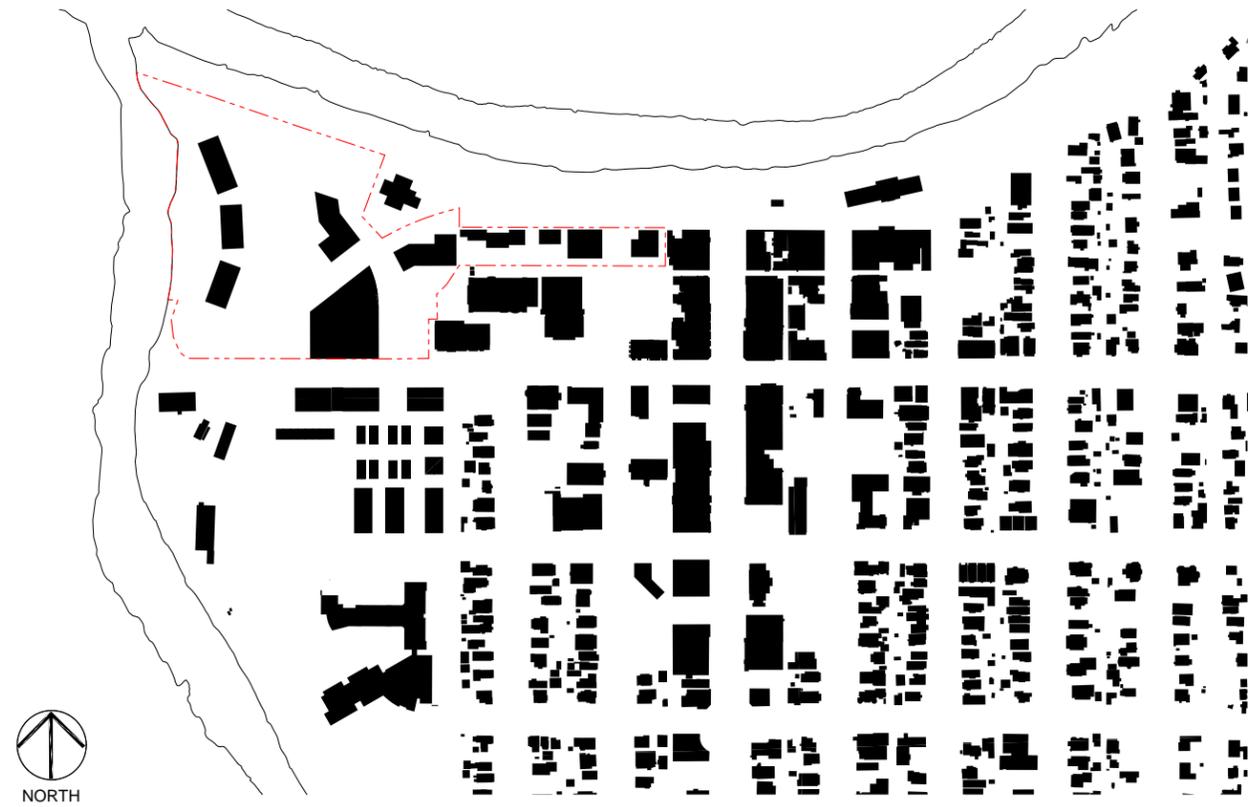
Alternative C Yield Table

Map Key	Uses	Building Footprint S.F.	Stories/ Levels	Commercial S.F.	Total S.F.	Dwelling Units	Notes
A	Mixed-Use: Multi-Family Housing & Commercial/Restaurant	9,000	5	5,000	45,000	28	Buildings A, B, & C would sit on top one interconnected parking level pedestal with a public promenade overlooking the river as the “Ground Floor” for the buildings. Total building Height 52’.
B	Mixed-Use: Multi-Family Housing & Limited Commercial/Retail	7,200	5	5,000	36,000	24	
C	Mixed-Use: Multi-Family Housing & Commercial/Restaurant	7,200	5	6,500	36,000	24	
D	Boutique Hotel & Commercial/Restaurant	12,060	4	3,000	48,240		40 - 50 Room Hotel with Ground Floor Lobby and Retail. Total Building Height 42’.
E	Commercial/Retail	4,900	1	4,900	4,900		One-story Commercial/Retail wrapping parking structure.
F	Mixed-Use: Affordable Housing & Commercial/Retail	11,360	4	8,000	45,440	27	Affordable Housing on upper floor. Total building Height: 42’
G	Commercial/Retail	2,400	1	2,400	2,400		
H	Commercial/Retail	1,700	1	1,700	1,700		
I	Commercial/Retail	5,400	1	5,400	5,400		
J	Commercial/Retail	2,000	1	2,000	2,000		
K	Commercial/Retail	7,500	3	22,500	22,500		
L	Commercial/Retail	5,000	2	10,000	10,000		
Totals		75,720		76,400	259,580	103	

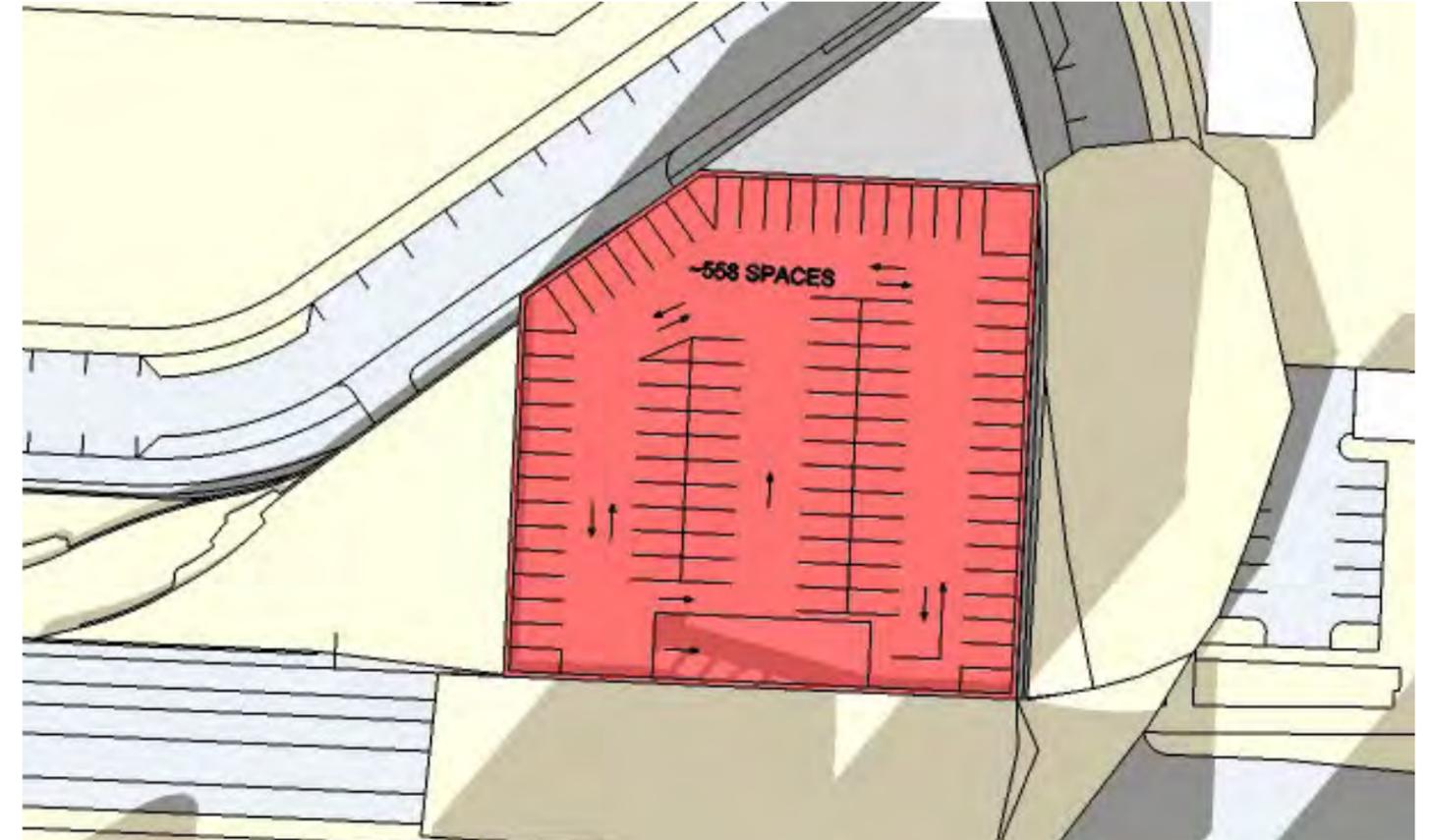
5. Downtown Transit Center – This plan alternative also shows a RFTA bus transit center in conjunction with the large parking structure on lot 1. Bus pick-up and drop-off would occur along Defiance Avenue. The ability to provide efficient operations and routing back onto 8th Street in each direction will need to be evaluated since the only signalized intersection is at 8th Street and Colorado Avenue. Direct BRT transit stop service could also be provided on both sides of 8th Street in conjunction with the garage, to facilitate express bus routing

6. Utilities – This plan alternative doesn’t anticipate the need to make any major modifications to underground utilities.

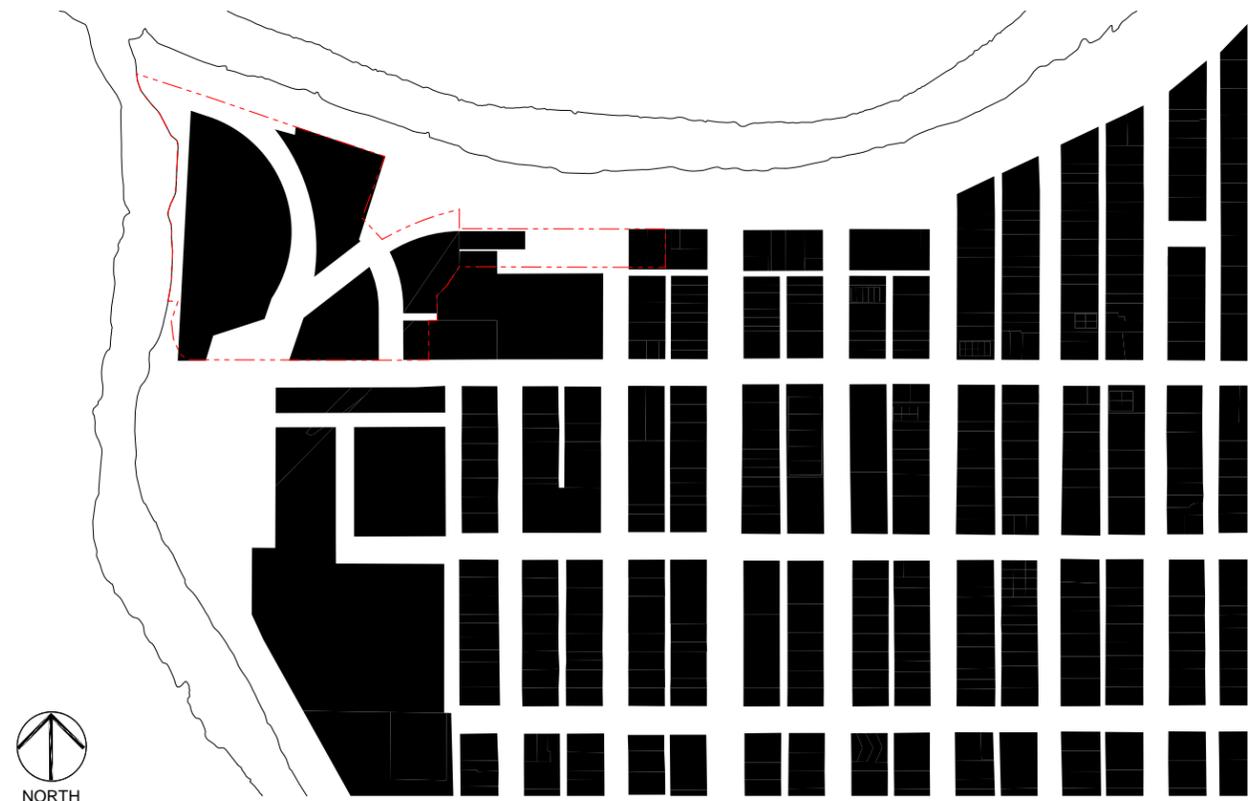
7. Costs, Time, and Phasing – A significant amount of this development could advance in the near-term. With the exception of the need to acquire additional private property at the intersection of 7th and 8th Streets and the riverfront, the development on lot 4 could proceed. Phasing of development could occur and correspond to the development of Vogelaar Park and the parking structure on lot 1. Lot 3 could also be developed entirely as a surface parking lot as an interim use until the parking structure is constructed on lot 1.



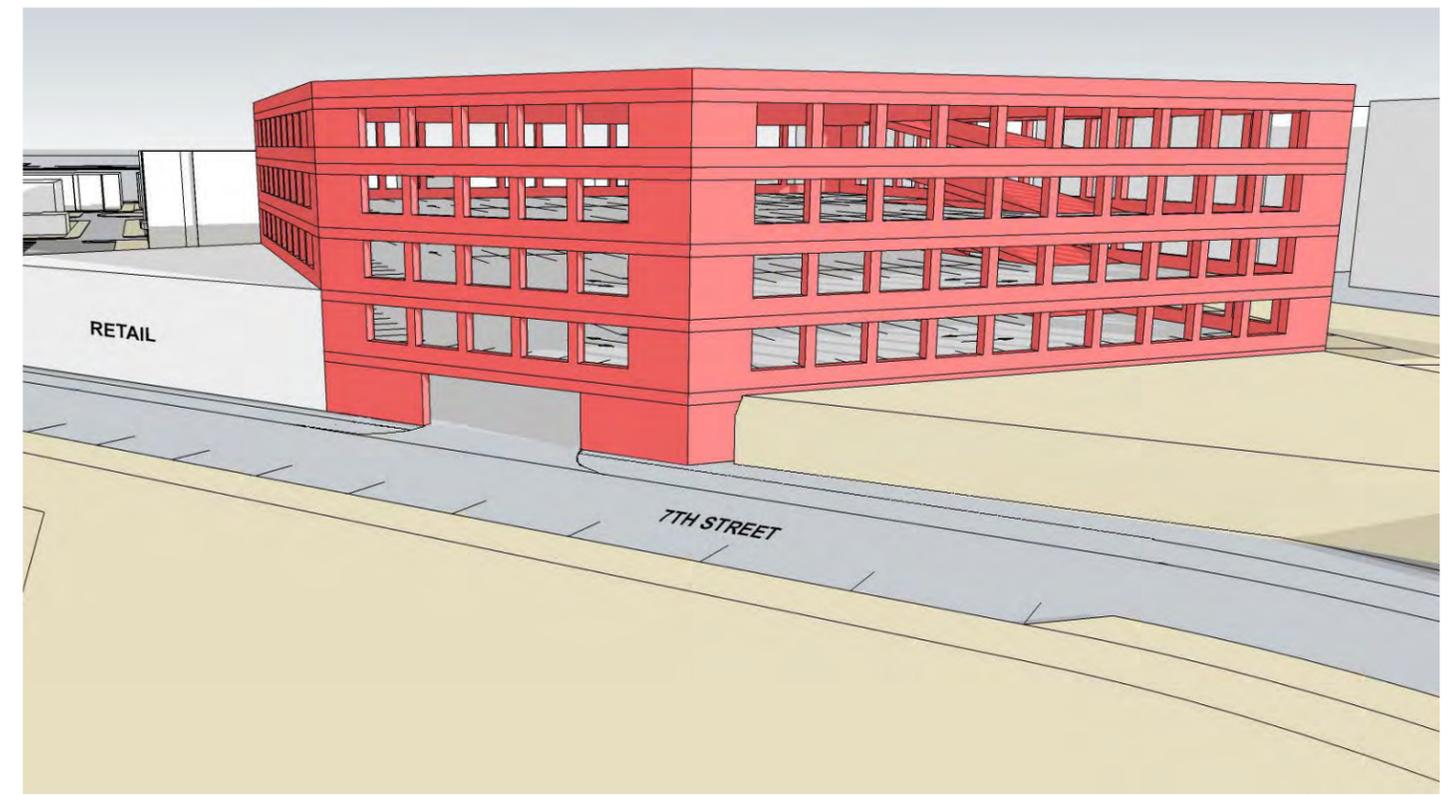
Alternative C - Building Footprint Figure/Ground Diagram



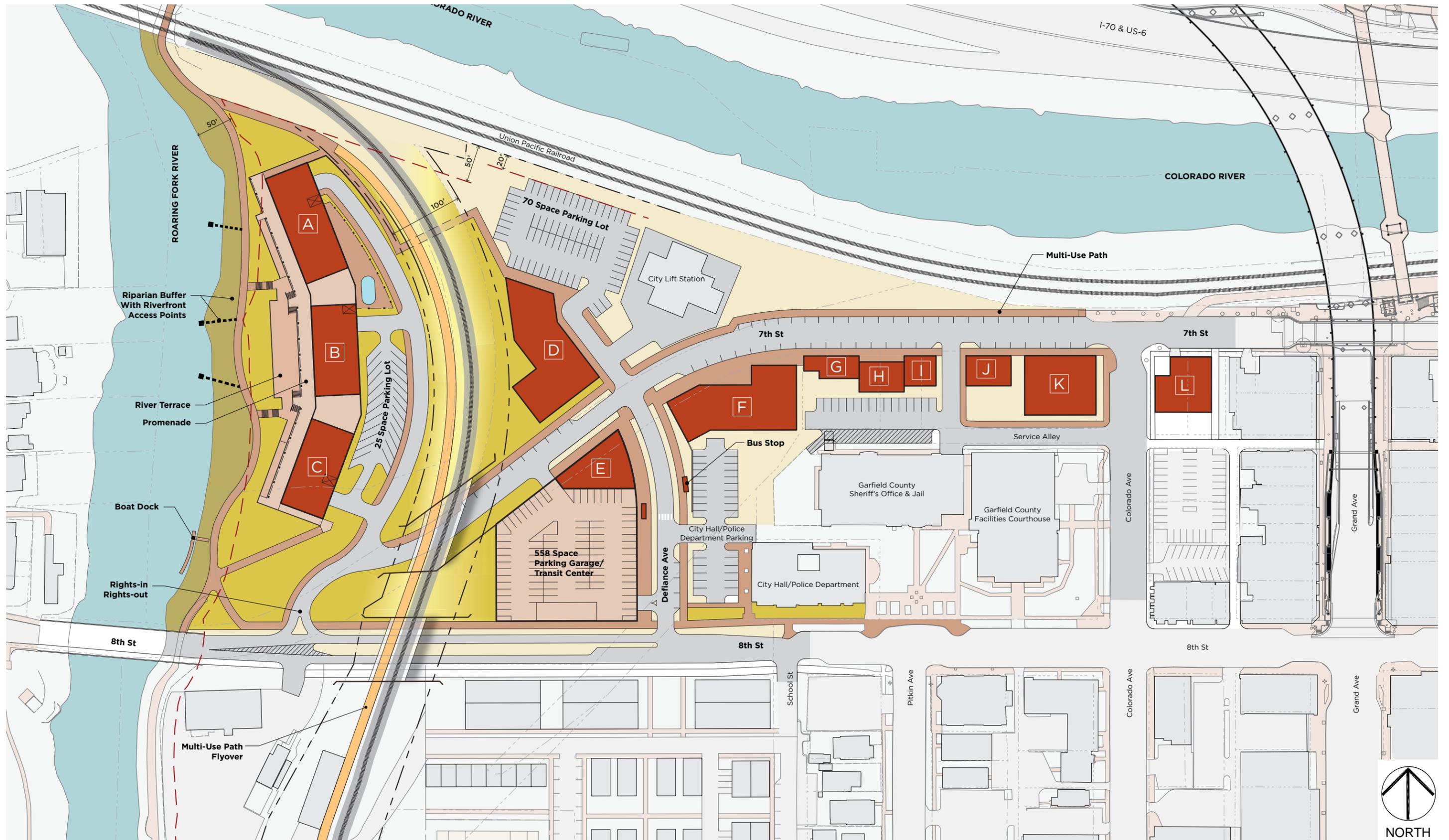
Plan view of the parking structure on lot 1.



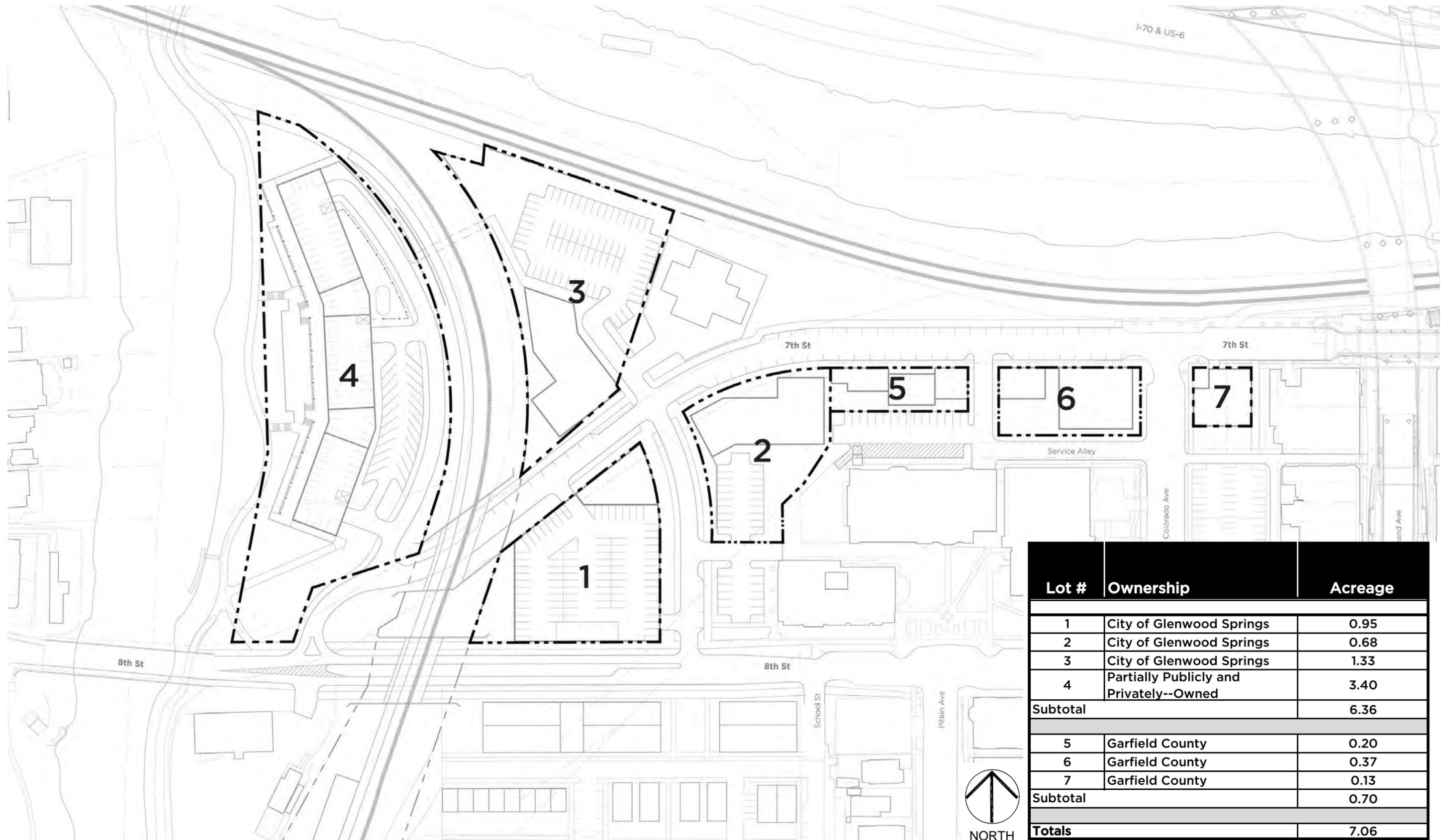
Alternative C - Block Structure Figure/Ground Diagram



Oblique view of parking structure on lot 1 showing 7th Street frontage and lower level access.
Note: RFTA ROW and berm are excluded for visualization purposes



Alternative C - Potential Development Parcels Diagram



Lot #	Ownership	Acreage
1	City of Glenwood Springs	0.95
2	City of Glenwood Springs	0.68
3	City of Glenwood Springs	1.33
4	Partially Publicly and Privately--Owned	3.40
Subtotal		6.36
5	Garfield County	0.20
6	Garfield County	0.37
7	Garfield County	0.13
Subtotal		0.70
Totals		7.06

2.3 THE WEST 6TH STREET AREA

This area was originally evaluated because of its value for redevelopment in relationship to the CDOT site as one of the three catalyst brownfield sites. It was thought that in order to determine the ultimate reuse value for the CDOT site, it was important to look at how it connects more directly to North Glenwood Springs and the downtown. This meant that the West 6th Area, and what that area's potential could be, became as crucial as what occurs on the CDOT site itself. The West 6th Street Area was evaluated starting with the recommendations from the 2017 6th Street Corridor Master Plan as a basis. In addition, it is believed that based on some of the historical uses in this area, a few of the properties may be brownfields, although no actual environmental assessment data was available to substantiate this possibility.

The 2017 6th Street Corridor Master Plan report focused heavily on the area of the 6th Street east of Laurel Street. It especially advocates creating a more traditional urban development pattern in the two blocks from Laurel Street to Pine Street, connecting to the pedestrian bridge north "landing" area. For the area west of Laurel Street, the plan mostly focuses on ways to improve the multi-modal transportation aspects of West 6th Street with an emphasis of introducing intersecting streets to form more typical street blocks, in order to reduce the highway-like suburban condition that current exists. This would also create a new traditional downtown block framework to shape new infill development that is oriented towards a pedestrian streetscape.

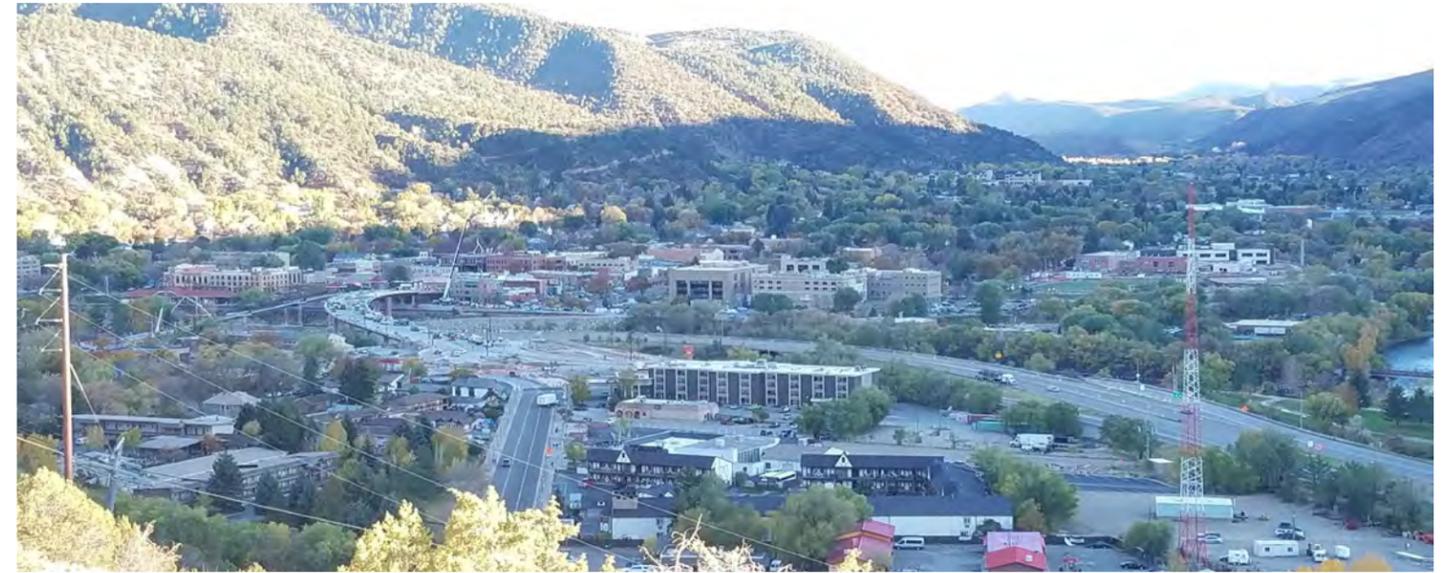
With the goal of promoting greater infill development in a denser, more walkable pattern, this project looked in more detail at the recommendations of the 2017 6th Street Master Plan to determine if new public streets and facilities could be introduced into the area to begin to foster a transformation of the area, especially for some of the parcels that have a history of auto-related uses and other potential brownfields aspects.

The proposed AWP reuse scheme for this area evaluates how a new local street network could be introduced. The proposed layout of the local streets works around the existing uses that are anticipated to remain and are active businesses. The concept is based on creating traditional complete streets with two-way traffic, on-street parking, few if any curb cuts, and sidewalks and streetscaping. New infill development would front onto these streets with zero setbacks and in some cases mixed-use development with ground floor

commercial uses and upper floor residential. Since this area already has a concentration of lodging uses and the market analysis performed as a part of the AWP showed that there may be demand for additional hotels, a potential hotel could certainly fit within the proposed reuse framework, most likely fronting onto West 6th Street, at a newly created corner.

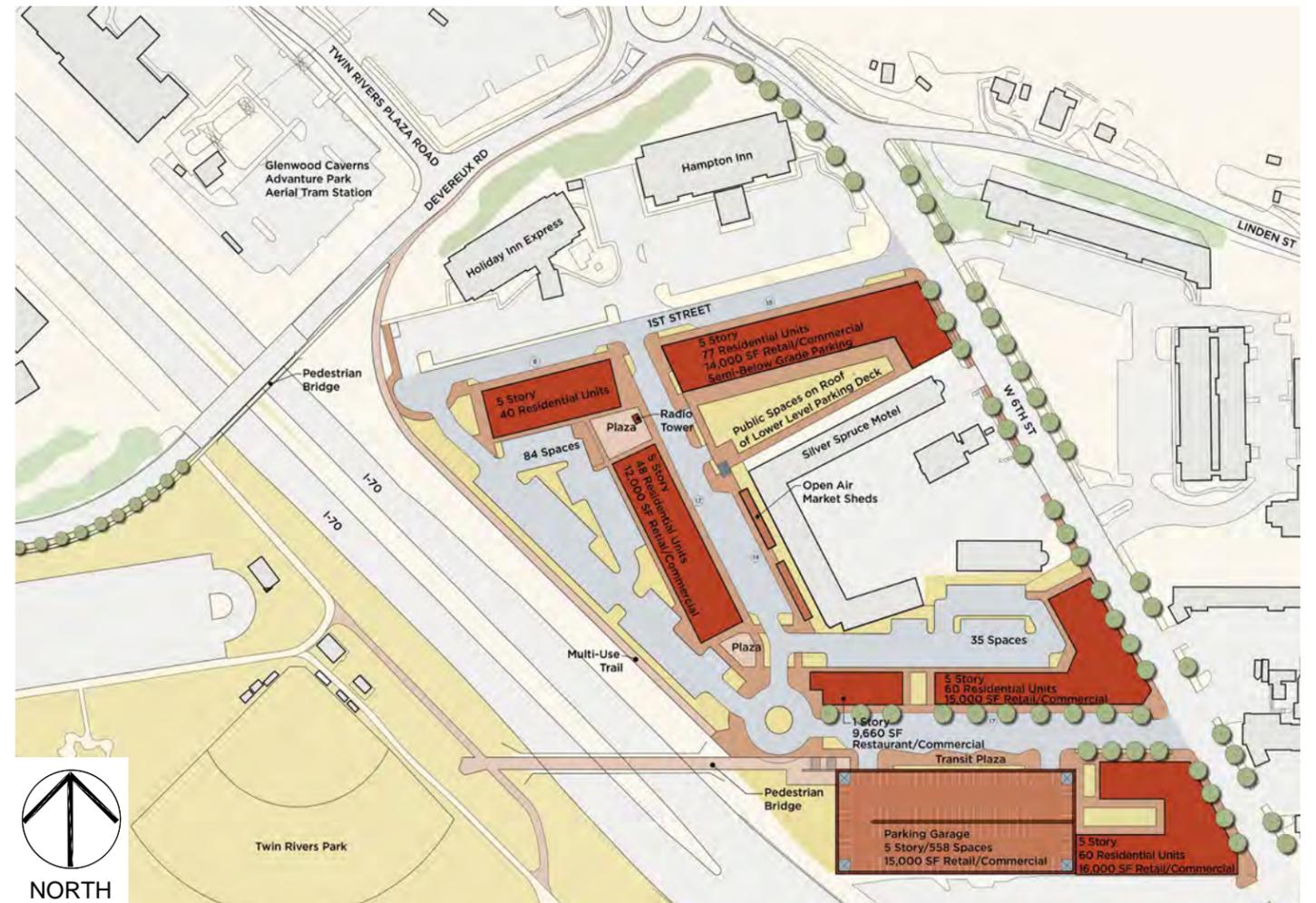
Throughout the AWP planning process there were discussions regarding the possible placement of a larger parking structure to function as a park-and-ride connected to RFTA transit service, somewhere within the AWP study area. In addition to the various alternatives for structured parking explored within the Confluence Area, the possibility of locating a large structured facility in this area was also considered. The reuse plan shows the placement of an approximately 558 space, five-story garage, with ground floor retail and transit facilities. A facility of this type in this location would have the benefit of being directly accessible for vehicular traffic exiting in both directions from I-70, as well as being easily served by existing RFTA transit routes. As a part of the RFTA pending Corridor Service Study, additional service may be considered for the 6th Street Corridor now that the Grand Avenue Bridge Replacement Project is complete. The presence of a parking structure of this scale in this location would also support the ability to build much denser infill in this area. This could transform it from a land use pattern mostly focused upon automobiles using off-street surface parking lots, to one that is more multi-modal and pedestrian, bicycle, and transit friendly.

The AWP reuse scheme also shows how a potential pedestrian/bicycle bridge over I-70 directly from the garage, could serve Two Rivers Park with greatly expanded parking supply. This would alleviate the undersupply of parking in the City's signature destination park, especially during major events.



View of the West 6th Street Area from the Holly Quarry.

West 6th Street Area Reuse Plan



2.4 THE FORMER HOLLY QUARRY

This site was included as part of the AWP study area as a result of its post-industrial mining operation condition. It was not known if environmental conditions currently existed as a result of the historic activities that occurred on the site, and what impacts those might have on its reuse. Based on information provide by the current property owners not responsible for any of the mining activities that occurred previously, it is believe that there are no environmental conditions that exist that would require specific permitting or other related site remediation activities. Due to its location and the large-scale earth disturbance activities that occurred, the site has challenges that impact its ability to be developed for non-mining activities.

After discussions with the property owners and findings from the market analysis, one potential reuse scenario that was considered was residential. Again, due to its location and topographic conditions, any development that might occur on the site would need to work with, and ideally try to take advantage of, the unique mountainside condition and location. The views afforded from the site into downtown, for example, are an excellent attribute that could provide immense value for a residential development.

Historically models for how mountainside or mountain-top residential could be constructed were researched. The town of Sassi di Matera in southern Italy (see www.sassidimatera.net for images) was one location that provided an interesting case study for the type of unique character that could be

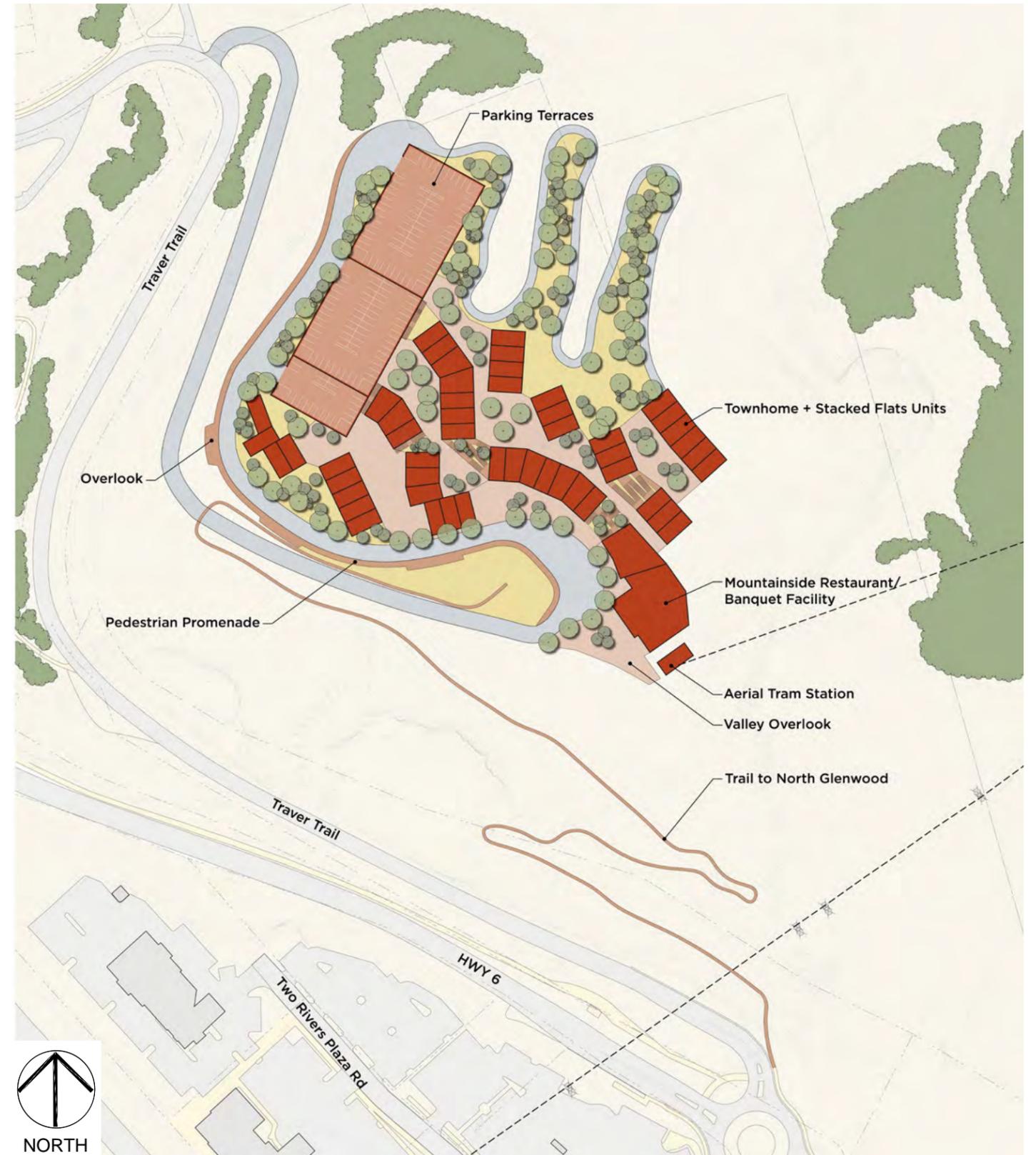
achieved by a new residential development on the quarry site. Large areas of the town are designated as a World Heritage Site by UNESCO, an organization of the United Nations. The intention of the proposed reuse plan for the quarry site is not to create a fake historic town, but instead to look at how new buildings could relate to a site with similar topography and create a very interesting pedestrian-oriented community.

The reuse plan for the site shows how clusters of residential dwellings might be stacked up the sloping site to create interesting spaces and courtyards, while affording scenic views from the units. The bulk of the site would be pedestrian-only, which would make it a unique place to live, and likely not the place for everyone, but the unique aspects would make it so attractive that demand for units would exist. The plan shows what appears to be a large blocky parking structure to accommodate vehicles of residents and visitors. In fact, this facility would be a series of parking terraces stacked one on top of another in a staged manner to use the grade of the site to provide access to each level. Ideally, the facility would have a landscaped roof to minimize its visual impact on the site and from a distance, since the site would be visible from across the valley.

Access to the site is provided by a ring-road with a mountainside pedestrian promenade. This public space, including several projecting overlooks, would become a destination for visitors, so it is possible that some limited commercial, most likely restaurants, could occur along the lowest terrace of units. Again, the views from these European café-like venues would be spectacular.



Vista up and down the Colorado River valley would be unmatched for any development that might occur on the Holly Quarry site.







03

- I Executive Summary
- 01 The Area-Wide Plan
- 02 Site Reuse Planning

03 Public Facilities and Implementation Strategies

- 3.1 Brownfield Environment Site Assessment Activities
- 3.2 Multi-Modal Transportation Connectivity
- 3.3 Public Parks and Open Spaces
- 3.4 Stormwater and Resiliency
- 3.5 Public Projects and Implementation
- 3.6 Potential Implementation Funding Sources

Appendix A Background Report

Appendix B Business Development Opportunities Report

PUBLIC FACILITIES AND IMPLEMENTATION STRATEGIES

In addition to the site reuse plans described in the prior chapter, a major focus of the overall AWP planning effort will be placed on the broader public site preparation actions and infrastructure work needed to support the site reuse recommendations. The following information summarizes the key strategies for advancing projects by topic area.

3.1 BROWNFIELD ENVIRONMENTAL SITE ASSESSMENT ACTIVITIES

Although extensive environmental site assessment (ESA) work has been performed on the former wastewater treatment plant site, there are other parcels where a Phase I ESA will be required or is recommended. The east leg of the former railroad right-of-way that was acquired by the City from RFTA will need to be evaluated. Based on the site's historical railroad use and associated activities, a Phases I ESA and likely a Phase II ESA will need to be performed. Since a Phase I ESA was not performed prior to the transfer of ownership to the City, the site is not eligible for U.S. EPA brownfields assessment funding, however other potential funding sources for these activities are described later in this chapter. The reuse of most of this property includes the construction of parking underneath buildings, therefore significant soil excavation will be required. In order for this work to be performed, depending on the results of soil sampling under a Phase II ESA, Soil Management and Remedial Action Plans will likely be required.

Because of the prevalence of railroad activities within this area and the former conditions at the wastewater treatment plant, the City should also consider performing Phase I ESAs prior to acquiring any additional properties. Soil sampling is also advisable along the riverfront prior to any major earth disturbance as a part of any park construction or shoreline restoration activities.

3.2 MULTI-MODAL TRANSPORTATION CONNECTIVITY

The focus of the AWP transportation framework is to improve mobility for people and goods moving throughout the AWP study area, especially in relation to the north and south sides of the downtown. Through the establishment of new

connections, increased consideration for promoting multi-modal transportation, and the upgrading of existing roads and intersections, it is possible to improve upon current transportation conditions. This includes providing increased traffic volumes associated with infill development while making the town increasingly more attractive for walking, bicycling, and transit use.

With regards to the Confluence Area and the West 6th Street Areas the establishment of a sense of true neighborhoods, including those that consist of a vibrant mix of uses, depends upon a consistently good pedestrian experience. Complete neighborhoods require a mix of land uses (residential, retail, office, civic uses, etc.) and a mix of housing types and household income levels arranged to provide a variety of living and working options, all within walking distance of each other. The value of high-quality multi-modal streets in supporting the redevelopment efforts of this plan cannot be understated. The prime determinant of the pedestrian experience is the quality of the streetscape; "complete" walkable streets are visually stimulating, while environments that are hostile or uninteresting immediately turn pedestrians away. Specifically, the most important element of a good streetscape is the quality of street frontage – the manner in which the public realm of the street and sidewalk meet the private line of building facades. Streets and other thoroughfares are public spaces balanced for function and character. Streets shape blocks. Larger voids in the block structure should generally only exist as public spaces such as plazas, playgrounds, and parks, not as pedestrian "dead zones." Promoting a safe and quality pedestrian experience, however, does not mean that efficient vehicular traffic circulation must suffer. Instead, it advocates the desire of a high-quality pedestrian environment not be immediately sacrificed for the sake of the automobile. Transportation design decision-making must be made using a balanced approach between all modes, considering that a minimum base-line of pedestrian services be achieved that are above the typical norm. This multi-modal approach is the fundamental basis for all transportation recommendations in the AWP and can be used to inform future schematic designs and engineered plans.

Through the AWP planning effort specific transportation improvements were explored for critical connector streets and intersections within the study area. Specifically, in and around West 6th Street, 7th Street, 8th Street, and Defiance Avenue. The key steps needed to advance the priority transportation improvements, specifically within

the Confluence Area are described on the Implementation Action and Public Infrastructure CIP Project Table later in this chapter.

There was a strong desire to enhance connectivity of the existing Rio Grande Trail through the Confluence Area and provide improved multi-use path connections into the core of downtown. The various alternatives show how a "flyover" multi-use path could be achieved via the RFTA ROW while also accommodating future rail operations. In essence this would create a rail-and-trail configuration and provide for a very unique pedestrian and bicycle experience through the area. It would also reduce bicycle and pedestrian conflicts on the existing Rio Grande Trail as it travels underneath the 8th Street bridge, along the riverfront. An expanded sidewalk, formally designated as a multi-use side path, is possible along Defiance Avenue, north of 7th Street, and on the north side of 7th Street between Defiance and Colorado Avenues, to provide a dedicated bicycle supportive facility as close to Grand Avenue, as possible. If the structured parking garage alternative that would have a structure built at Colorado Avenue and 7th Street were constructed, special bicycle parking within the garage should be explored. Less useable space, such as space underneath the ground level ramp to the second level could be a bicycle parking or bicycle corral as a way to promote safe parking for bicycles.

Transit and parking facilities

All of the reuse plan alternatives consider the opportunities to increase transit service, facilities, and ridership. In essence all of the alternatives consider the Confluence Area redevelopment as a model Transit Oriented Development (TOD). All of the urban design scenarios promote density that supports transit ridership and utilization and all of the street infrastructure would provide complete pedestrian facilities facilitating direct connections to transit service.

There are various opportunities to locate a transit center, of varying scales and service levels, including a potential park-and-ride parking structure. Based on the numerous discussions with RFTA representatives, there is an interest in exploring the viability of the various alternatives. RFTA has suggested to incorporate an evaluation of the various options into its pending Corridor Service Study planned for later in 2019. It is important for the City to play an active role in developing the parameters of the various alternatives considered and reviewing findings as they are evaluated. RFTA will need to consider a wide range of factors, especially their

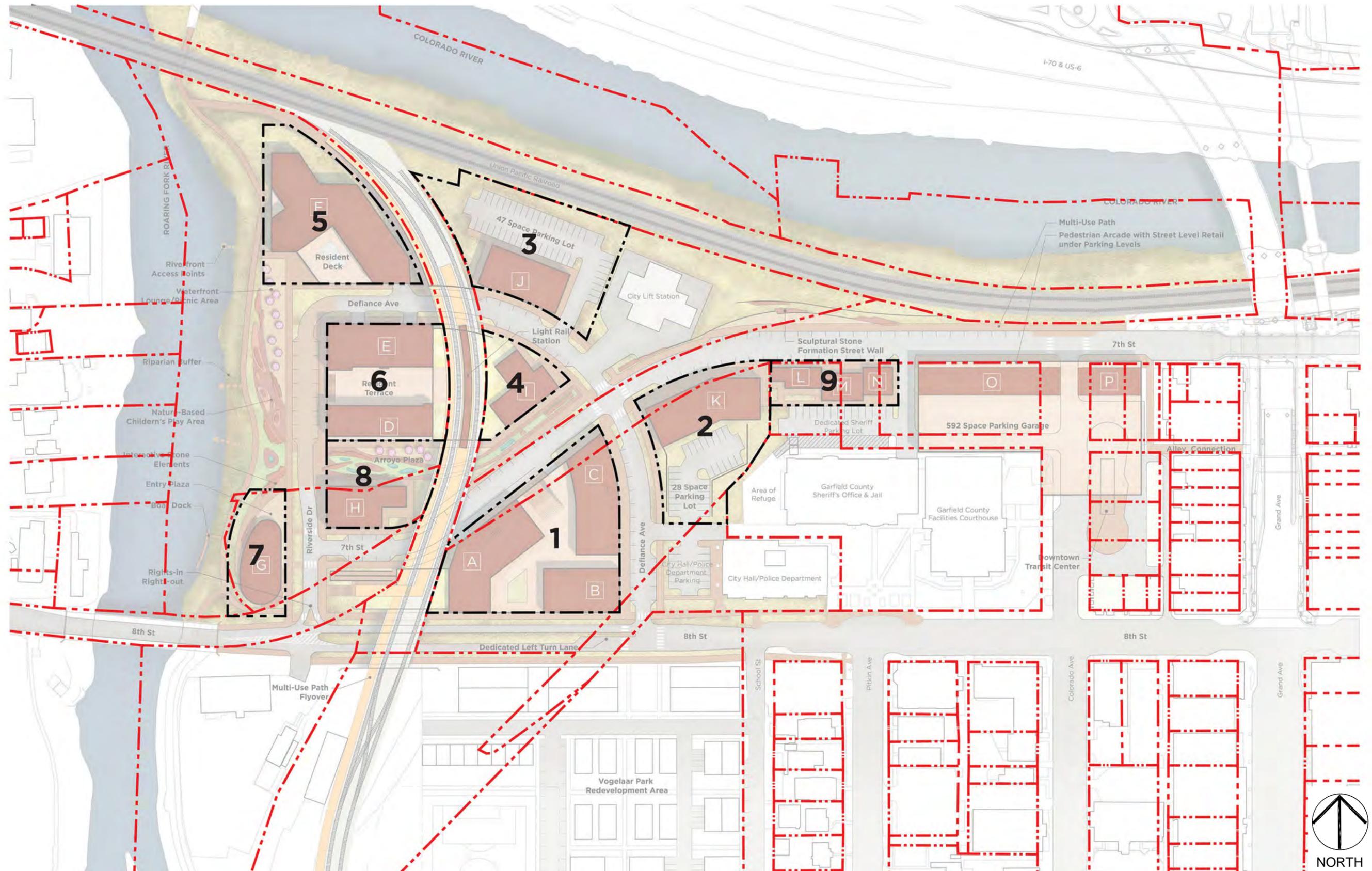
ability to provide efficient and effective service. Of course, the City's desire to create a parking structure that primarily serves existing and proposed development will inform the decision-making as to the ultimate location of a large parking facility and/or a transit center are co-located. They may be one conjoined facility or two independent elements that locate based on their individual performance criteria, to be determined.

3.3 PUBLIC PARKS AND OPEN SPACES

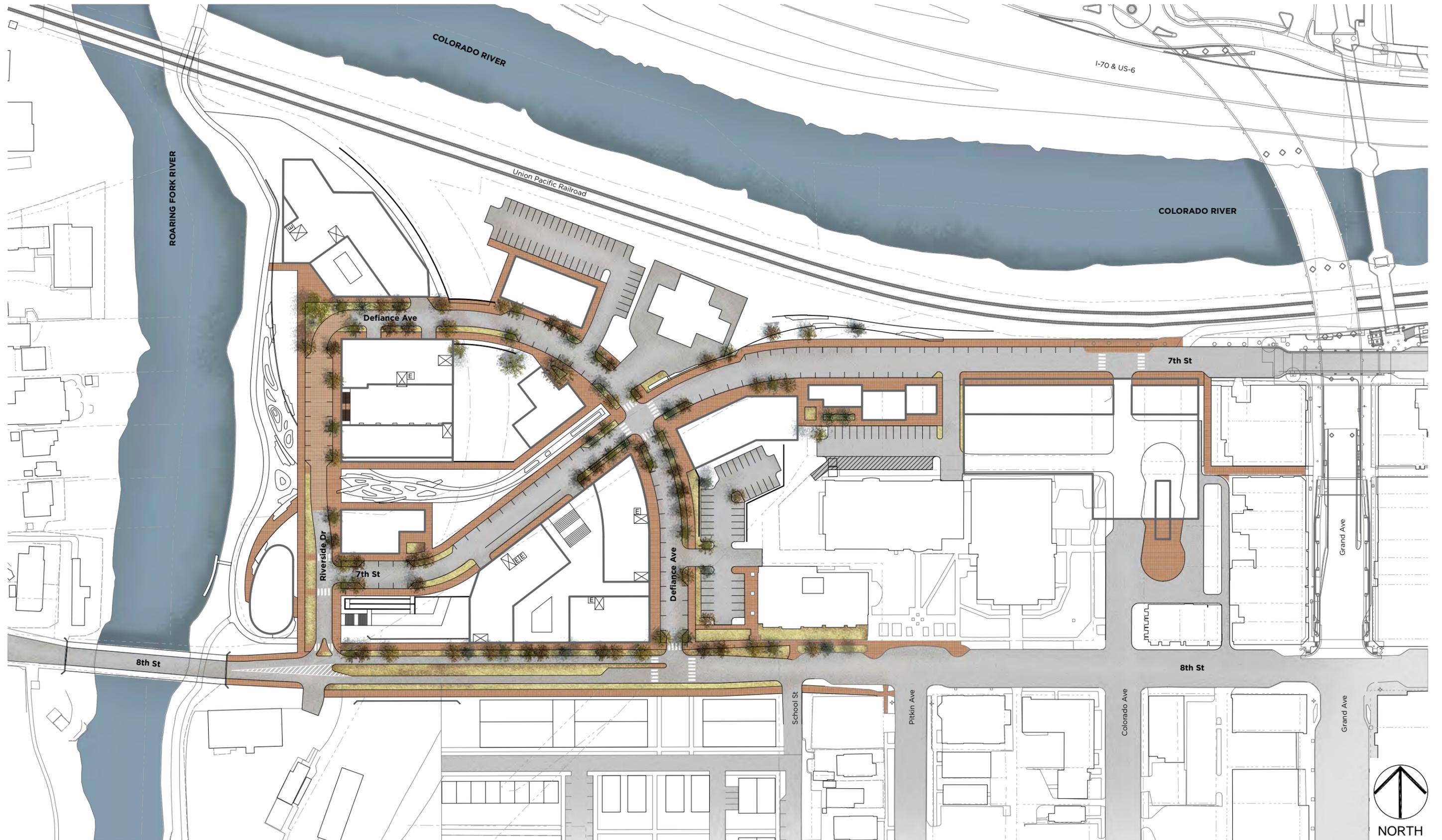
Public open space is an important aspect of the overall urban design organization of all of the proposed reuse scenarios within the AWP study area. This is especially true in the Confluence Area, with each reuse alternative providing a publicly-owned riverfront park and various forms of public or privately-owned public spaces within the development. The key aspect of all of these approaches is the idea that the overall developments are formed as much as possible around a cohesive network of public spaces. The riverfront park should remain as City-owned and form the starting point of an interconnected public space network throughout the Confluence Area, linking the riverfront to downtown and vice-versa.

With the creation of a true park along the downtown side of the Roaring Fork River, Glenwood Springs has the opportunity to create a signature riverfront park within the reach of the core of its downtown. An asset that will further distinguish Glenwood Springs within the region. In addition, thanks to the greenway along the riverfront and the direct pedestrian and bicycle bridge connection to Two Rivers Park, the new park would provide the ability to extend Two Rivers Park to the doorstep of downtown, which should greatly expand the programming potential for all of the parks in and around the Confluence. The form of the proposed riverfront park should be one that responds to the flooding dynamics of the river's edge and appear very natural and somewhat "wild."

Creating a high-quality and flexible central gathering space within the development will provide the connectivity thread that weaves everything together. This notion is further augmented by the opportunity to create a unique linear park-like streetscape along both sides of 7th Street to Colorado Avenue, especially on the north side, as a way to also buffer the active railroad line from the new development.

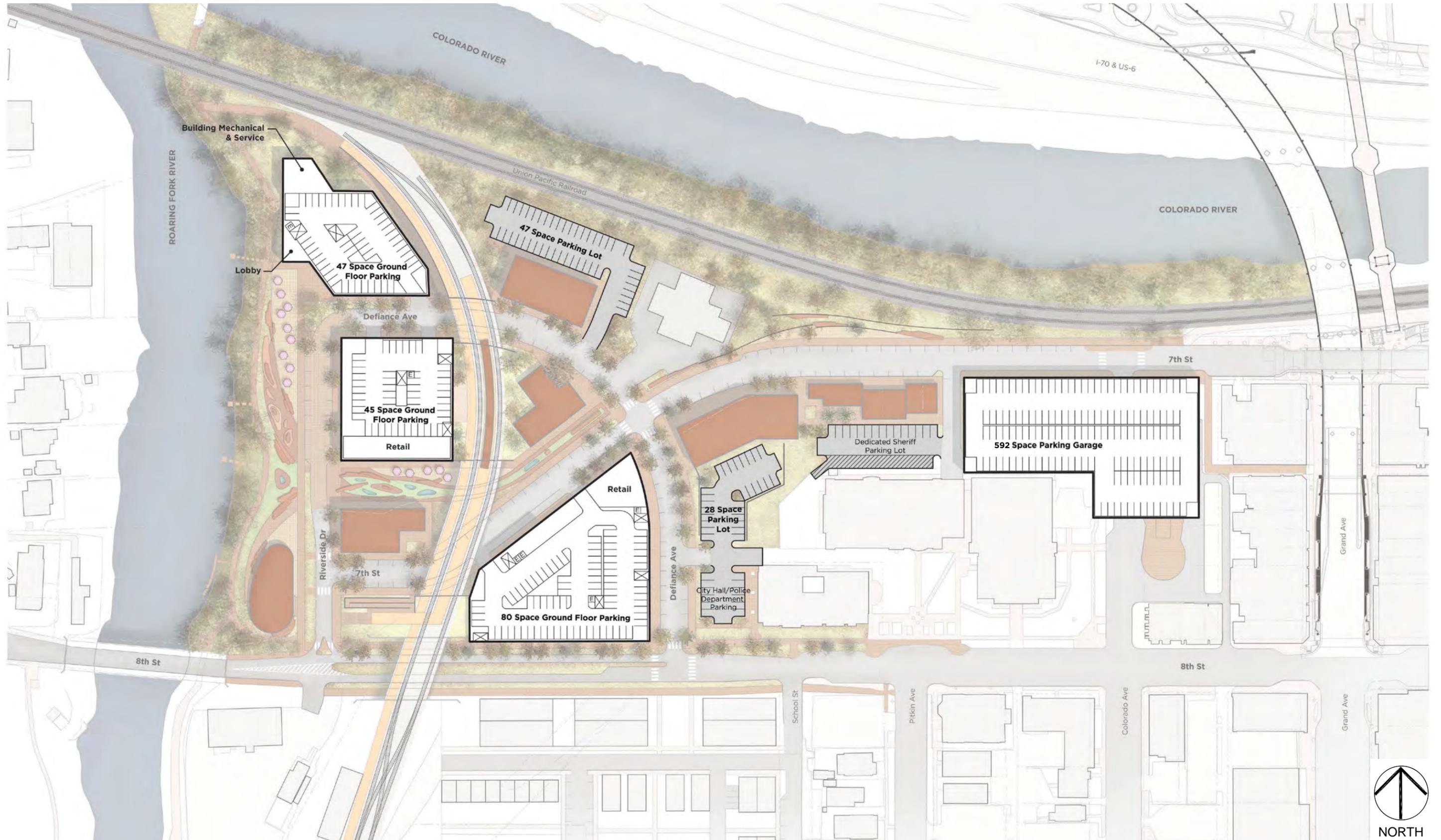


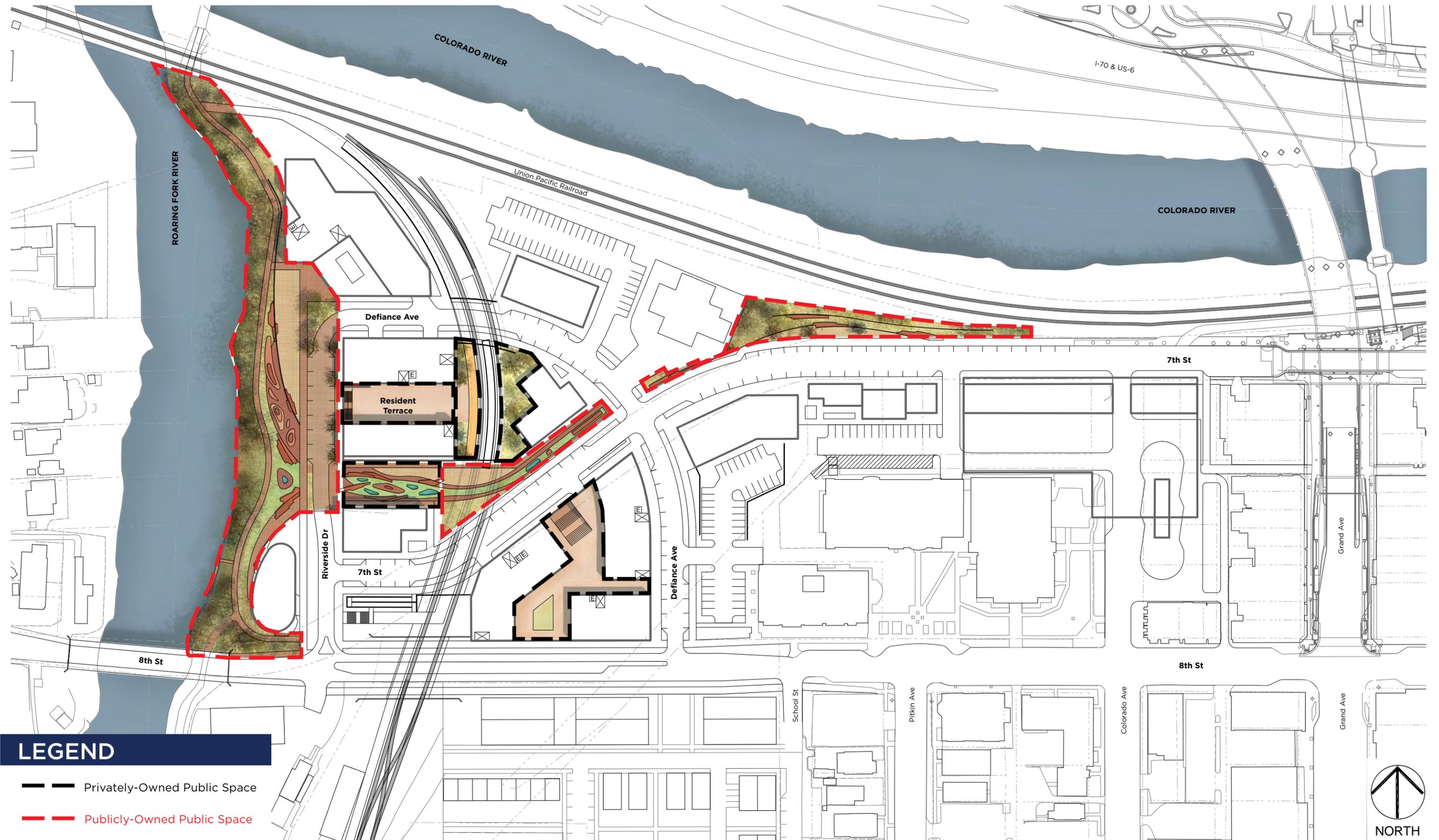
Complete Streets Diagram





Parking Facilities Diagram





LEGEND

- Privately-Owned Public Space
- Publicly-Owned Public Space

3.4 STORMWATER AND RESILIENCY

The AWP reuse alternatives promote the integration of blue/green infrastructure elements into the ultimate design and execution of projects, especially within public spaces. Based on the local and regional conditions there are several factors that should be considered when designing public infrastructure and private site development projects throughout the City and especially within the AWP study area. These elements are also especially important to support funding strategies, since many state and federal agencies place emphasis on projects which include such green infrastructure measures.

An important consideration when utilizing numerous smaller stormwater elements as a part of a system-wide approach is the fact that stormwater and drainage are inherently part of networks. Water flows downhill into continually larger, more concentrated conveyance systems. If stormwater management systems are treated as an area-wide network of interconnected components, it ensures effectiveness while providing the benefit of overlaying other uses that also want to interconnect. This is especially true for parks, public spaces, trails, and greenways that may connect from a public space function as well as serve as an inter-connected chain of stormwater management facilities if they are designed to function in that manner. In the case of the Confluence Area, the ability to engage stormwater at the most local level, will improve overall environmental quality. This will require special cares, since the seasonal rainfall dynamic make it more challenging to create natural vegetative systems that can tolerate both the urbanized conditions and the significant seasonal moisture gradients.

Stormwater is often considered a liability that must be “mitigated,” but it can also be viewed as a vital asset. The creative storage and reuse of stormwater runoff from buildings and paved surfaces to irrigate civic landscapes, streetscape, and urban beautification plantings, parks, and community gardens can offer cost-savings and should be encouraged.

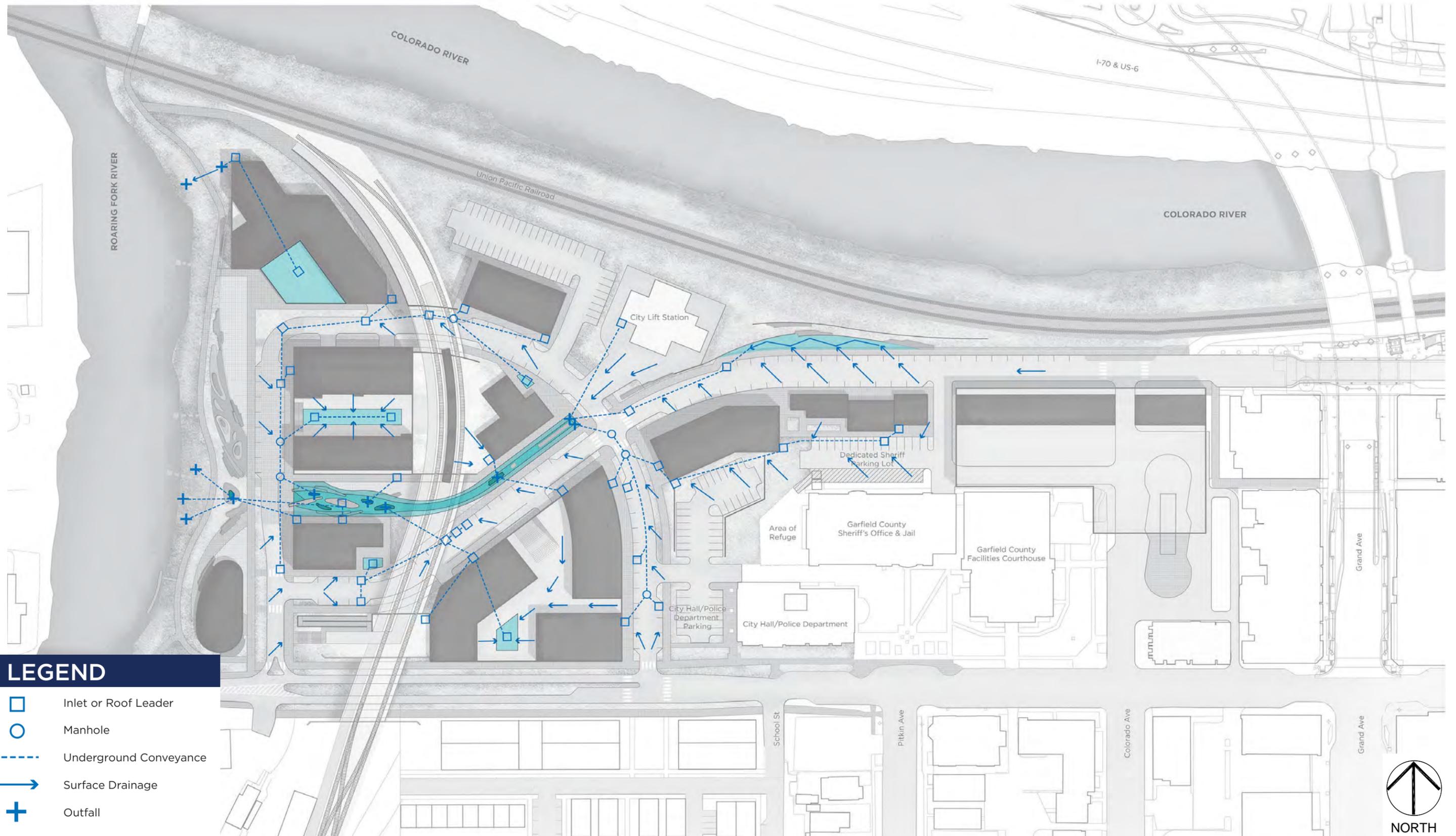
Beyond stormwater, there are other sustainable principles that the City and developers can implement during the redevelopment of areas. Street trees utilized as a beneficial feature for stormwater management are also helpful for improving air quality and reducing heat island effect by providing shade. The City can also consider the use of technologies such as LED lighting to reduce energy consumption. On the private-sector side, developers should

be encouraged to strive for LEED or Sustainable Sites accreditation or at least employ some principles of sustainable design to reduce energy usage and conserve resources.

With regards to resiliency, the AWP reuse alternatives consider ways to locate buildings within flood zone. These buildings will need to be elevated as much as possible in response to the actual flood elevation, which is also ultimately tied to the elevation of the new streets. In addition, all of the buildings proposed that are within this flood zone would either have parking underneath residential floors, or have limited commercial uses that could be designed to accommodate and respond to potential flood conditions. All new buildings should be resilient to known flood conditions.

Key Stormwater Elements to Consider:

- **Filtration BMPs which improve water quality of runoff by removing sediment and nutrients should be employed where there are opportunities since this aspect is especially relevant based on the local conditions within the AWP study area. The goal should be to remove sediment and pollutants in runoff before these negative elements end up in surface water bodies.**
- **Stormwater planters and detention areas do not have to be underlined, but can include underdrains to return portions of the water to the drainage system after treatment.**
- **Filtration BMPs can also provide storage/detention for the purposes of reducing local flooding in large storm events.**
- **Runoff from roads and sidewalks is particularly important to capture as de-icing materials and other runoff from roadways can be harmful to water quality, especially considering the close proximity of the Roaring Fork and Colorado Rivers, if direct discharge were to occur. Systems and flow should foster natural drainage patterns as much as possible and prevent runoff from directly entering the river(s) from road to pipes to outfall.**
- **Water can be captured for reuse but should ultimately be used in a way that returns it to the ground/surface waters of the region; replenishing the source of potable water.**
- **Vegetated swales with micro-pools, flow-through planters, and other similar facilities should be integrated into transportation facilities where possible. Flow-through planters can be placed along street edges with underdrain connections back to conveyance system or for landscape irrigation storage devices.**
- **Protection and improvement of the river riparian buffers at the Confluence will improve the health and habitat along the rivers and prevent erosion of riverbanks during flooding events.**
- **Incorporating other structural technologies such as green roofs or grey water capture within buildings will maximize local utilization and detention capacity during major storm events.**



LEGEND

-  Inlet or Roof Leader
-  Manhole
-  Underground Conveyance
-  Surface Drainage
-  Outfall

3.5 PUBLIC PROJECTS AND IMPLEMENTATION

The following table outlines the key projects and elements needed to advance development activities within the Confluence Area and to some extent broader projects which will impact the entire study area, such as improved transit services, traffic management, and parking supply and facilities.

Project Key #	Description	Design/Eng. Projection	LOM CIP Projection	Total	Notes
Limits TBD	Environmental Assessment & Remedial Plan -Conduct supplemental hazardous/environmental assessment work to ensure proper due diligence and the development of a preliminary Remedial Action Plan strategy for the relevant Confluence Area parcels.	\$140,000.00	\$-	\$140,000.00	The Environmental Assessments and Remedial Action Plans will establish the remedial approach necessary to achieve redevelopment end-use as well determine what if any remediation needs to occur prior to acquisition or conveyance of properties. Based on the 2 Phase I ESAs, 2 Phase II ESA and additional Sampling & Analysis, and Remedial Action Plans for former RR ROW.
Limits TBD	Perform a Downtown Parking Study Update to ensure parking supply needs are accommodated for existing businesses in the downtown, serve potential transit ridership, and to incrementally accommodate proposed Confluence Area redevelopment.	\$100,000.00	\$-	\$100,000.00	The parking study should be coordinated with RFTA's Corridor Service Study that could in a transit center in the downtown. Needs to include parking generation based on full occupancy of existing and proposed development projects downtown with the goal of not creating an oversupply of parking. Should include identifying size and location of preferred structured facility and cover fee structure and O&M.
Limits TBD	Undertake a Downtown Traffic Study that models the impacts to existing traffic patterns and increased traffic generation from the proposed Confluence Area redevelopment.	\$180,000.00	\$-	\$180,000.00	The traffic study should include modelling key intersections along Grand Avenue, 8th Street, and Midland Avenue. Final limits should be worked out with CDOT input recommended from Bennett Avenue to Midland Avenue and south to at least 14th Street.
AP-3/AP-6	Undertake Riverfront and 7th St. central public space Schematic Programming & Master Plan Design (30% Design)(See note G below).	\$75,000.00	\$-	\$75,000.00	The Master Plan should include a community workshop to determine waterfront programming. The plan should include preliminary level-of-Magnitude CIP costs to develop a funding and financing campaign for the riverfront master plan
Limits TBD	Perform Comprehensive Survey (topographic, photometric, boundary, and bathymetric) and assemble a composite master survey for Confluence Area redevelopment.	\$150,000.00	\$-	\$150,000.00	The composite master survey should include all projects undergoing engineering and construction as well as recently completed as-builts. Should include incorporating existing 8th Street project survey.
Limits TBD	Perform a Comprehensive Utility Survey to be incorporated into the composite master survey for the Confluence Area redevelopment.	\$50,000.00	\$-	\$50,000.00	Should include Vogelaar Park Area and School District property utility information.
Limits TBD	Undertake the development of Utility Master Plan for the Confluence Area.	\$100,000.00	\$-	\$100,000.00	Determine the most efficient and cost-effective long term strategies for utilities with the overall redevelopment area and it surrounding service area.
AP-1	Undertake Preliminary Engineering (60% Design) of confluence redevelopment area public infrastructure multi-modal transportation, riverfront park, multi-use trail, utility, resiliency/ sustainability design elements, etc.	\$2,135,200.00	\$-	\$2,135,200.00	It is recommended the preliminary engineering of the public infrastructure is a single project undertaking. This will ensure project horizontal and vertical design is properly coordinated; NPDES permitting structure is established; utility realignments, access agreements, and easements are identified, rights-of-way and setbacks are delineated; and boundaries for proper subdivision are delineated.
AP-2	Advance the construction of 8th Street Transportation Improvement Project.	\$40,000.00	\$2,180,447.85	\$2,220,447.85	Ensure traffic study, parking study, utility master plan and Confluence Area roadway preliminary engineering are completed and the public ROW are delineated prior to advancing 8th Street to construction.
Limits TBD	The flyover multi-use path preliminary engineering to finalize costs for capital programming.	\$75,000.00	\$-	\$75,000.00	Define limits of project, length of trail and number of flyover bridges needed after 60% preliminary engineering of Confluence Area transportation network. Construction cost count vary widely dependent on length of dedicated spans and need for retaining walls so a construction number not included.

Project Key #	Description	Design/Eng. Projection	LOM CIP Projection	Total	Notes
N/A	Perform a Geotechnical Study for Confluence Area to inform the design engineering of public infrastructure and amenities.	\$80,000.00	\$-	\$80,000.00	The characterization should include the site specific soil and bedrock conditions as well as rail ROW berm conditions (will requires RFTA access agreement).
AP-3	Perform Geophysical Soil Characterization and Analysis along Roaring Fork River and associated floodplain areas.	\$40,000.00	\$-	\$40,000.00	Geophysical Soil Characterization should follow agency requirements and procedures for floodplain regions and along rivers.
AP-1	Capital Improvement Programming Plan - Refine and determine multi-project capital improvement phasing and implementation strategy that establishes packaged projects with preliminary cost estimates, project ordering, implementation schedule, and funding and financing tracking.	\$-	\$-	\$-	Performed by in-house staff and contract funding specialist. Cost for funding specialist covered under annual services contract.
	Undertake Land assemblage, establish access agreements with RFTA, delineate utility easements, and preform legal subdivision for conveyance/sale of property.	\$-	\$-	\$-	Performed by in-house staff and legal counsel.
AP-1	Advance utility coordination with utility companies and authorities. Complete final design (100%), permitting, and construction.	\$1,026,000.00	\$8,550,000.00	\$9,576,000.00	Responsibilities for engineering and constructions costs for utility infrastructure and service upgrade improvements will need to be determined based on utility ownership, especially dry utilities.
AP-3	Final design (100%), permitting and construction of Riverfront Park.	\$960,000.00	\$8,000,000.00	\$8,960,000.00	
AP-4	Final design (100%), permitting and construction 7th St. from Colorado Ave. to the west side of the RFTA ROW underpass, as well as Defiance Ave. from 8th St. intersection to the entrance of the City pump station.	\$636,000.00	\$5,300,000.00	\$5,936,000.00	
AP-5	Final design (100%), permitting and construction of Riverside Dr. from 8th St. intersection to extension of Defiance Ave.; the realignment and extension of 7th St. from the west side of the RFTA Berm to Riverside Dr.; and the extension Defiance from the entrance of the City sanitary lift station entrance to Riverside Dr.	\$390,000.00	\$3,250,000.00	\$3,640,000.00	
AP-6	Final design (100%), permitting and construction of civic pubic spaces along 7th St.	\$190,800.00	\$1,590,000.00	\$1,780,800.00	
	TOTALS	\$5,948,000.00	\$28,870,447.85	\$34,818,447.85	

Clarifications:

A. This level-of-magnitude cost breakdown is intended to inform the client, design team, and other involved parties of the potential costs associated with this project. Opinions of probable costs provided are based on preliminary design efforts and historical cost data. Quantities, unit prices, and specific line items are all subject to change as the design becomes more refined. This cost evaluation represents the judgement of the design professional, who does not guarantee that proposals, bids, or actual construction costs will not vary from their original opinion of the probably project costs.

B. This cost breakdown does not include costs for property acquisition and land assemblage.

C. Utility relocation allowances are based on relocation activities which would occur within the study area only. Changes necessitated by the work within the study area to utilities and utility support structures/facilities outside of the study area have not been accounted for.

D. Design and engineering costs do not include fees and other costs associated with permitting requirements.

E. Costs are likely to be incurred with environmental mitigation and cleanup but are difficult to predict at this level of design. Therefore, the design team has listed this item as a cost item for consideration but has not assigned a cost value.

F. Costs are based on 2019 estimates and an escalation rate of 3% to 5% annually should be used to project future costs.

G. Ideally would occur prior to the preparation of actual land development plans by developer but could happen simultaneously.

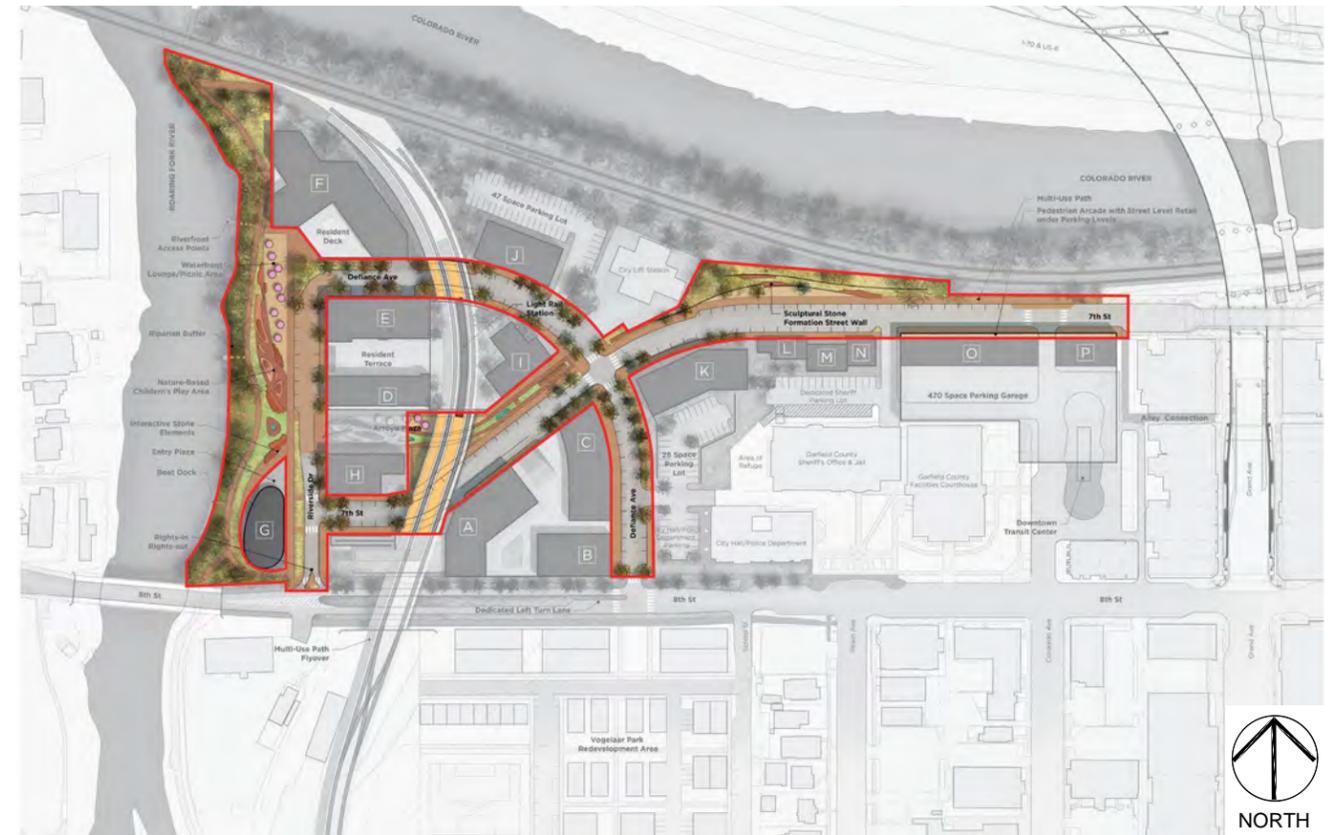
H. Assumes that a NEPA process will be required for federally funded transportation projects.

I. Does not include costs to design and construct a structured parking garage which is highly dependent upon type, size, and location based on various projects included on this list.

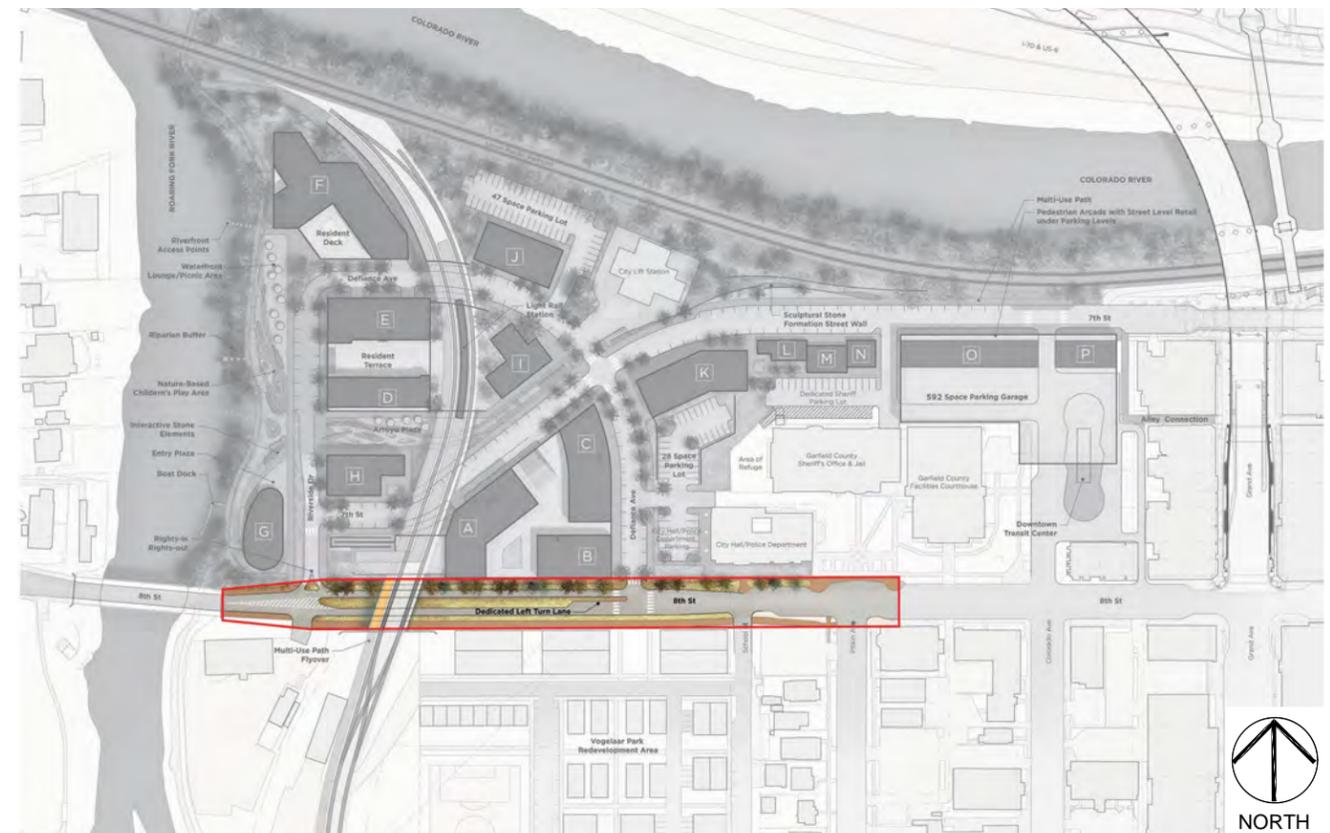
J. Some of the projects identified on this list could be divided into sub projects but depending on the project will likely increase desing and construction costs and potentially complicate permitting.

Action Plan Key Project Elements

The following diagrams represent potential project elements as defined in the Implementation Action Plan and Infrastructure CIP Projects Table. They are not presented following a specific phasing but instead are provided to show approximate boundaries for packages of projects, at key steps. The ultimate phasing and project limits and components can only be determined after preliminary engineering is performed. After that progress milestone is archived, exact project definitions and phasing will still evolve based on budgets, priorities, and developer timelines.



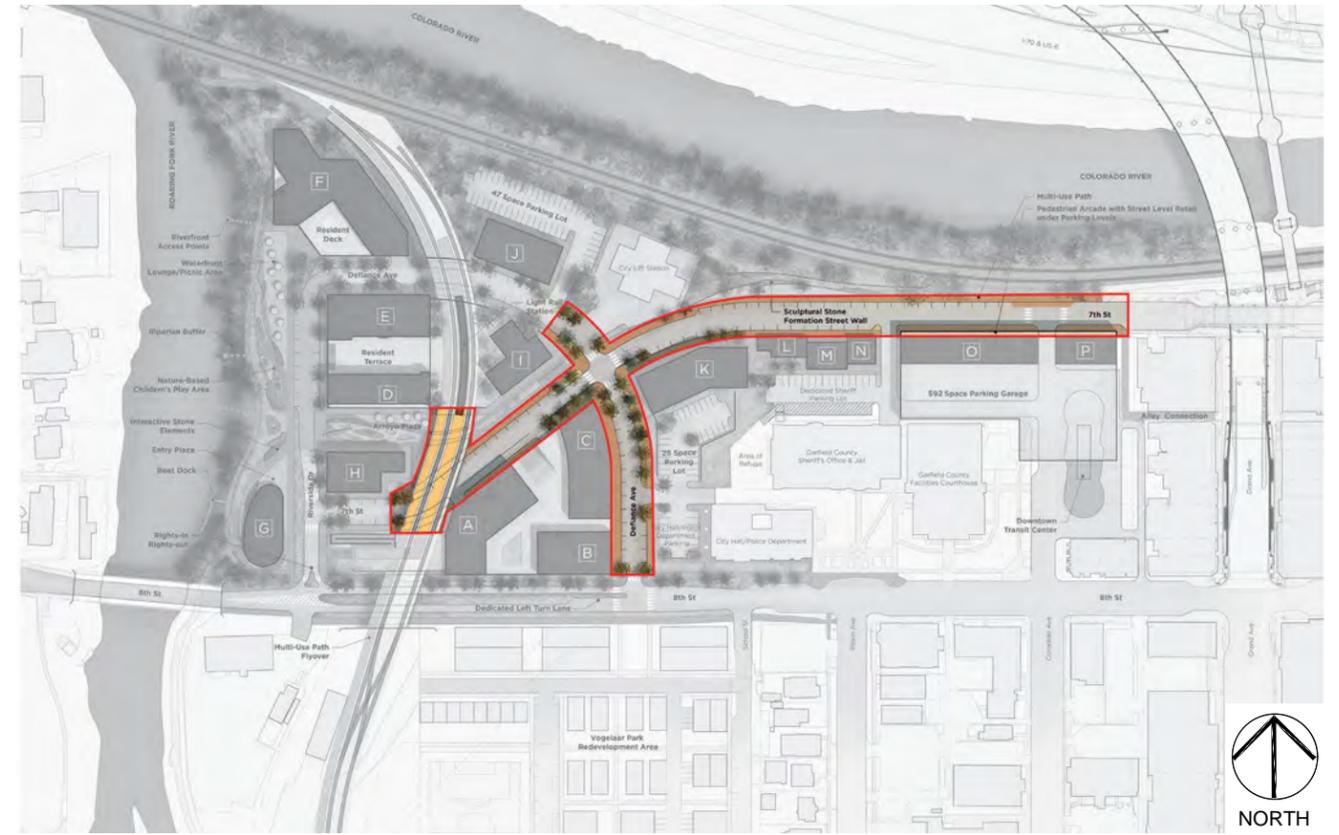
AP-1 - Comprehensive Street Network and Public Space 60% Engineering Design



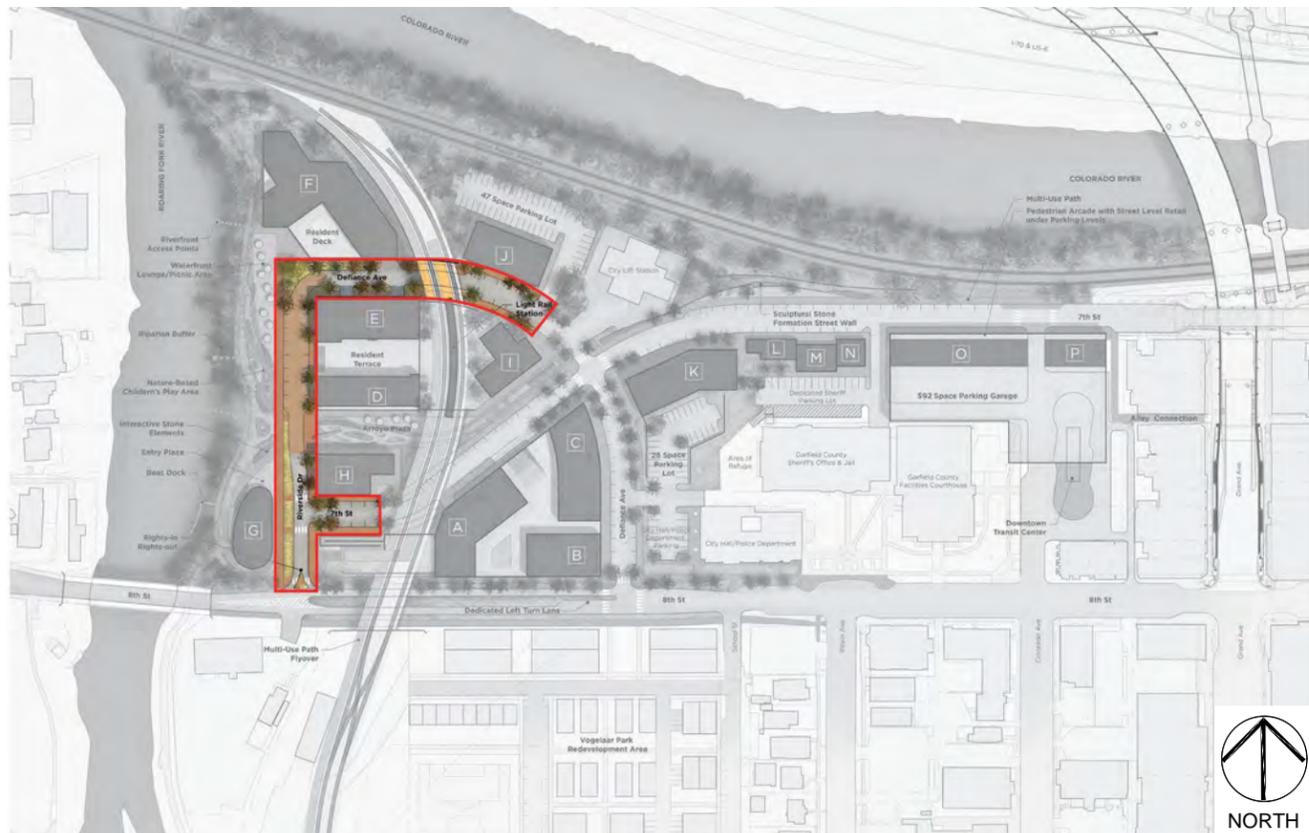
AP-2 - 8th Street Improvement Project Construction



AP-3/AP-6 - Riverfront Park Master Plan Design, Design, and Construction



AP-5 - Riverside Drive and Defiance Avenue Extension Final Engineering and Construction



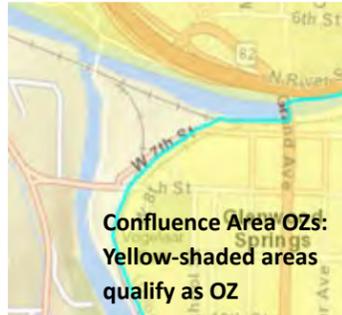
AP-4 - 7th Street Final Design, Engineering, and Construction



AP-6 - 7th Street Civic Space Public Improvements

3.6 POTENTIAL IMPLEMENTATION FUNDING SOURCES

This funding matrix outlines potential funding sources to support next steps for advancing the activities and project shown in the Implementation Action Plan and Public Infrastructure CIP Projects. The resources below can be layered and leveraged to help fund activities recommended in the AWP and should be used as a starting point for the preparation of a formal Capital Improvement Programming Plan.

Funding Opportunity	Amount, Match, & Deadline	Program Description	Potential Projects
Studies & Plans			
US EDA Local Technical Assistance	Average size – approximately \$75,000 Accepted on rolling basis 50:50 matching requirement	While Glenwood Springs has not traditionally been eligible to receive US Economic Development Agency (EDA) funding because its census tracts fail to meet the distress criteria (<80% of US per capita income or unemployment rate of at least one percentage point higher than US unemployment), federally designated Opportunity Zones are now considered eligible for EDA funding . This means that for portions of the Confluence redevelopment that fall within the designated Opportunity Zone, EDA is now a viable source of funding for pre-development costs, market and feasibility studies, and public works projects associated with job growth. The EDA Local Technical Assistance helps analyze the feasibility of potential economic development projects through projects such as feasibility studies and impact analyses in areas with economic distress.  <p>Confluence Area OZs: Yellow-shaded areas qualify as OZ</p>	<ul style="list-style-type: none"> ▪ Traffic Study (must connect project area/impacts to OZ) ▪ Comprehensive Utility Study (must connect project area/impacts to OZ) ▪ Parking Study

Funding Opportunity	Amount, Match, & Deadline	Program Description	Potential Projects
DOLA REDI Local Government Economic Planning Grants	Up to \$100,000; no match required Deadline is March 15, 2019	Colorado Department of Local Affairs (DOLA) Rural Economic Development Initiative (REDI) Local Government Economic Planning grants support planning efforts to help diversify local economies in communities with fewer than 20,000 residents. Examples include: strategic plans, engineering plans, land use feasibility, and/or marketing studies. Consulting services for specific project implementation are also eligible.	<ul style="list-style-type: none"> ▪ Comprehensive Utility Study ▪ Parking study
DOLA EIAF Administrative Planning grants	Up to \$25,000; 50:50 match; total project cost cannot exceed \$100,000 Accepted year-round	The DOLA Energy & Energy and Mineral Impact Assistance (EIAF) Administrative Planning grant program accepts applications year-round for administrative approval, as long as funds are available. Project types include preliminary design, engineering, or feasibility studies. Projects are reviewed and approved by DOLA staff.	<ul style="list-style-type: none"> ▪ Riverfront Schematic & Programming Design ▪ Traffic Study ▪ Comprehensive Utility Study ▪ Parking Study
CDPHE Brownfields Assistance	Assessment performed by CDPHE at no cost to City	The Colorado Department of Public Health & Environment (CDPHE) provides Targeted Brownfield Assessments at no cost to the applicant. The DDA has formerly served as an applicant for a TBA at the City-owned wastewater treatment plant site. A similar arrangement should be considered for applying for a targeted assessment at for lot 1. Because the City had to accept the site without doing All Appropriate Inquiries, the City is not eligible for federal Environmental Protection Agency (EPA) funds for the site. But ample state resources are available. The City should also consider entering the site into the voluntary cleanup program.	<ul style="list-style-type: none"> ▪ Environmental Assessment & Remedial Plan
GOCO Planning Grants	Up to \$75,000; 25% match requirement	The Great Outdoors Colorado (GOCO) Planning grants program provides grants to help local governments execute a wide range of planning efforts, including site-specific plans, department master plans, and strategic plans. The City of Glenwood Springs would need to determine how the planning of a riverfront park in the Confluence would stack up against other planning needs for a GOCO request.	<ul style="list-style-type: none"> ▪ Riverfront Schematic & Programming Design

Funding Opportunity	Amount, Match, & Deadline	Program Description	Potential Projects
Smart Growth Technical Assistance	No cost assistance with transit planning	The U.S. EPA Smart Growth Technical Assistance program offers no-cost technical assistance to communities on specific topics related to smart growth development. This source of assistance could potentially be tapped to help integrate RFTA's Corridor Service Study with economic development plans for the Confluence, ensuring that transit improvements effectively support the area. The EPA Building Blocks for Sustainable Communities Program has a category of assistance called "Sustainable Strategies for Small Cities and Rural Areas" that could potentially be used to guide the riverfront schematic and programming, as well as transit-related planning.	<ul style="list-style-type: none"> ▪ Transit Improvements ▪ Riverfront Schematic & Programming Design
Implementation			
US EDA Public Works & Economic Adjustment Assistance Grants	<p>Average size – approximately \$1.4 million; 50:50 match</p> <p>Two-phase review process with no submission deadlines. Proposals will be reviewed by EDA within 30 days of receipt; and following the proposal review, full applications will be reviewed within 60 days of receipt.</p>	<p>The US EDA Public Works program provides catalytic investments to help distressed communities build, design, or engineer critical infrastructure and facilities that will advance bottom-up economic development goals to promote regional prosperity. Potential projects include projects supporting water and sewer system improvements, industrial parks, high-tech shipping and logistics facilities, workforce training facilities, business incubators and accelerators, brownfield redevelopment, technology-based facilities, multi-tenant manufacturing facilities, science and research parks, and telecommunications infrastructure and development facilities.</p> <p>The US EDA Economic Adjustment Assistance Program provides investments that support a wide range of construction and non-construction activities (including infrastructure, design/engineering, technical assistance, economic recovery strategies, and capitalization or re-capitalization of Revolving Loan Funds (RLF)) in economically distressed areas. For example, EDA might provide funding to a city to support the construction of a publicly-owned, multi-tenant business and industrial facility to house early-stage businesses.</p>	<ul style="list-style-type: none"> ▪ Studies, design & engineering, or infrastructure and utility upgrades on sites slated for economic development



Glenwood Springs Moving Forward Together | U.S. EPA Brownfields Area-Wide Plan



A

Physical/Built Environment Conditions

**Glenwood Springs Moving Forward Together
U.S. EPA Brownfields Area-Wide Plan**

THE CATALYST SITES

The basis of study for the U.S. EPA Brownfields Area-Wide Plan (AWP) are three brownfield catalyst sites that have former or active uses that qualify them as potential brownfields and likely subjects for redevelopment planning for higher and better uses.

THE FORMER WASTEWATER TREATMENT PLANT

Location: 405 and 101 West 7th Street

Target Reuse Area: The Confluence Area

Site Acreage: 5-acres over three parcels

Historical and Current Use: The site was utilized as a wastewater treatment plant from 1968 until 2012. Many of the previous structures and facilities associated with the former plant are still standing although not operational. The site is split by a large elevated berm that supported a former railroad line.

Environmental Status: The City intends to proceed, in phases, in demolishing the existing structures on the site. No additional environmental assessment is recommended at this time and no remedial activities have been identified as necessary to facilitate redevelopment of the property.

THE ACTIVE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) ENGINEERING & MAINTENANCE CENTER

Location: CDOT Target Site – 202 Centennial Street

Target Reuse Area: The West 6th Street Area

Site Acreage: 5-acres

Historical and Current Use: The site has been used by CDOT since the 1970s. Prior to that time the site is believed to have had limited use, although activity could have been associated with the former quarry operation and associated rail yards.

Environmental Status: The site has underground storage tanks. No data exists related to the current environmental status of the site.

THE FORMER HOLLY QUARRY

Location: The site is located along Traver Trail Road (exact address unknown)

Target Reuse Area: Quarry Area

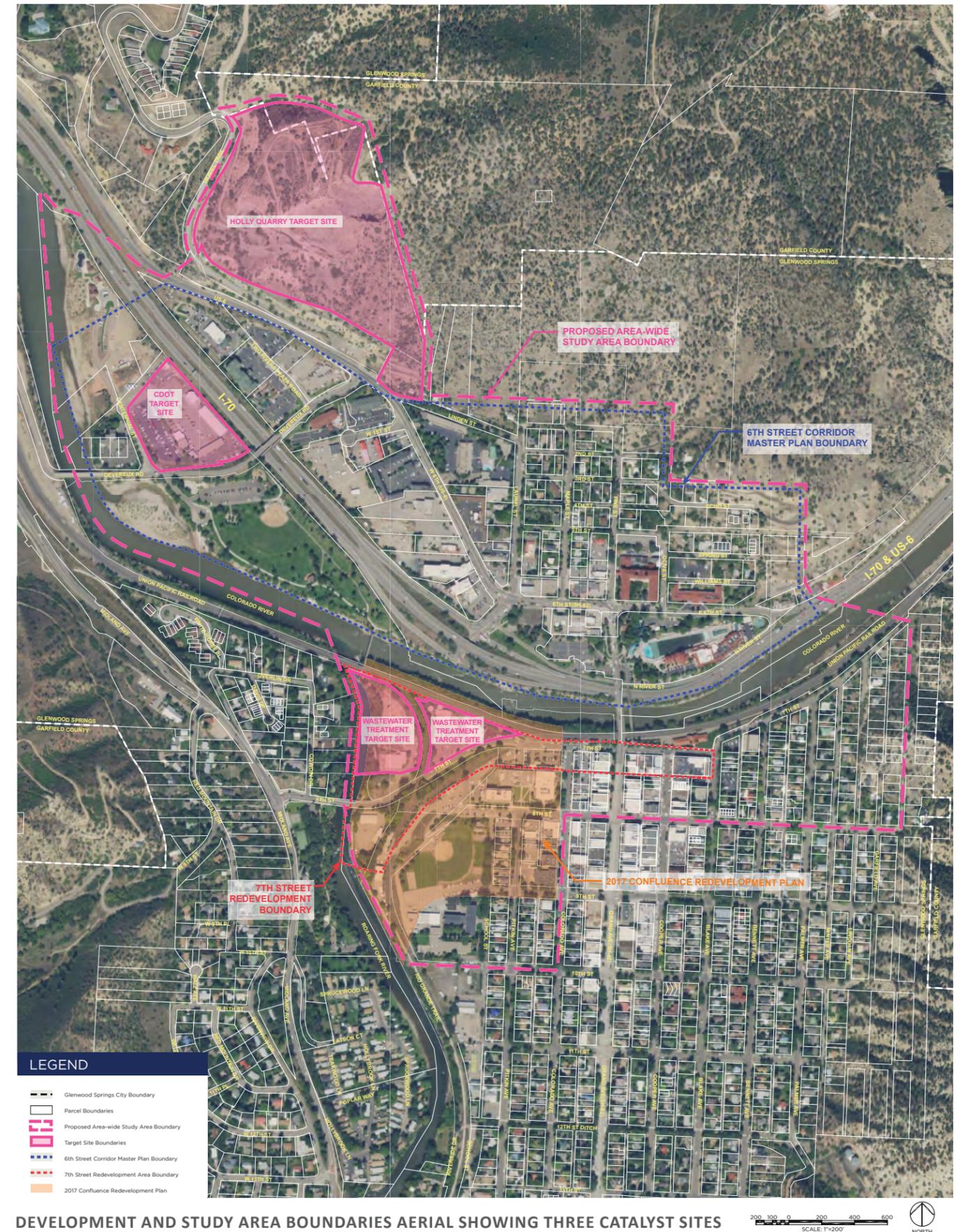
Site Acreage: Two parcels totaling 27-acres

Historical and Current Use: The site was formerly the Pitkin Iron Corporation and more recently the Mid-Continent's limestone quarry to support the coal mining industry. The site closed in 1991 and has remained vacant since that time.

Environmental Status: The site has no known environmental conditions beyond those associated with the concentrations and exposure of a large area of limestone. These include impacts on groundwater from leaching water through the limestone and runoff, the potential for sink holes, and limestone dust from the site (which due to the years of inactivity at the operation is not likely to still persist).



Portions of the Former Wastewater Treatment Plant are being demolished.





COMPOSITE PLAN

PLANNING CONTEXT

RECENT HISTORY OF PLANNING IN GLENWOOD SPRINGS - PLACEMAKING AND BROWNFIELDS REDEVELOPMENT

An initial step in the Area-Wide Planning process is to document the intentions and probable outcomes of planning and development activities. An important of the process is establishing what work has been performed to-date with the goal of building upon the outcomes as much as possible. This includes reviewing:

- Recent public planning/design initiatives (summarized on the following pages);
- Planned infrastructure improvements and capital projects; and
- Pending and anticipated private development projects.

The Composite Plan is the result of this exercise of merging the relevant plans together into one visual image. Though the Composite Plan is more of a patchwork collage than a plan for the future, it does define the likely boundaries and the relationships to each other for the areas where reinvestment and change is likely to occur over the next several years, if each of these initiatives were realized.

As an inventory of future actions and investment it provides a framework for the Area-Wide Plan and recommendations for the catalyst sites. Seeing the big picture also reveals potential partnerships, synergies, and phasing considerations.

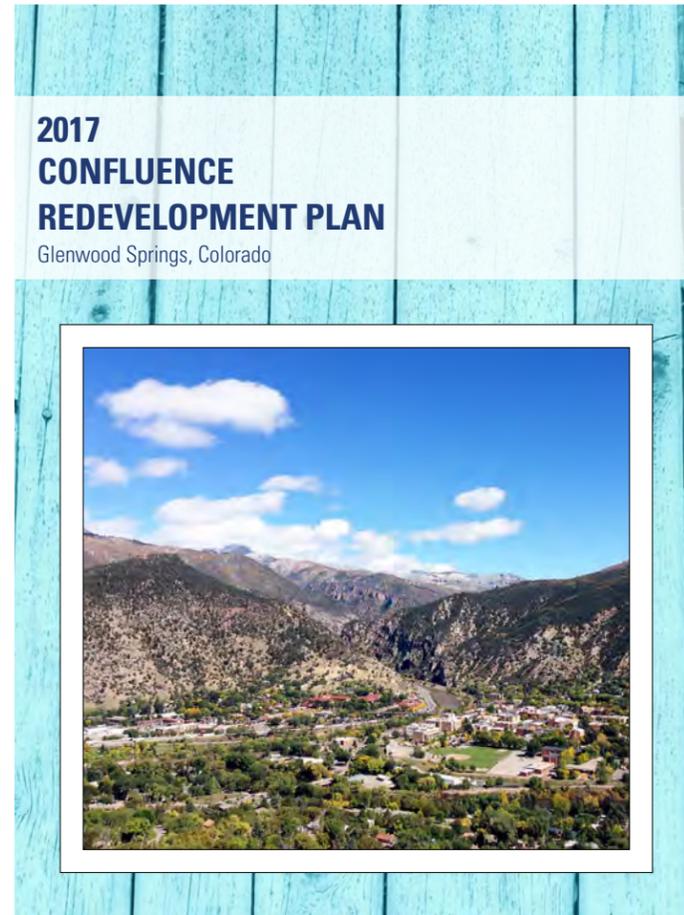
This assessment of the physical/built environment considers how present and planned land use, environmental conditions, zoning policy, transportation and utility infrastructure, and public open spaces are likely to be shaped by this pattern of investment. Additionally, for each topic key findings for “moving ahead” are listed to provide direction for the planning design solutions of the Area-Wide Plan in terms of incrementally improving efficiencies, connectivity, and design.



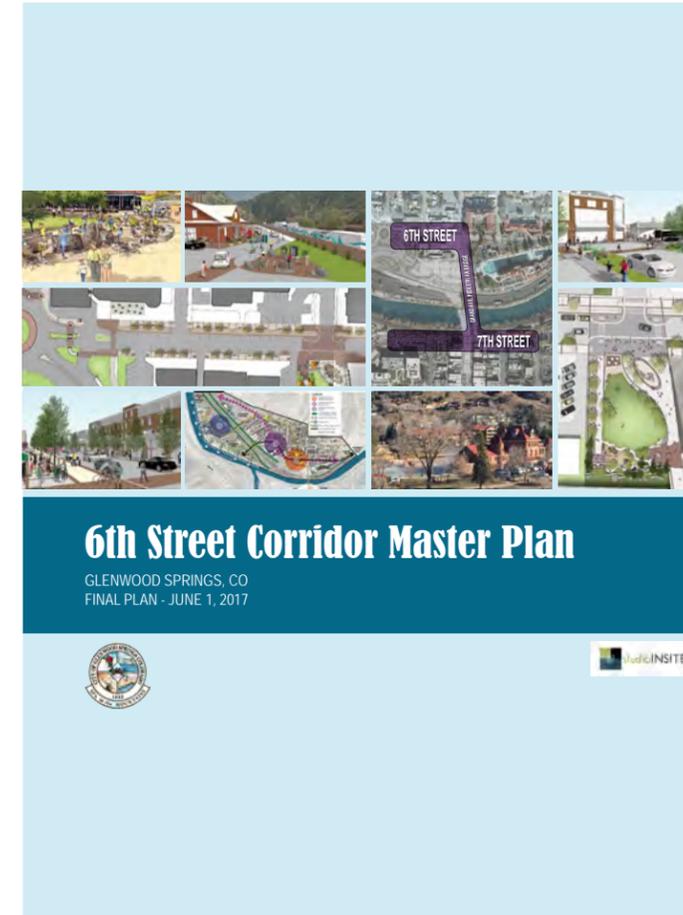
The opening of the new Grand Avenue Bridge is a project on November 7th, 2017, was years in the making and a major catalyst for change in the downtown and Glenwood Springs as a whole.

PLANNING RESOURCES

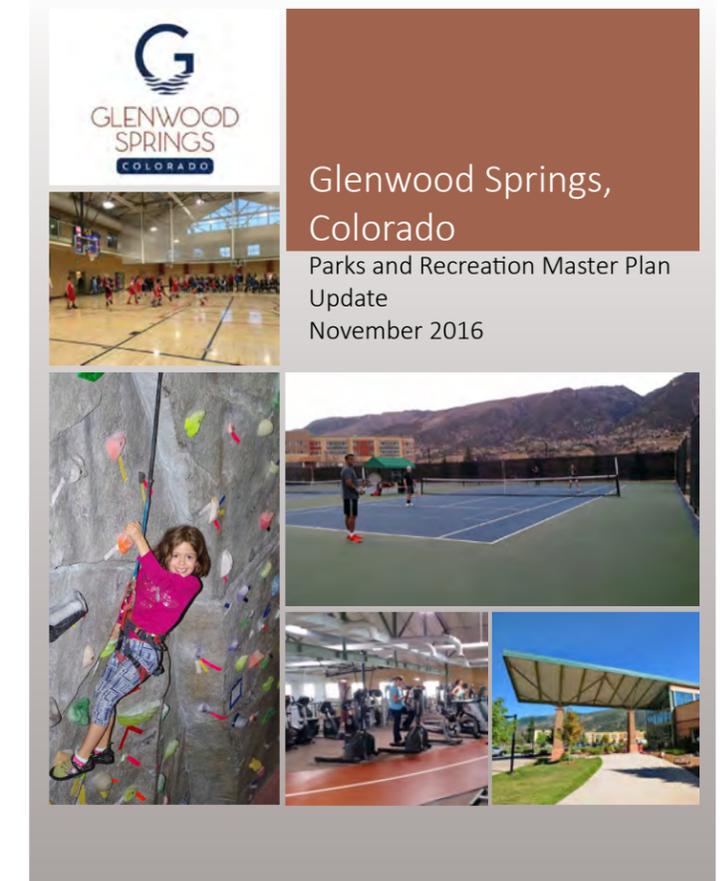
The City of Glenwood Springs is undertaking a process to bring together all of its development planning and includes several of its major undeveloped and under-utilized “brownfields” properties. The Area-Wide Plan is focused on pulling together the proposed redevelopment visions and planned infrastructure improvements developed from numerous planning documents. The focus of the effort is creating a great community where transportation, housing, tourism destinations, and commercial development investments are coordinated so that people have access to adequate, affordable, and environmentally sustainable living. This project is the next phase of ongoing economic development and community-wide planning in Glenwood Springs and focuses on bringing together all of the previous and ongoing planning efforts into one cohesive strategy for implementation. The determination of specific reuse strategies for these sites must consider the larger context, and area that includes the downtown, North Glenwood Springs, and surround context.



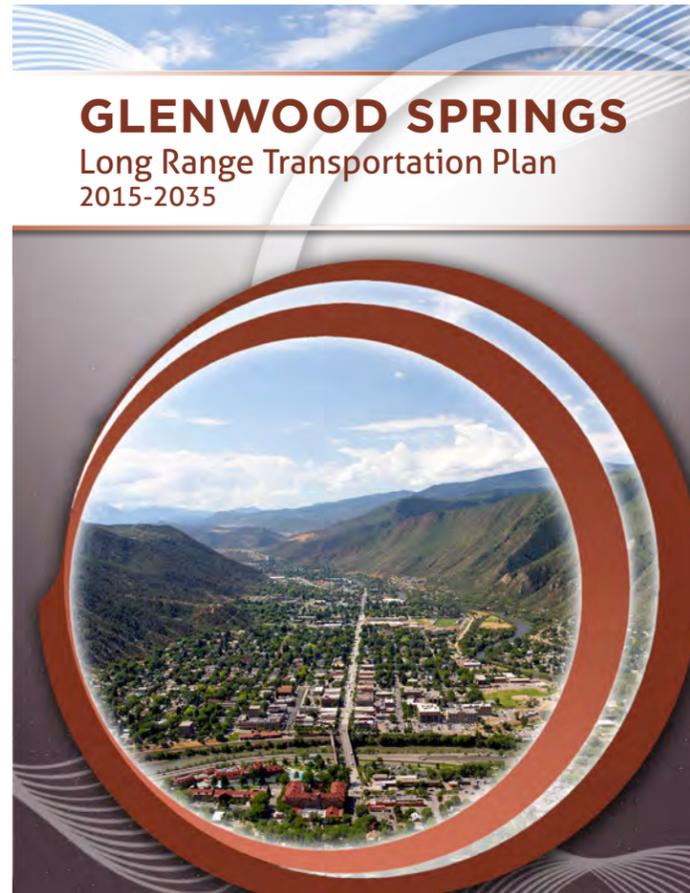
2017 Confluence Development Plan. This plan presents a redevelopment vision for the area at the junction of the Roaring Fork and Colorado rivers. Initiated in part by the decommissioning of the city’s wastewater treatment facility, the City of Glenwood Springs and Downtown Development Authority (DDA) partnered with Community Builders in 2013 to update the concepts for the Confluence. The Confluence is generally defined as the area bordered by the Colorado River to the north, Colorado Avenue to the east, 9th Street to the south, and the Roaring Fork River to the west. This document aims to provide realistic and actionable strategies for achieving higher and better use within the Confluence area that complements and adds vitality. The Confluence Plan includes examples of how Vogelaar Park could be repurposed, recommending a mix of housing while retaining some parkland and open space on the site.



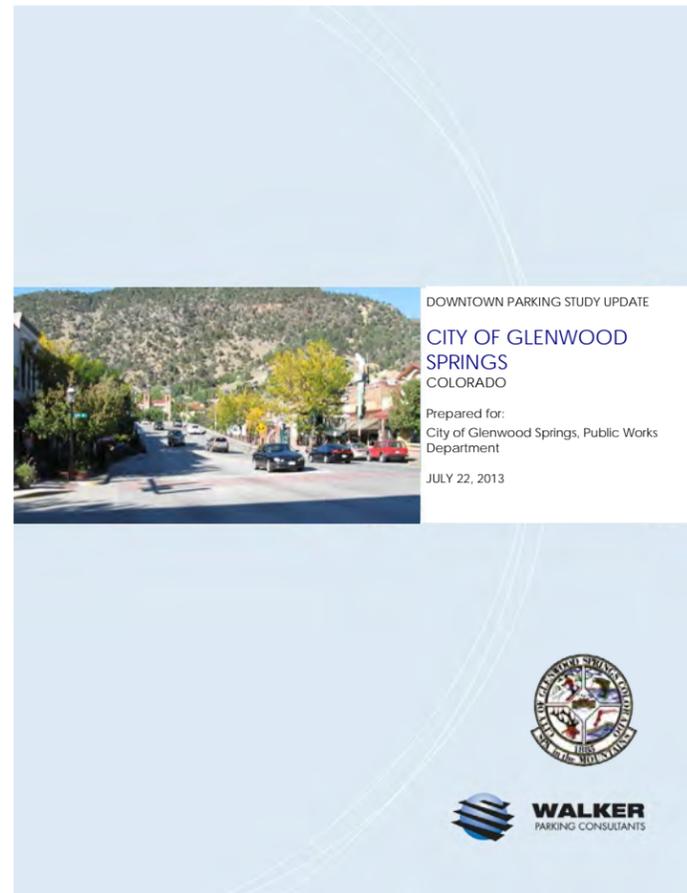
6th Street Corridor Master Plan. Over the next two years, 6th Street is expected to change dramatically as a result of the multi-million dollar Colorado Department of Transportation (CDOT) project to demolish and realign the Grand Avenue-State Highway 82 Bridge over the Colorado River. The goal of the planning effort, which kicked off in January 2016, is to anticipate public improvements that the Grand Avenue Bridge project will set in motion such as streetscape improvements, bike facilities, public parking, and neighborhood gathering areas. Based on input from public & stakeholder meetings, studioINSITE finalized a master plan that creates a blueprint for future North Glenwood development and redevelopment.



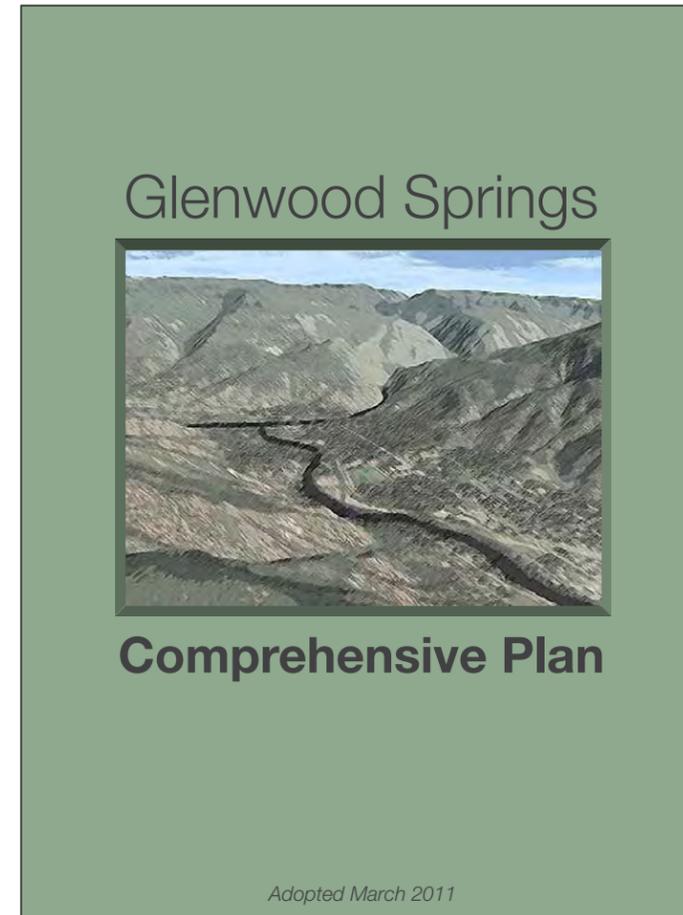
The Parks and Recreation Master Plan, and the November 2016 Update is structured around a citizen-driven community process, defining a broad mission and a strategic approach for implementation over time. Projects identified as high priority include new and existing trails, a skatepark, performing arts, an indoor ice arena, and a sports complex as well as a Capital Improvements Plan informed by improved cost recovery and management. A major focus on this effort was maintaining the focus on trail connectivity and the improvement of existing park facilities. Improvements to Two Rivers Park are being planned using the concepts of improving the quality of existing facilities and expanding their revenue potential to support parks overall. Finally, the Strategic Business Plan lays out specific recommendations to manage the program to maximize service to the community. From this plan, a budget outlining necessary revenues to sustain the program is developed.



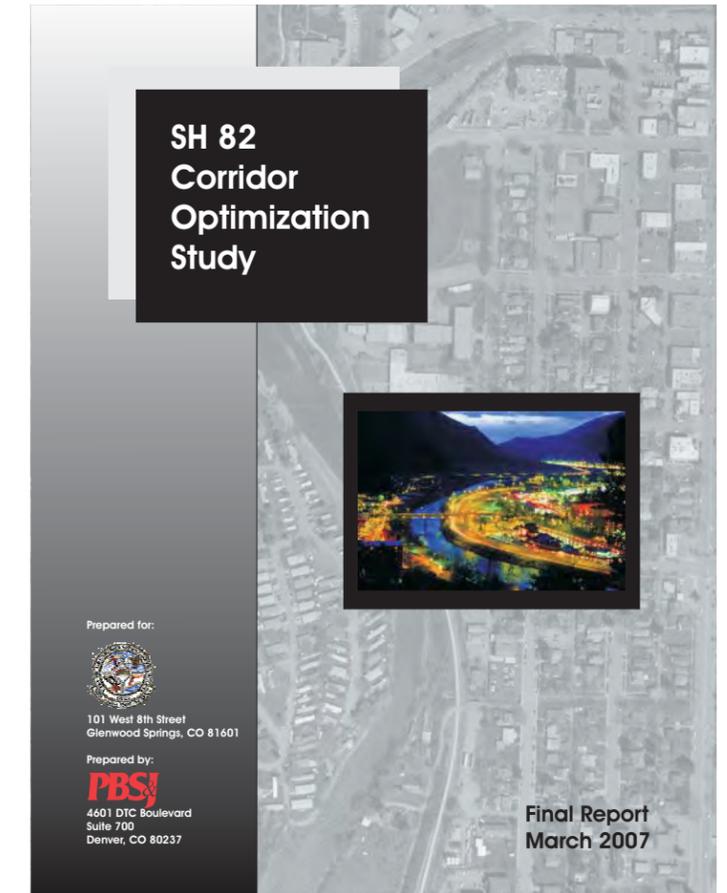
The Long Range Transportation Plan 2015 – 2035 outlines recommendations to establish the city multi-modal transportation network and strengthen connections between different modes, making travel more convenient for users at all levels of service. Based on a detailed efficiency analysis of vehicular, bicycle and pedestrian circulation; the plan recommends twenty on and off-street priority projects at a projected cost of over \$75m. The list includes shared-use paths, bicycle facilities, sidewalk connections, wayfinding signs, intersection improvements and new bridge connections. Potential federal state and local resources are identified. The Appendix is replete with essential data and technical references.



The 2012-13 Downtown Parking Study assessed parking supply and demand, evaluated future parking needs, and recommend possible parking management strategies to maximize the use of available resources. The document reported that existing supply is sufficient to adequately address parking needs, and concluded that the parking system can support additional development without adding weekday parking resources. The study does recommend that the City evaluate options for a second public parking garage and suggests possible locations.



Glenwood Springs Comprehensive Plan, adopted in 2011, is the community's guide for making land use decisions and is based on the community's values and vision for the future. The Comprehensive Plan sets the stage for other City plans including neighborhood or special district plans, capital improvement plans, street and transportation plans, and utility plans. In short, it is the central manuscript that coordinates and sets priorities for the City's current and future planning endeavors.



The SH 82 Corridor Optimization Study, Focuses on the SH 82 corridor as the primary east-west regional transportation facility serving the Roaring Fork Valley. Within the City, SH 82 is known as Grand Avenue. The corridor optimization process identifies a range of operational problems; leading to the selection of priority issues/locations and a corridor strategy in anticipation of the National environmental Policy Act (NEPA) process. This planning identifies needed intersection improvements, interchange enhancements, capacity issues, as well as how parallel arterial roads operate and convey traffic under different conditions.

LAND USE

Due to the size of the study area, land uses vary greatly. The range from traditional downtown retail, suburban format retail and lodging, to historic tourism destinations, government center, civic uses, and parkland. Recent planning studies have begun to revise the land use types for the study area, but more important the mixing of uses and their format, i.e. in terms of promoting a greater sense of a traditional downtown. This is especially important for the areas orbiting the core of what the community typically perceives as the downtown.

The City's Comprehensive Plan contemplates the topic of "Growth versus No Growth", and concludes that growth needs to be focused on increasing the utilization of land within and around the downtown, i.e. the study area of this project.

Although this planning effort is contemplating opportunities that exist broadly within the study area, it is primarily focused on three catalyst brownfields sites, and the study area includes three very distinct Targeted Reuse Areas, each organized around one key brownfield sites. The areas are:

- The Confluence Area (the Former Wastewater Treatment Plant);
- The West 6th Street Area (the Active CDOT Engineering & Maintenance Center);
- The Former Holly Quarry.

THE CONFLUENCE AREA

Existing uses in the Confluence Area include the decommissioned wastewater treatment plant, an active City-owned utility pumping plant, two inactive railroad spurs (referred to as the "Wye"), the active Union Pacific Railroad mainline and related facilities, the Rio Grande Trail along the Roaring Fork River, storage buildings, a funeral home, a household equipment rental shop, and surface parking for the adjacent government complex. This includes City Hall, the Garfield County Courthouse, and a county office complex. In the vicinity just south of the Confluence Area are Vogelaar Park and the Glenwood Elementary School.

- **The Wastewater Treatment Plant** — Decommissioned in 2012, the facility includes several structures slated to be demolished and removed in 2018, including a brick building housing the rotating biological contactor facility and several round sedimentation/filtration tanks. The City intends to complete demolition and clean-up of the site over the next few years to open the site for reuse.
- **The Wye Inactive Railroad Spurs** — Though not currently in use, the west spur of the wye is currently required to remain intact to a level to support future potential reactivation, per agreements between the City and RFTA. Due to their location and configuration especially for the west spur, this use creates significant land use challenges for reuse planning in the area.
- **Vogelaar Park and Environs** — This area will be reconfigured as the land exchange agreements and the 2017 redevelopment plan are implemented. Additional park land will be added to the west and south of the current park allowing a portion of the area where the baseball diamond currently is located to be developed as new mixed-use focused on downtown residences with a limited amount of commercial/retail space.

The City's 2003 Confluence Plan and the 2017 Confluence Redevelopment Plan acknowledge that achieving an ideal balance of civic uses and commercial development activity is complicated by challenges of topography, access, subsurface utilities, and complex property agreements. All of these factors will influence the viability of future land uses as well as their configuration in this area.

THE WEST 6TH STREET AREA

The West 6th Street Area is host to several of the City's key tourism-related businesses, as well as many of Glenwood Springs' hotels and motels. West of Laurel Street especially, most of the businesses front onto 6th Street in the familiar pattern of highway commercial operations, each situated behind its parking field.

- **Popular destinations** — These include Glenwood Hot Springs, Yampah Spa & Vapor Caves, Glenwood Caverns Adventure Park, and Iron Mountain Hot Springs. Other commercial land uses within the study area include offices, retail, restaurants, spa and beauty salons, an automobile dealership, and automotive service and repair facilities. Like the hotels and motels, most of these businesses front onto 6th Street and are situated on their sites behind deep setbacks and in many cases off-street parking.

- **North Glenwood** — This a compact residential neighborhood sits on the south-facing hill above 6th Street, primarily east of Laurel Street. The neighborhood consists of mostly single-family homes, some dating from the late 1800s and early 1900s. The streets in North Glenwood are aligned on a traditional compact north-south, east-west grid.
- **Former Bighorn Toyota site** — This 2.8-acre property is worth noting because it is a relatively large vacant site within the overall W. 6th Street Corridor. It is currently functioning as temporary parking for the Glenwood Hot Springs and for river rafting customer pick-up and drop-off.
- **CDOT Site** — The Colorado Department of Transportation's keep 3 offices and yard are located on a 6-acre parcel between I-70 and the Colorado River along Devereux Road, adjacent to Iron Mountain Hot Springs. The majority of the facility includes maintenance operations and with numerous buildings associated with maintenance and fleet operations, as well as engineering offices for the region, and the State Police.
- **CenturyLink** — This property is located at the terminus of 1st Street, adjacent to I-70 and serves as a regional hub for CenturyLink maintenance operations and the small buildings on the property are used mainly for storage.
- **Two Rivers Park** — Glenwood Springs' largest regional park is located within the study area across from the confluence of the Colorado and Roaring Fork Rivers and serves as a major destination for events and summer river sport activities. The 22-acre park includes a baseball field, amphitheater, sheltered picnic areas, restrooms, a playground, and a skate park.

THE FORMER HOLLY QUARRY

There is ongoing interest in repurposing the 27-acre of the former limestone quarry to create a remarkable "hillside village" residential community and resort facility. The site is located on the southeast-facing slope of Iron Mountain, adjacent to the intersection of Traver Trail and 6th Street/Highway 6. A preliminary plan, submitted in 2013 as a PUD, was approved and then extended to June 20, 2019. The program as submitted includes a multi-level Cliff Lodge building, 260 space parking spaces, a funicular to transport guests to the top of Iron Mountain, and a small museum themed around mining and local mining history. The proposal would re-purpose mine-scarred land, while building on previous investments by the same owner, establishing successful tourist destination businesses at the base and at the top of the mountain (Iron Mountain Hot Springs and Glenwood Caverns Adventure Park).



Former Waste Water Treatment Plant



6th Street under construction



Holly Quarry Site

Land Use: Moving Forward

The Confluence area

- The former Wastewater Treatment Plant and dormant associated infrastructure will be removed to allow for new uses.
- The active Wastewater Treatment Pump Station is fixed and cannot be moved. Any new development in the area will need to accommodate the access and service needs of this new facility.
- Negotiations with RFTA regarding the wye have been ongoing. Although subject to change, it appears that east spur of the wye can be removed and the west spur will need to be accommodated to allow for future possible rail utilization.
- There are current private uses, such as the funeral home, which may impede the ability to maximize the redevelopment potential of the area.
- The former rail freight shed will be able to be razed but such an action may require special permitting.
- The government center is fixed and has several requirements that surrounding it include parking and access for the Police Department and service access to the rear of the buildings.
- There are numerous parking areas that are potentially available for infill development.
- The active Union Pacific Railroad will have impact on the placement of new uses due to noise and dust impacts.
- Per the 2017 Confluence Redevelopment Plan, the Vogelaar Park redevelopment area will likely advance first as a primarily residential project with limited commercial development.

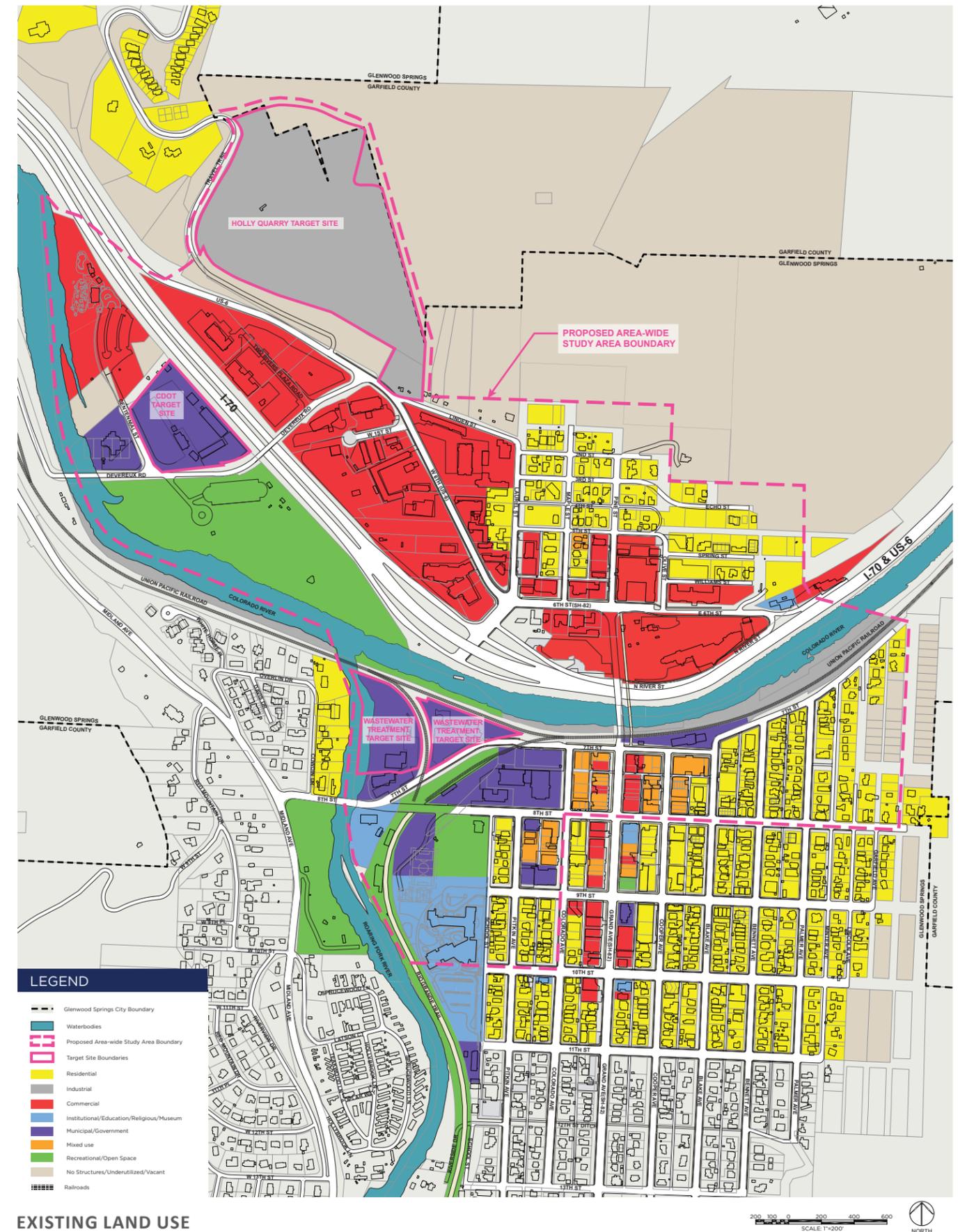
6th Street Corridor

- The 6th Street Corridor Plan Master Plan, completed in April of 2017, anticipates future private redevelopment of existing properties that will incrementally infill following a mixed-use pattern of land uses. This is anticipated to start on underutilized parcels buildout to occupy street frontages. Public improvements such as new streetscapes, bike facilities, public parking, and neighborhood gathering areas are planned as the district evolves. This fundamental approach will result a potential dramatic shift long term in the mix of uses in this area, as it transitions from large parcels with single uses, to a more densely grouping of buildings and a diverse mix of commercial/retail, lodging, tourism, and residential uses.

- This area represents the largest potential area to attract growth within the downtown, as discussed first in the Comprehensive Plan and then refined through the 6th Street Corridor Plan. It also strategically located within close proximity of downtown, to expand and development pattern and mix of land uses that expands the overall impact of the City's downtown as a whole. This includes accommodating the increasing regional demand for commercial space in a manner that compliments the character and mix of uses in the downtown and not compete with it.
- The desire for new buildings and expansions to existing buildings will bring new residents living in this part of town. Land uses that have been considered include recruiting convenience and fresh food retailers as well as entertainment and service providers to what should become a new Glenwood Springs neighborhood, as well as a more attractive, and fun, version of the regional destination it is today.
- The CDOT Engineering & Maintenance Center, a commercial office building, and the Iron Mountain Hot Springs occupy 17+ acres between the Colorado River and the southbound lane of I-70, west of Devereux Road. Opportunities to better integrate and buffer the CDOT facility to allow further redevelopment around it will be important. This includes reducing potential conflicts between activities on the site and the new uses focused on tourism and residential that are occurring around it. Moving forward, there may be opportunities for the property owners to work collaboratively within this geographically constrained area to explore mutually agreeable ways to accommodate additional compatible economic activity. This includes improved public river access while improving public access, and without diminishing the capability of the CDOT to perform its public safety operations in a reliable, and efficient way.

The Former Holly Quarry

- It is in the best interest of all parties to return this parcel to an economically productive use. The proposed PUD development program for the site includes a mix of tourism, lodging, and residential uses. The current property owner is still exploring options for the highest and best uses for the site, especially since there are infrastructure challenges to meet the requirements of almost any likely land use combination. Based on current factors, residential uses that take advantage of the excellent valley views may be the most likely best use for the site.



ENVIRONMENTAL AND HUMAN HEALTH RISK CONDITIONS

A key goal of the U.S. EPA Brownfields Area-Wide Planning Program is to help communities create strategies for the reuse of brownfields that are protective of public health. The Environmental and Human Health and Risk Assessment section of this analysis focuses on identifying potential site constraints that may impact redevelopment and public health impacts posed by the current site conditions and summarizing those conditions in a manner that can be easily communicated to the residents that may be impacted.

Human health aspects evaluated include:

- Cleanup efforts at the three catalyst sites and impacts to soil and groundwater quality;
- Existing Air Quality issues and efforts to improve air quality;
- Surface Water quality and public access to the waterfronts; and
- Environmental Justice issues per the U.S. EPA's Plan EJ 2020 parameters.

FORMER WASTEWATER TREATMENT PLANT

The Former (City of Glenwood Springs) Wastewater Treatment Plant is a 5-acre property located at 401 West 7th Street was decommissioned in 2012. The City owns the property and is considering the site for future redevelopment opportunities. The property is one of the catalyst brownfield sites of the Area-Wide Planning effort.

The 5-acre decommissioned wastewater treatment site, ideally situated on a triangular parcel

wedged into the confluence of the rivers, was identified by a public engagement process as a high priority for redevelopment in the 2003 Confluence Plan. First a trickling filter plant completed in 1968 and then a rotating biological contactor plant built in 1979, all wastewater facilities, with the exception of a new lift station, were relocated to the outskirts of town in 2012.

The plant was decommissioned in part due to potent chemicals such as sulfuric acid created during the treatment process corroding its brick structure over time. The plant also had recurrent struggles with removing ammonia from wastewater before it was discharged into the Colorado River. Additional potential contaminants of concern include chlorine leachates from the treatment process; asbestos; potential hazardous waste from drying beds on the north side of the side where sludge was stored; and arsenic, creosote, and other toxins from the former Union Pacific-owned railroad wye that bisects the parcel.

Following assessment, city officials plan to demolish the old plant, including several holding tanks and a major pipeline that brought most of the City's sewage into the old treatment facility.

As part of the Area-wide Planning effort, Gaito & Associates interviewed the City's Public Works Director, Mr. Robin Millyard and reviewed readily available environmental information including the following reports:

- Phase 1 Environmental Site Assessment, Waste Engineering, December 1998
- Phase 2 Environmental Site Assessment, Waste Engineering, March 1999
- Phase 1 Environmental Site Assessment, Weston, December 2016
- Phase 2 Environmental Site Assessment, Weston, February 2017.

Findings of 1999 Environmental Site Assessments

The 1999 Phase 2 Environmental Site Assessment (ESA) report identified minor BTEX soil contamination in the areas of former Drywells 2 and 3. The report recommended localized excavation and disposal of this soil. The recommendations indicated that the soil should be excavated, analyzed, and disposed of at the South Canyon Landfill after approval by the Colorado Department of Public Health and Environment. Through review of the City's records and contact with the contractor who conducted the 1999 Phase 2 ESA, it was determined that this contaminated soil was not remediated.

The 1999 Phase 2 ESA report also identified the presence of solid waste during the excavation of Test Pit No. 2. The solid waste included burned debris, cans, bottles, bones, and lumber. The extent of the solid waste was not determined at that time. While the presence of the solid waste did not result in a recommendation of remediation, there was a concern that the presence of the solid waste could complicate the construction of new building foundations or slabs. The report recommended that future contractors be made aware of the potential to encounter solid waste and that any waste that is encountered during construction be disposed of appropriately. Through review of the City's records and contact with the contractor who conducted the 1999 Phase 2 ESA, it was determined that this debris was not removed.

As part of the Existing Conditions evaluation, EPA's START Contractor, Weston Solutions, was contacted about the information presented in the 1999 Phase 2 ESA. The following information was provided by Weston:

General Notes

- The 1999 Phase II ESA Investigation tasks in the vicinity of the four of the buildings (M.O.C. Building, Old Shop Building, Old Truss Building, and Sign Shop) did not occur within the 2016 Technical Brownfields Assistance (TBA) Site Boundary.
- The four buildings (M.O.C. Building, Old Shop Building, Old Truss Building, and Sign Shop) had already been demolished and the land redevelopment with a new building and parking lots during the 2016 TBA.
- Regulatory standards in Colorado have changed since 1999. Soil and groundwater sample results were compared from the 1999 Phase 2 ESA investigation against current Colorado petroleum benchmarks and no Certificate of Completion (COC) exceedances were noted for BTEX or TPH analytes.

Three Drywells

- Drywell #1 – Drywell #1 was installed in 1983. This well had a solid base and no indication of gravel or perforations in the interior walls were observed. Material in the well was routinely pumped using a vacuum truck. Material did not come in contact with surrounding soils or have a completed pathway to groundwater. Once the buildings were torn down, the source of material entering the drywell no longer existed.

- Drywells #2 and 3 – The purpose of these wells were to collect surface runoff. It is likely petroleum constituents from vehicles in the parking lot were mobilized and diluted by rain water which collected in the drywells (these wells have gravel bottoms). A soil sample was collected from each drywell (DW-1 and DW-2). Extractable Petroleum Hydrocarbons (EPH) values in soil samples from Drywell #2 and Drywell #3 were 340 mg/kg and 300 mg/kg, respectively (VPH were non-detected). These concentrations are below the current TPH comparison benchmark of 500 mg/kg. BTEX concentrations reported in the samples are below Tier 1 RBSLs. Based on these two criteria, the localized impacts to soil do not exceed any standards and no further action should be necessary (unless requested by the state).

Six Soil Borings/Monitoring Wells (Soil Borings were converted to Monitoring Wells)

- Soil Samples: No petroleum constituents (VPH, EPH, or BTEX, as applicable) exceeding standards were noted in soil samples collected from the soil borings.
- Groundwater Samples: No exceedances were noted in ground water samples collected from the monitoring wells.

Two Test Pits (Test Pit #1 and Test Pit #2)

- Soil Samples: A soil sample was collected from each test pit (TP-1 and TP-2). EPH values in soil samples from Test Pit #1 and Test Pit #2 were 64 mg/kg and 160 mg/kg, respectively (VPH were non-detect). These concentrations are below the current TPH comparison benchmark of 500 mg/kg. BTEX concentrations reported in the samples are below Tier 1 RBSLs. Based on these two criteria, the localized impacts to soil do not exceed any standards and no further action should be necessary (unless requested by the state).

Solid Waste

- It was reported that buried trash and debris was observed during installation of the three (3) drywells at the site. Materials primarily consistent of bottles and debris from burned trash. During the 1999 Phase II ESA, the side-wall of Test Pit #2 consisted predominantly of trash fill such as burned debris, cans, bottles, bones, and lumber. These materials by themselves are not considered to pose a substantial environmental risk.

Findings of 2016/17 Environmental Site Assessments

The more recent Phase 1 and Phase 2 ESAs were prepared by Weston after the decommissioning of the Wastewater Treatment Plant in order to assist the City in their preparations for redevelopment of the property. The Phase 1 ESA report identified two Potential Recognized Environmental Conditions:

- The operations associated with the wastewater treatment system, including the sandfilter drying beds, indicate the potential for organics and heavy metals contamination at the subject property.
- Due to the operations associated with the active railroad adjacent to the subject property and the inactive railroad spurs (“the wye”) bisecting the subject property, there is the potential for petroleum hydrocarbons, semi-volatile compounds, and heavy metals contamination in soils.

Two additional concerns were also identified:

- The operations at the former Wastewater Treatment Plant may have resulted in contamination from the activities performed at the subject property. The processes at the treatment plant were not designed for the treatment of ammonia in the influent.
- Due to the age of the buildings, there is the potential for asbestos-containing materials (ACM), lead-based paint (LBP), mercury-containing thermostat switches, and/or light ballasts containing polychlorinated biphenyls (PCBs), and mold to be present at the subject property.

A Phase 2 ESA was recommended and consequently conducted by Weston to investigate the identified Recognized Environmental Conditions (RECs) and concerns. The Phase 2 ESA had the following recommendations:

- Preparation and use of a Materials Management Plan during redevelopment is recommended to address localized areas of surface soil impacts identified and in case impacts are encountered during building removal.

- Based on the ACM identified at the Site and demolition plans, START recommends contracting an accredited asbestos remediation company to determine appropriate remedial actions to address the ACM at the Site during the cleanup phase of redevelopment. The non-friable ACM identified is classified as Category I or II non-friable.
- Due to planned demolition of the buildings, remediation of LBP may not be necessary and no additional sampling may be needed unless required by the disposal facility. It is recommended that the disposal facility be contacted to determine if Toxicity Characteristic Leaching Procedure sample(s) are required.
- PCB-containing equipment (e.g., light ballasts) should be properly removed and disposed.
- Mercury-containing thermostat switches should be properly removed and disposed.

Former Wastewater Plant: Moving Forward

- Based on available information no additional environmental site assessments are likely to be necessary at this time to support reuse.
- Additional health and safety precautions and soil management protocols during demolition and future construction should be implemented. A materials management plan is recommended during redevelopment for construction worker awareness, including excavation contractors, in case adverse environmental conditions are encountered (e.g., potentially impacted soils and/or unexpected buried solid wastes).
- If unexpected contamination is discovered during redevelopment, it would be an opportune time to excavate then when the presence and extent can be seen.
- Management of Asbestos Containing Materials (ACM), Lead-Based Paint, PCB-Containing equipment and Mercury-containing thermostats must be addressed during building demolition.
- Management of these issues could impact the costs of demolition.
- Resources should be identified to assist the City in the management of concerns with building demolition including abatement of the ACMs.



View of the Former Wastewater Treatment Plant. Note building to the right is the new active pump station.

THE ACTIVE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) ENGINEERING & MAINTENANCE CENTER

The active Colorado Department of Transportation (CDOT) Engineering and Maintenance Center was identified as one of the catalyst brownfield sites due to the City's interest in establishing connectivity between downtown Glenwood Springs, Two Rivers Park, the Iron Mountain Hot Springs attraction and the redevelopment of the 6th and 7th Street Corridors. The 5-acre CDOT site is located at the extreme end of the W. 6th Street Area at the intersection of Devereux Road and Centennial Street. The property has been used for CDOT for Engineering and Maintenance Departments since the 1970's. The CDOT facility also houses Colorado State Police operations.

As a part of the Area-Wide Planning effort, Gaito & Associates reviewed historic aerial photographs and other information that documented the historical uses of the property to identify any potential environmental impacts to redevelopment. In short, according to historical photographs, the property was vacant until the CDOT facility was built in the 1970s. At that time, CDOT entered into an agreement that resulted in the construction of their facility in return for a 99-year lease for parking for an entity known as Redstone Corporation. Water testing conducted in support of the building construction recommended that if Underground Storage Tanks were to be installed, the metal tanks should not be used to the alkaline condition of the soils on site. No other environmental information was readily available for review.

In January 2018, the SGA team and the City met with CDOT representatives with the intent of identifying the availability of environmental information and to engage CDOT as a stakeholder of the Area-Wide Planning effort. During this stakeholder meeting, CDOT explained the critical nature of their location to both their operations as well as to the operations of the Colorado State Police. Due to the proximity and access to the Interstate, the current location of the CDOT facility is paramount to public service and safety. No other location has been identified that can provide the same levels of service and safety. As a result, CDOT representatives indicated that the feasibility of relocating these operations is not currently viable. CDOT representatives strongly expressed their desire to work with the City to explore other projects that could achieve the desired connectivity goals, especially around the perimeter and general environs of their facility. Other projects that were suggested included streetscaping, bike paths improvements, and additional and/or improved multi-modal sidewalks and pedestrian safety improvements.

CDOT Engineering and Maintenance Center Site: Moving Forward

- Based on the current status of the site no environmental site assessment activities are warranted at this time.
- Opportunities to engage CDOT on ways to improve the interface of this site with the overall redevelopment visions for the West 6th Street Area should be pursued.



West 6th Street Area



The CDOT Engineering & Maintenance Center

THE FORMER HOLLY QUARRY

The former Holly Quarry site was identified as one of the catalyst brownfield sites due to the City's desire to support a private sector partner's interest in redevelopment of this site. The Holly Quarry site is a 27-acre property that was formerly the Pitkin Iron Corporation limestone quarry.

The Holly Quarry site contains two abandoned limestone quarries located at the base of Iron Mountain, north of Interstate 70 and adjacent to Iron Mountain Hot Springs and the Glenwood Caverns Adventure Park. The Holly Quarry served Mid-Continent's Redstone coal mine operations, which produced more than 21 million tons of mid-volatile metallurgical coal thirty minutes outside of Glenwood Springs until a deadly underground fire ended operations in 1991.

For decades Mid-Continent's associated industrial activities were the economic foundation of Carbondale and surrounding areas. Limestone from the Holly Quarry was ground at a rock dust plant then sent to coal mines in the region to help reduce coal dust and prevent explosions. When Mid-Continent formally closed the entire business in 1991, much of this industrial base evaporated. While one of the three former limestone quarries on Iron Mountain reopened in 2009, the Holly Quarry site has remained closed and out of operation for over 30 years.

As part of the Area-Wide Planning effort, Gaito & Associates reviewed historic aerial photographs that documented the historical uses of the property to identify any potential environmental impacts to redevelopment. The aerial photographs confirmed that the site was undeveloped until the onset of the mining operations. No other environmental information was readily available for review.



Holly Quarry Site

Limestone, composed mostly of calcium carbonate, is used primarily to produce Portland cement for the building industry. Other products that use limestone include breakfast cereal, paint, calcium supplements, antacid tablets, paper, and white roofing materials. Typical environmental impacts from limestone mining include:

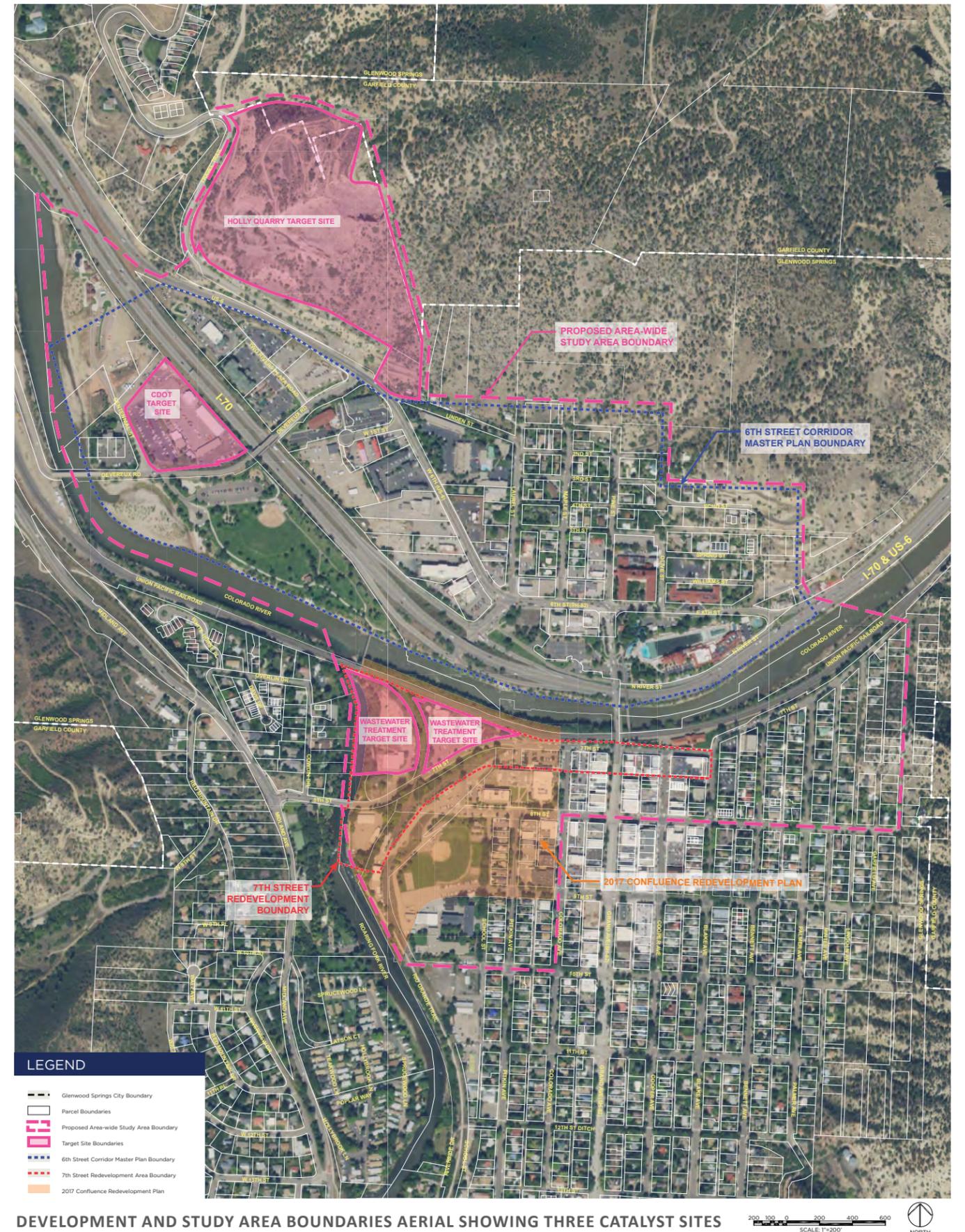
- Reduction in quality and quantity of groundwater;
- Potential for sink holes if the mining occurs in areas of karst geology; and
- Creation of dust during mining activities that could impact air quality.

Given that the mining operations ceased over 30 years ago, potential dust impacts no longer exist. The property owner is addressing any potential stabilization issues as part of the site development plan and construction specifications. Since it is the property owner's intention to provide a water supply to the redevelopment, groundwater quality would not be a concern.

The SGA Team and the City met with the current owner of the site with the intent of identifying the availability of environmental information and discuss reuse opportunities. The current property owner stated that he is not aware of any traditional brownfield-type environmental issues at this property. He also was not able to identify any other legacy environmental issues that he believed would impact redevelopment of this site. The property owner did identify the need for resources to establish water, wastewater, and stormwater infrastructure to support site redevelopment.

The Former Holly Quarry: Moving Forward

- Based on the current status of the site no environmental site assessment activities are warranted at this time.
- Opportunities to obtain resources to support extension of water, wastewater and storm sewer infrastructure should be explored.
- Opportunities to obtain funding that supports the reuse and reclamation of mine-scarred lands should be considered.



DEVELOPMENT AND STUDY AREA BOUNDARIES AERIAL SHOWING THREE CATALYST SITES

ZONING

ZONING: GLENWOOD SPRINGS' DEVELOPMENT REGULATIONS

The City's 2011 Comprehensive Plan establishes the policy framework for the City's development regulations. The plan describes the preferred outcomes of future private property investment. These outcomes are succinctly summarized in the list of planning goals and policies and in the Future Land Use Map. The Future Land Use Map delineates the Confluence Area as a new, emerging mixed-use center. The plan also sets out actions that will support construction of new housing; emphasizing variety and affordability, and making special mention about the character of the future of the Confluence site...“Incorporate a prominent residential component in a mixed-use redevelopment plan”.

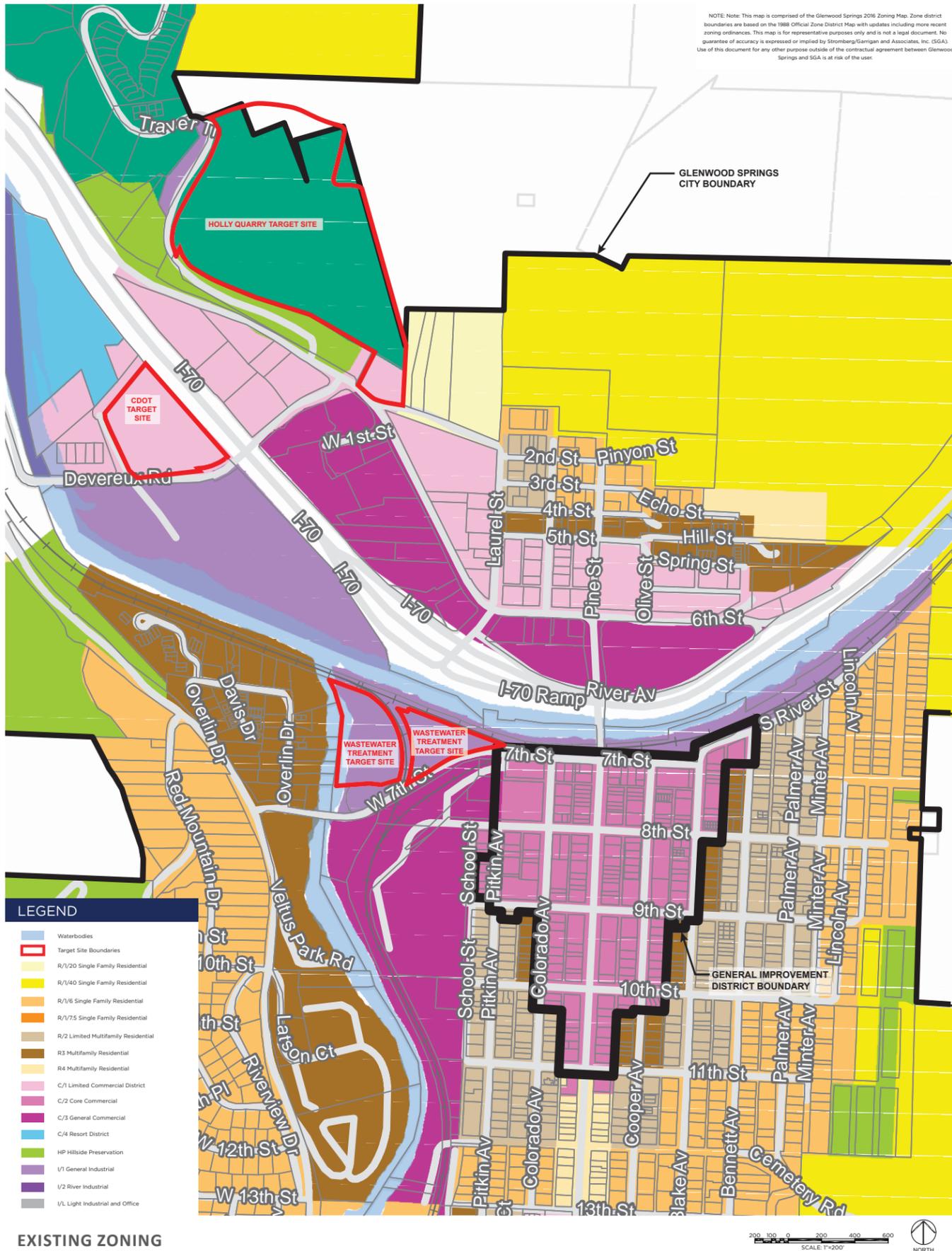
Since 2015, the City has been engaged in an effort to substantially re-write Title 070, the Glenwood Springs Development Regulations. It is likely that this new regulatory framework will guide future development taking place in the study area. Transformative changes include:

- Mixed-use welcomed. The current code lacks adequate provision for mixed use districts and mixed use buildings; a desired outcome of future investment and redevelopment in the study area.
- The PUD ordinance is recalibrated to include public purpose goals. Though the PUD provisions in the present code lay out the exhibits required for submittal and then describe the procedure for review and hearing of qualified applications, no criteria for approval/denial are offered in the ordinance. The new ordinance will describe specific community goals and desired outcomes to be accommodated if zoning requirements are to change as part of an approved PUD project
- The code is restructured to provide clear direction, vivid illustrations, and additional controls. The town is mostly “built out” in the valley floor and “boxed in” by steep canyon slopes near the outer boundaries, therefore, future development will be in the form of infill, expansion or redevelopment. Zoning regulations and review procedures must effectively steer reinvestment toward high-quality outcomes for these key sites.
- The proposed updates aim to simplify the process. The current development regulations require substantial commitment of front-end investment in fees, professional services and time before starting a very long review process guided by subjective criteria and lengthy hearings, often resulting in changes and essentially starting again.
- Recommended amendments specific to the study area will eliminate some zoning district designations, add at least one new one, and substantially restructure many of the other provisions guiding building placement and permitted uses.
- Recommendations also include eliminating I/1 General Industrial, the base zoning for much of the Confluence Area, including the City-owned 2-acre site occupied by the decommissioned wastewater treatment plant. The future zoning is likely to be M1 or M2; anticipating walkable and active neighborhood-scale places with a mix of residential and non-residential uses. Regarding the treatment plant site, since the parcel is City-owned, the governing body may exert considerable influence over the outcome.
- C/3 General Commercial, to be renamed CO Commercial, is the current base zoning for the remainder of the Confluence area as well as most of the parcels fronting West 6th Street below Devereux Road. However, future mapping amendments are likely to re-zone these areas so that they are covered under the provisions of one of the new M (mixed-use) districts.
- C/1 Limited Commercial is the base zoning controlling most of North Glenwood above 6th Street as well as the properties across I-70, including the CDOT Engineering & Maintenance Center and the Iron Mountain Hot Springs resort. The proposed amendment will change the title of the district to M1, permitting and promoting an array of activities, inviting new residents, and setting expectations for less dominant parking lots, attractive shopfronts and great streets for a stroll.

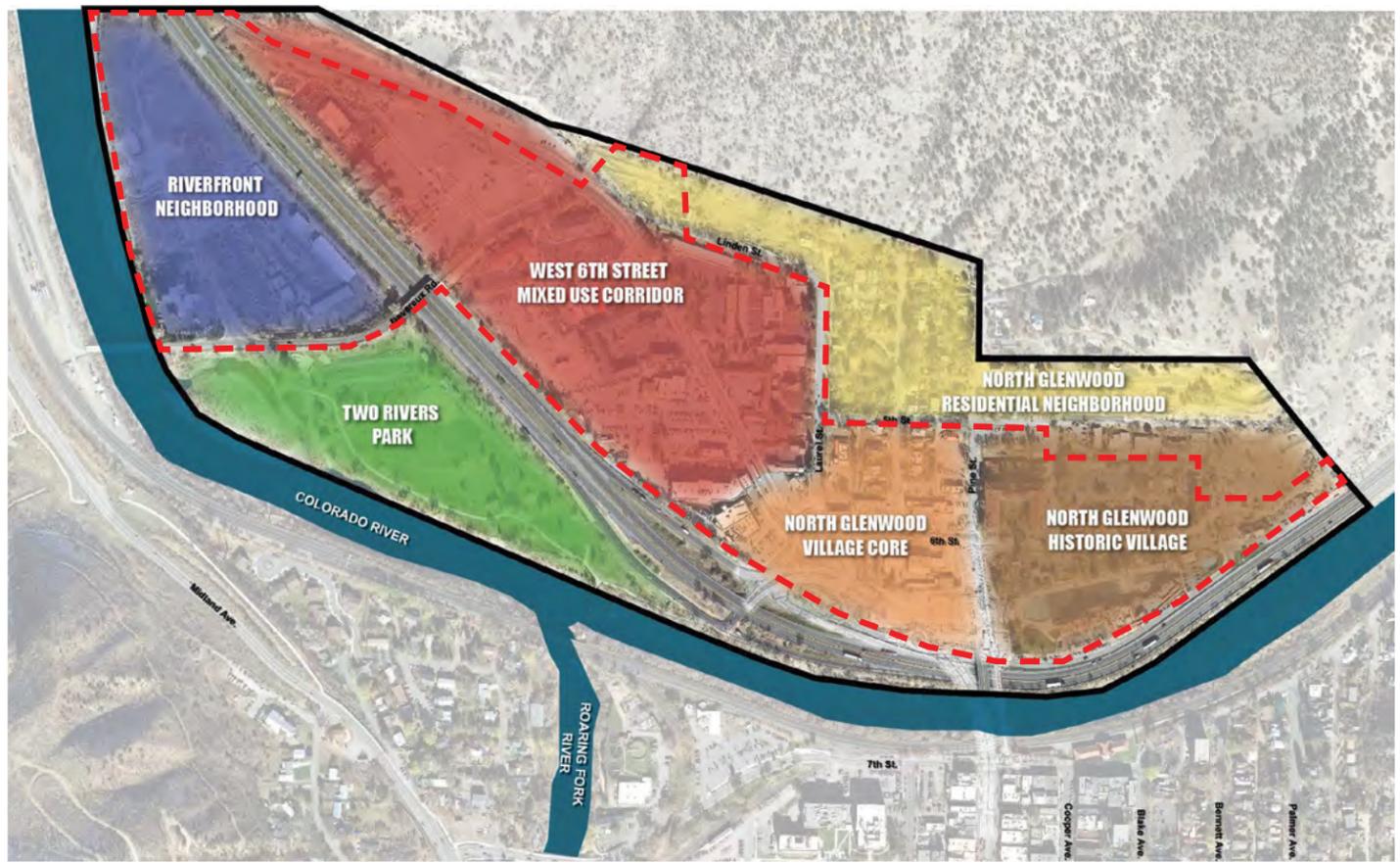
Zoning: Moving Forward

- As mentioned previously, after the text amendments are adopted or largely accepted, public consideration of changes to the zoning map will include focus on the 6th Street, North Glenwood, and the Confluence Areas.
- Future redevelopment in the 6th Street and Confluence Areas will benefit if there is a mechanism to provide a higher level of design guidance and oversight than anticipated by the provisions of the updated M1, M2 PUD or the new M3 zoning district. The December 2016 Module 2 Public Draft suggests that this could require additional base zones, or an overlay district that applies unique design standards and guidelines.
- City policy to expand mobility options and encourage walking and biking should feature prominently in discussions about development ordinances, rezoning applications and subdivision reviews. Provision for public access to rivers, trails, bike parking, setting a maximum front setback (as proposed for the M districts) and the expectation that front entrances are to be convenient to a walkable public way are all components of development regulations that support, rather than stifle, walking and biking. Management of easements, as well as seeking dedication or acquisition to eliminate gaps in the network, should be part of an overall public access masterplan for the West 6th Street Area.
- The new zoning standards constrain/shape the future development potential of the 6th Street and Confluence areas. Development regulations set parking requirements by use. The update eased some requirements, and simplified allowances and procedures for shared parking and off-site parking. Nevertheless, the standards do constrain/shape the future development potential of the 6th Street and Confluence areas. Evaluation of car usage by future residents may indicate that further easing and cooperative management would be logical.
- Evaluate if additional building height is permitted (to incentivize private resources to support public policy goals) in some locations. As proposed, the M2 and M3 districts permit structures up to 60 feet tall by-right. The 6th Street Corridor Plan suggests that a height bonus may be an appropriate strategy to attract developer interest in providing income-qualified community housing as part of future residential buildings in some areas. This thesis should be further evaluated from an appearance perspective – to understand the how that building height would look and also to understand whether an analysis of building costs confirms that the additional return on an additional floor or two is not entirely consumed by the additional cost of building it, as the construction type will be different for the taller structure.

NOTE: This map is comprised of the Glenwood Springs 2016 Zoning Map. Zone district boundaries are based on the 1988 Official Zone District Map with updates including more recent zoning ordinances. This map is for representative purposes only and is not a legal document. No guarantee of accuracy is expressed or implied by Stormberg/Carrigan and Associates, Inc. (SCA). Use of this document for any other purpose outside of the contractual agreement between Glenwood Springs and SGA is at risk of the user.



EXISTING ZONING



Proposed Land Use Character Areas from the 2017 6th Street Corridor Master Plan

NATURAL RESOURCES

The natural conditions surrounding the City of Glenwood Springs are some of its most defining features. Set within the Roaring Fork and Colorado River Valleys at the confluence of the two rivers, the hydrologic and geologic environments create the unique environment in which Glenwood Springs has been able to thrive.

Based on information from the Colorado Geological Survey, the City of Glenwood Springs proper is largely situated on the relatively flat or gentle-sloping alluvial terraces which surround the Colorado and Roaring Fork Rivers. These alluvial deposits feature a mixture of broken rock and gravel within a matrix of finer sands and silts. The soil profiles on these terraces are variable, but generally designated well-drained by the NRCS's soil survey, meaning they aren't prone to local ponding and flooding in an undeveloped condition.

Rising out of the river valleys are steep mountainsides with the bedrock at or near the surface of the slope. These mountainside outcrops essentially frame the developed areas of Glenwood Springs, with the majority of existing buildings ending at the geologic barriers between the alluvium and the outcrops. On the south side of the Colorado River, these mountains consist of bedrock formations that include evaporative rock like gypsum and halite as well as sedimentary units like sandstone and shale. On the north side of the Colorado River in Glenwood Springs, the mountains consist mainly of a formation called the Leadville Limestone, a blue/gray limestone and dolomite rock outcropping. These steep slopes surrounding the City do provide some risk in the form of mudslides and debris flows, particularly where rainwaters are able to collect in gulches and similar topographies. This presents a hazard for some areas of the city but is also a natural geologic occurrence for an area such as Glenwood Springs.

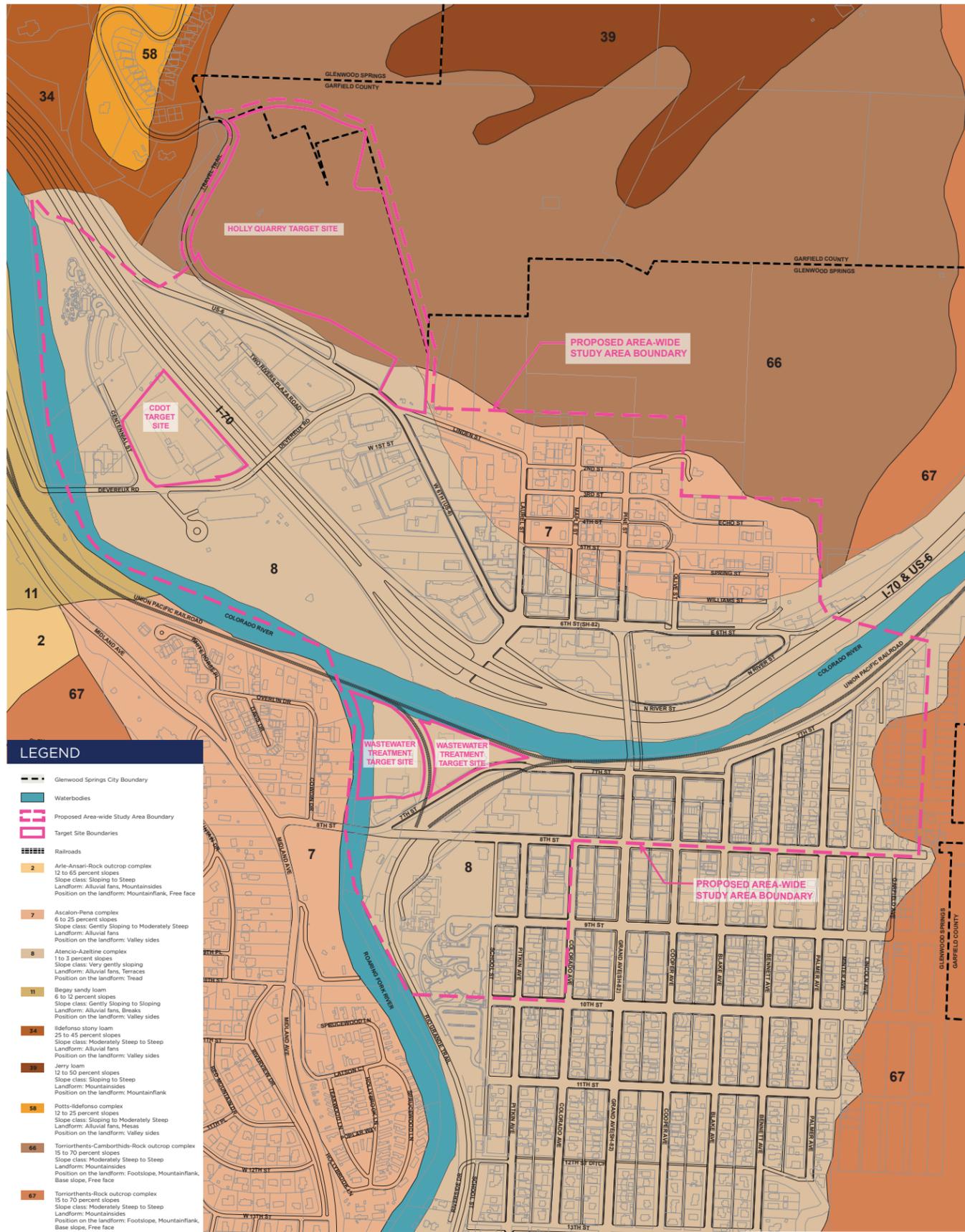
Extraction of natural resource is not currently prevalent in the areas immediately within/surrounding the City of Glenwood Springs like it is in other portions of the western slope, although one of the sites at the northern edge of the City/study area was formerly a limestone quarry.

One resource that is relatively abundant within Glenwood Springs is geothermal energy. Much of this area of Colorado experiences geologic phenomena which result in higher-than-normal levels of heat in its bedrock. This energy has clear manifestations within the City and provides the basis for some of the more well know tourism destinations, such as the vapor caves and hot springs. It has practical applications beyond those features though. Geothermal energy can be (and is) harnessed to heat homes and water, and in this region is abundant enough that it can also be used as a resource to generate electricity. Geothermal power generation is an inherently renewable as it relies on the continuously generated heat from the earth's mantle to harness energy.

Natural Resource: Moving Forward

- Natural topography defines the area and provides recreation opportunities.
- City situated on alluvial terraces centered on the Roaring Fork and Colorado Rivers.
- City has been developed to its natural boundaries, thus re-use of land and smart urban design are necessary for growth.
- Rivers offer recreation opportunities and city should strive to increase public access to riverfront.
- Geothermal energy is a significant potential resource in the area for electricity and heating/cooling.
- The mountains that bookend the city, contain some relatively desirable materials like limestone and gypsum, but mineral and other resource extractions are largely absent.

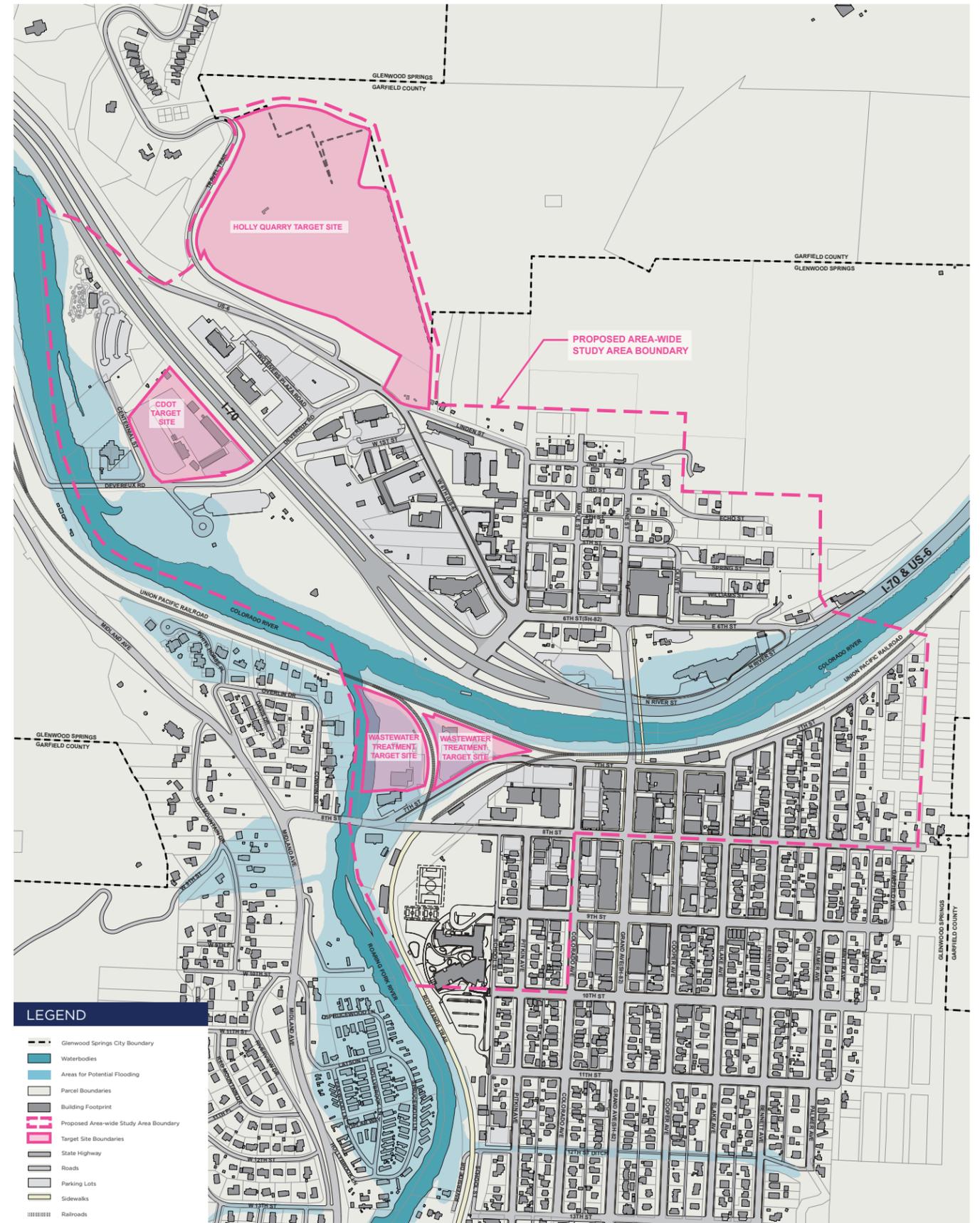




LEGEND

- Glenwood Springs City Boundary
- Waterbodies
- Proposed Area-wide Study Area Boundary
- Target Site Boundaries
- Railroads
- 2 Arle-Ansari-Rock outcrop complex
Slope class: Steep to Steep
Landform: Alluvial fans, Mountainsides
Position on the landform: Mountainflank, Free face
- 7 Ascalon-Pena complex
Slope class: Gently Sloping to Moderately Steep
Landform: Alluvial fans
Position on the landform: Valley sides
- 8 Atenco-Azeltine complex
Slope class: Very gently sloping
Landform: Alluvial fans, Terraces
Position on the landform: Tread
- 11 Began sandy loam
Slope class: Gently Sloping to Sloping
Landform: Alluvial fans, Breaks
Position on the landform: Valley sides
- 34 Ildifonso stony loam
Slope class: Moderately Steep to Steep
Landform: Alluvial fans
Position on the landform: Valley sides
- 12 Jerry loam
Slope class: Steep to Steep
Landform: Mountainsides
Position on the landform: Mountainflank
- 58 Potts-Ildifonso complex
Slope class: Sloping to Moderately Steep
Landform: Alluvial fans, Mesas
Position on the landform: Valley sides
- 66 Torionthems-Camborhids-Rock outcrop complex
Slope class: Moderately Steep to Steep
Landform: Mountainsides
Position on the landform: Footslope, Mountainflank, Base slope, Free face
- 67 Torionthems-Rock outcrop complex
Slope class: Moderately Steep to Steep
Landform: Mountainsides
Position on the landform: Footslope, Mountainflank, Base slope, Free face

SOIL CLASSIFICATION



LEGEND

- Glenwood Springs City Boundary
- Waterbodies
- Areas for Potential Flooding
- Parcel Boundaries
- Building Footprint
- Proposed Area-wide Study Area Boundary
- State Highway
- Roads
- Parking Lots
- Sidewalks
- Railroads

HYDROLOGY



STORMWATER MANAGEMENT

Stormwater management is a concern for every city, although the specific issues each city must tackle are unique and require site-specific solutions. In Glenwood Springs, despite its location along two substantial rivers, widespread flooding beyond intense flash-flood-type events is not a major issue for the City at-large, although some lower areas within the study area near the confluence of the Roaring Fork and Colorado Rivers have overbank flood risk. Instead, the focus for a community like Glenwood Springs in a majority of rain events is more on water rights within the river watershed and treatment of pollutants in runoff before it returns to surface waterways.

Mudslides and debris flows, which in severe cases can cause major damage to areas in their path, are also a significant concern in the City and surrounding region, though the issue is related more to the topography and maintenance of upland areas. Given the factors that contribute to these events, only limited measures can be taken to mitigate their impact within the downtown setting of much of the study area.

Within the City, stormwater is handled through an independent drainage system that keeps rainwaters separate from all of its sanitary sewer flows. By having separate systems for stormwater and sewage, the City is protected from issues with combined sewer overflow, but that does not mean pollution within the rivers is not still a concern. The storm sewer system in many cases carries runoff directly from streets, parking lots, and other paved areas directly to the Colorado and Roaring Fork Rivers. This means that without the implementation of water quality best management practices, any pollutants carried within runoff, including sediment, salts, chemicals, petroleum, and nutrients that can negatively impact river water quality, will flow directly into the waters of the Colorado and Roaring Fork Rivers. In the 2014 City of Glenwood Springs Source Water Protection Plan, stormwater runoff from roads and other impervious surfaces in urban areas is identified as one of the primary potential pollution sources for waters contributing to the Lower Roaring Fork River, which serves as a secondary drinking water intake for the city. With this in mind, any new development or significant infrastructure work should include a focus on water quality protection for runoff as a component of its design and utilize proper best management practices (BMPs) as recommended in the Source Water Protection Plan as well as the 2003 Stormwater Assessment and Watershed Report produced for the Roaring Fork Conservancy.

The City sits relatively close to the upper reaches of the Colorado River, where water rights based on existing natural flow patterns are a major concern. Only recently has the State of Colorado legalized rainwater harvesting methods, mainly in the form of rain barrels and similar systems. Particularly as it relates to the arid climate of much of Colorado's Western Slope, scarcity of water within the various river watersheds is a significant concern.

With those water rights concerns in mind, any measure that potentially captures rainwater must be considered in the context of the greater drainage and water usage patterns. For instance, any capture/reuse BMPs should be considered as a means to replace existing potable water usage, rather than to remove any substantial amount of additional water from the surface waters flowing into the Colorado River. Replacing previously allocated potable water use will have a net-neutral effect on downstream water flows, satisfying water rights concerns, and will also reduce demand on drinking water treatment facilities. Many reuse BMPs can also have the effect of reducing pollutant loads, making them dually useful for a community like Glenwood Springs.

Stormwater Management: Moving Forward

- Glenwood Springs does not have significant overbank flooding concerns, despite being situated at the confluence of the Roaring Fork and Colorado River. The area of the Confluence would require elevating development 1' above the 100 year AE Flood Zone.
- The City requires a 30' feet (or 50' depending on the situation) setback from the normal highwater mark of the rivers. This does not apply to public space projects.
- Management of stormwater is focused on water quality protection for the river waters. The City is currently exploring the development of regulations that would focus on pre-treatment of runoff to reduce pollutant discharge into service waters.
- Glenwood Springs has separate storm and sanitary sewer systems, preventing any combined sewer overflow concerns.
- In Colorado, scarcity of water means downstream water rights should be considered for all stormwater planning, and particularly for capture/reuse BMPs.
- Reuse BMPs should be designed to replace existing potable water use to reduce demand for those sources within the overall system.
- The City is interested in promoting riparian zone expansion for flood control and ecological habitat restoration for environmental quality.
- Mudslides during major storm events present a risk to perimeter areas of the City near steep slopes and gulches.



New streetscapes such as this one on Cooper Street, are well suited for the integration of stormwater pretreatment landscape systems and plantings.

TRANSPORTATION & CIRCULATION

OVERALL CONNECTIVITY CONTEXT

One of the overarching concept and concern expressed throughout all of the community engagement, from the general public to elected officials, is the notion that “connectivity” is critical to the ongoing success of Glenwood Springs. Through previous planning efforts as well as this effort to established an overall unified development strategy within the study area, a few key aspects are re-occurring themes:

The existing street grid of the City provides the basis for a sound transportation network. Creating a connected network of street and thoroughfares that extends the City’s existing street grid and block structure to and through redevelopment areas, including brownfield sites, can serve as a framework to link new development with surrounding neighborhoods and the overall transportation framework of the City.

Street and thoroughfare typologies have generally been established linking multi-modal transportation needs and urban design guidelines for the uses and buildings that front onto them. The City is advocating a “complete street” approach to the design of all streets and thoroughfares to provide the maximum opportunity of a balanced benefit to all modes. Ensuring that streets are constructed to include the appropriate number and limited widths of travel/parking lanes, bicycle and pedestrian facilities as well as supporting streetscaping and green infrastructure elements such as street trees, landscaping, street fixtures, flow-through stormwater planters, etc. will need to be incorporated into the redevelopment goals of this plan. The community clearly understands the relationship between great streets and great and vibrant places and those parameters must be deployed through appropriate redevelopment actions.

The completion of the Grand Avenue Bridge project is a potential game-changer in terms of re-thinking the circulation landscape. This project was years in the making and now that it is open to traffic and with its ultimate completion in June 2018, will its full impact just beginning to be determined.

There are strategic corridors and intersections within the study area that have been identified or need special design consideration. Improving key intersections along major streets and thoroughfare corridors into the study area and especially downtown ensures that maximum transportation connectivity (for all modes) is achieved along with mitigating future impacts to the transportation network as new developments are constructed. Again, the urban design quality of key transportation nodes can also promote the livability of the city as well as effective devices to promotes its brand. Project such as the Grand Avenue and Laurel Street roundabout to the 7th Street events street plans, illustrate how functionality can also achieve other social values.

The City is advocating for greater transit service and utilization. Therefore, transportation infrastructure planning includes strategic decision-making of multi-modal needs, including current and future transit services. Maximizing interconnectivity and providing transit supportive elements from transit center/nodes to transit shelters and stop locations, or at a minimum adequate space for future facilities is high on residents’ priorities. The community wants to see that full transit mobility is not precluded now or in the future. Reinforcing the potential for future transit service with support facilities, especially along Grand Avenue, 6th Street, and 8th Street further emphasize these corridors as key spines of the city and aid in attracting more users of all types and focus on short vehicular trip reduction. Transit can play an important role in placemaking as development occurs large areas of land will not need to be dedicated for surface parking.

Although the emphasis recently has been on the connectivity and capacity aspects of the downtown as a result of the Grand Avenue Bridge project, area-wide traffic safety and traffic calming strategies need to be considered for new and existing streets as they are (re)designed. While transportation efficiency is a goal, it should not be achieved at the cost of safety. Existing streets and thoroughfares should be carefully considered to determine the need to “calm” traffic to an appropriate speed. This is especially important at the intersection along the primary corridors of Grand Avenue, 6th Street, and 8th Street. Traffic calming devices such as curb bump-outs at corners and at mid-block crossings, chicanes, and traffic roundabouts should be considered as part of the palette of options to create a stronger sense of a balance environment between pedestrian, bicyclist, and motorists.

Pedestrian and bicycle trail connections should be constructed to provide dedicated interconnections between riverfronts, parks and commercial /neighborhood centers, tourism attractions, and the downtown. The City has been systematically building segments of trails and supporting pedestrian facilities to create what is now a fairly extensive network. The City’s original trail plan still functions as a valid guidance document, along with the various follow-up focused area plans that identify several critical missing connections. Providing multi-use paths along new streets and through parks, public spaces and interconnected stormwater management greenways provides the opportunity to create an armature for neighborhoods and commercial areas to connect, via adjacent sidewalks, bike lanes, and sharrows.

VEHICULAR CIRCULATION

The main routes through the study area include:

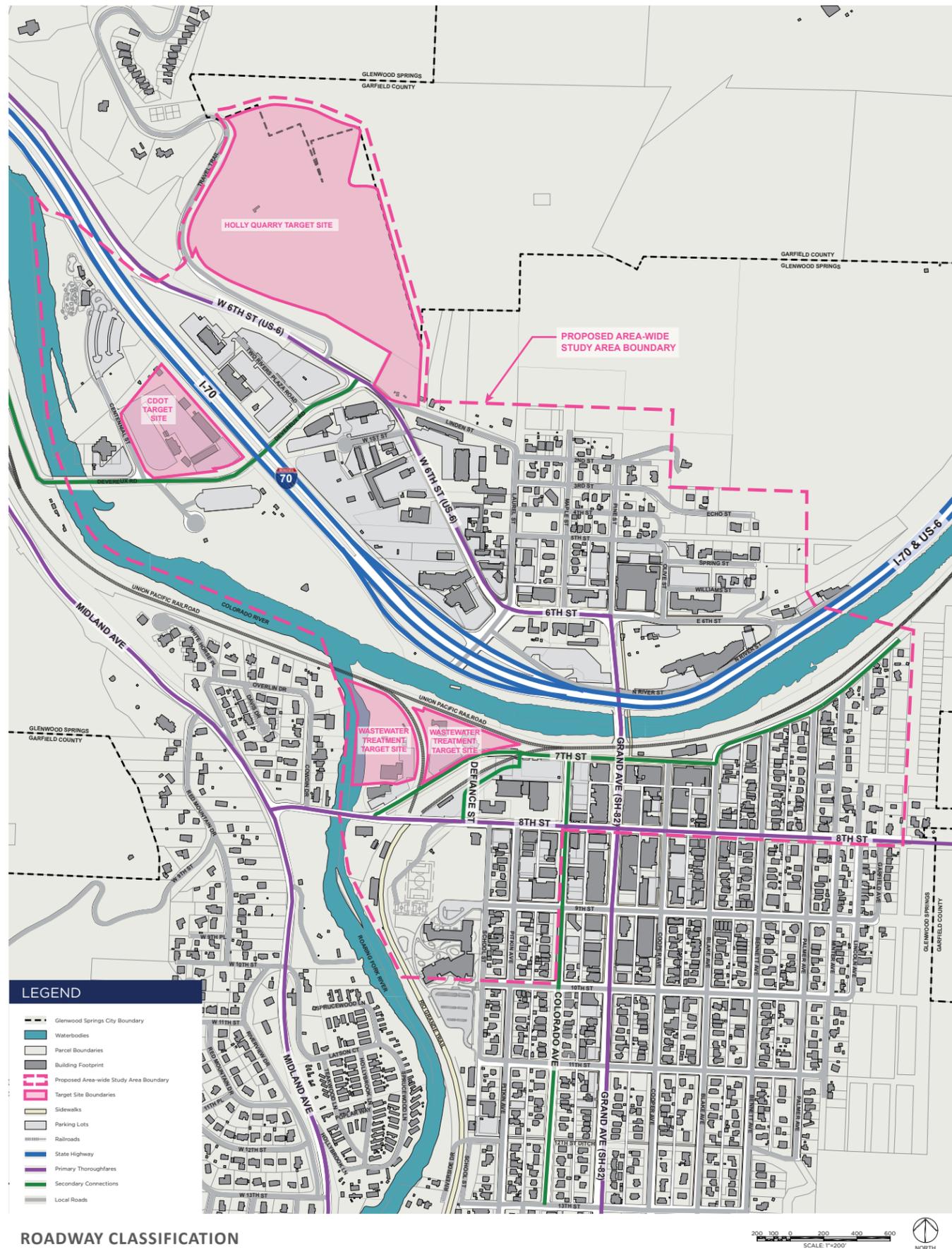
Primary Thoroughfares:

- Grand Avenue (SH 82)
- 6th Street (Laurel Street to Devereaux Road and west) (US Route 6)
- 8th Street
- Midland Avenue

Secondary Connections:

- Devereaux Road
- 6th Street (River Street to Laurel Street)
- 7th Street
- Colorado Avenue
- Defiance Avenue





ROADWAY CLASSIFICATION

Vehicular Circulation: Moving Forward

- The impacts of the Grand Avenue Bridge completion on traffic circulation patterns and the overall transportation system is still being determined. Evaluating travel patterns and vehicular behavior will be required to fully understand future needs. Traffic projections in the SH82 Corridor Optimization Study anticipate 47,900 vehicles per day (vpd) across the bridge by 2030 (versus 29,200 vpd prior to construction).
- West 6th Street from Laurel Street to Devereux Road is a critically important corridor as a multi-modal connection to expand the reach of downtown into the 6th Street west redevelopment area including towards the CDOT and Holly Quarry catalyst sites. West 6th Street currently suffers from a suburban approach with limited multi-modal amenities and long block lengths.
- Due to the dramatic reduction in traffic as a result of the Grand Avenue Bridge project, 6th Street east of Laurel Street is now a much lower trafficked street and is slated for “devolution” by CDOT which would allow the City greater flexibility in creating a complete street with a strong urban design and pedestrian presence connected to the pedestrian bridge to downtown.
- 8th Street has become a vital street connection between Grand Avenue and Midland Avenue. Although constructed to provide temporary connectivity during the Grand Avenue Bridge reconstruction period, it is now undergoing further design and engineering to make a permanent complete street connection. This entails addressing the issues associated with the RFTA rail corridor continuity as it crosses 8th Street.
- Previous planning efforts emphasize the desired to extend the street grid pattern into the Confluence Area to “mesh” future redevelopment into the established functional transportation and the visual development pattern of the downtown. Creating a full connection of Defiance Avenue aids in this endeavor by establishing a block structure along 8th Street and creating a direct connection between 7th and 8th Streets.
- 7th Street has been identified as a slow speed “events street” which acts as an east-west spine to convey people from the pedestrian bridge over the river to various destinations in the downtown. This is especially important as a spine that could be extended into the Confluence Area. It is important that a high-quality and continuous pedestrian realm be created along the entire stretch of 7th Street from Grand Avenue to the Roaring Fork River area, at least along the south side of the street.
- Per the legal agreement with RFTA, the 7th Street Connection must be maintained from Roaring Fork River Bridge to Colorado Avenue.
- The ability to create a connection between Devereux Road and Midland Avenue has been determined to be desirable since it would create greater connectivity across the Colorado River and establish a closer-in loop route to downtown. The City is current exploring, at a very conceptual level, the feasibility of bridge connection in this area. Elevation changes, railroad rights-of-way, the location of existing facilities including buildings and park elements, and the river, add complexity to the overall physical and financial feasibility considerations.

TRANSIT

ABOUT THE SYSTEM AND RIDERSHIP

Transit service is provided to Glenwood Springs by the Roaring Fork Transportation Authority (RFTA). RFTA is relatively young, but highly successfully rural transit system, dating back to the 1980s and being formed into its current structure since 2000. Having a reliable funding sources, in this case through a 2004 voter approved sales tax has resulted in the ability to provide high-quality and reliable service. According to the 2004 Local and Regional Travel Patterns Study, bus mode share in the SH82 corridor was about five to ten times what would normally be expected in a rural/small town region in the U.S. It was also two to three times the rate of major rail transit cities like the Portland- Salem Metropolitan Area.

RFTA is currently undergoing the creation of the regional Integrated Transportation Service Plan (ITSP) which when complete will comprehensively address the mobility issues, opportunities, and challenges that face RFTA and its constituents in the near and long term. The ITSP work performed so far affirms that the one of the two most heavy commuting route occurs between Parachute and Glenwood Springs emphasizing Glenwood Springs as a transit commuting hub within the region. RFTA is exploring the ability to provide improved feeder bus systems to and from Glenwood Springs and improve Park-and-Ride conditions along the I-70 and SH82 corridors. In 2017 RFTA estimates that it provided 5.27 million (est.) system-wide passenger trips.

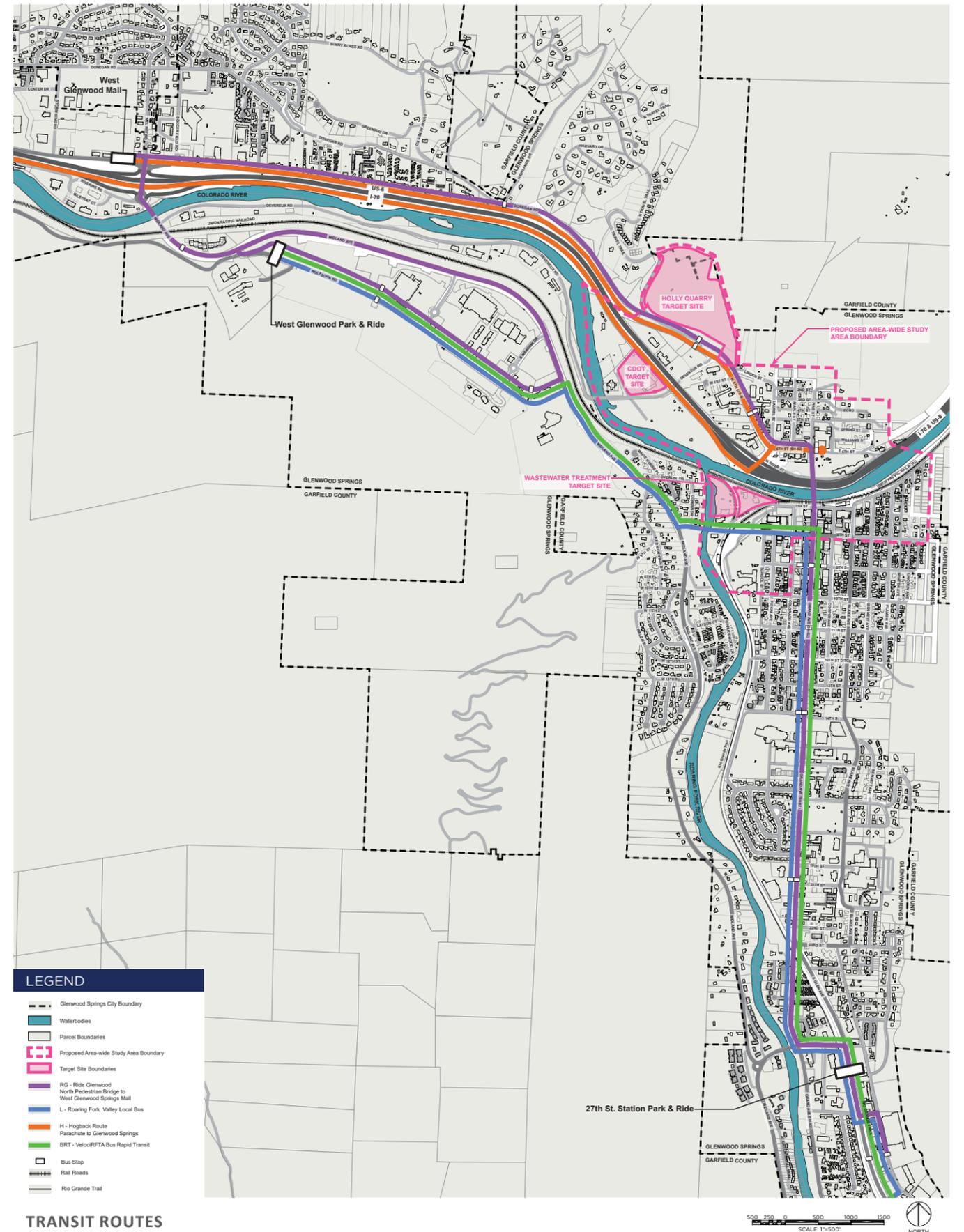


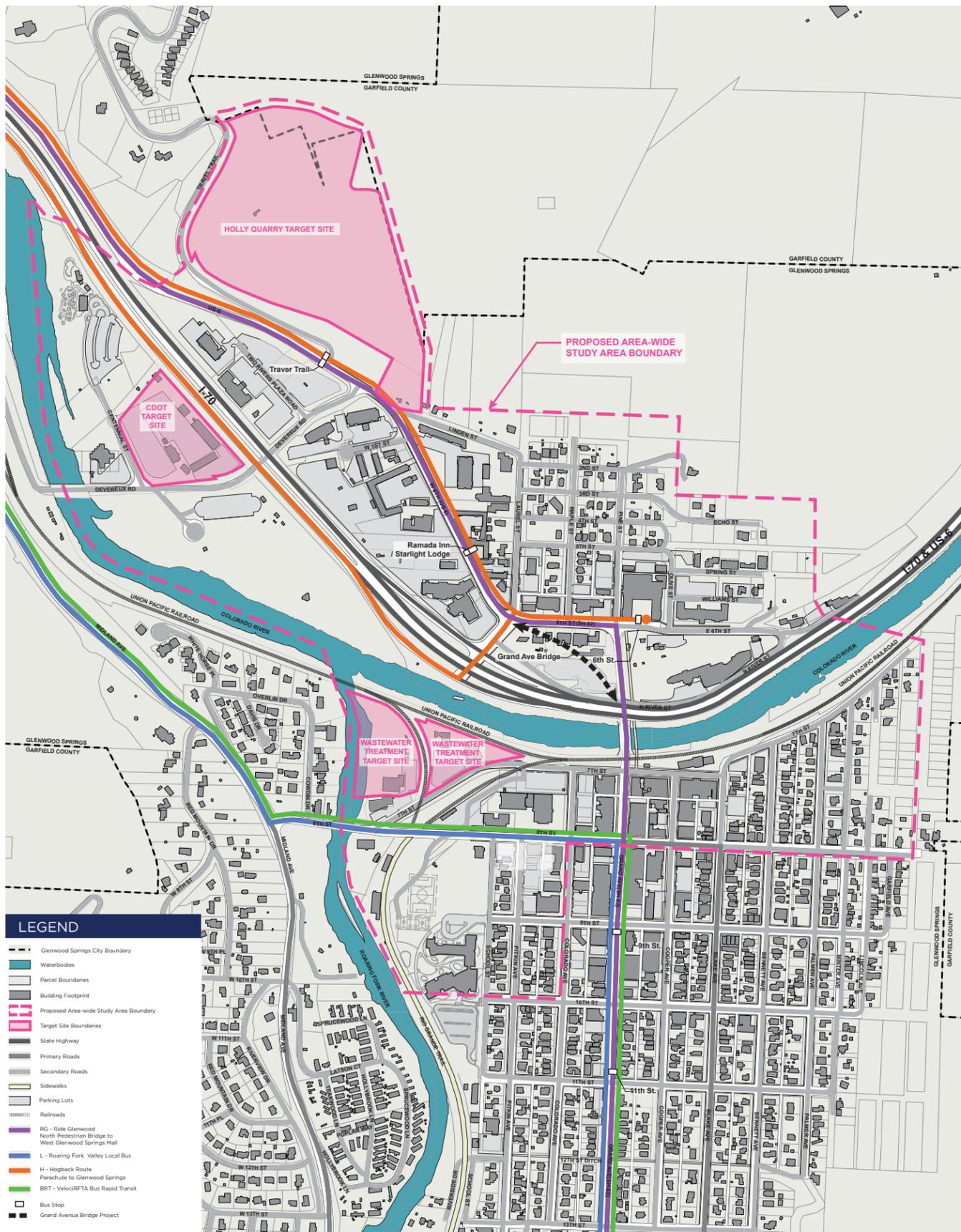
BUS ROUTES

The study area is served by multiple RFTA bus routes, most of which travel north along Grand Avenue and then turn onto 8th Street to reach Midland Avenue and travel to West Glenwood Springs. The Hogback Route originates in front of the Hotel Colorado and travels via 6th Street and I-70 to the west. This route it is supported by Garfield County and may be in jeopardy of losing funding. The City's funds the Ride Glenwood which serves downtown and the cities neighborhoods. The City contracts with RFTA to operate the service.

BUS RAPID TRANSIT (BRT)

On September 3, 2013, on time and on budget, RFTA began operation of the VelociRFTA BRT service, the nation's first rural BRT system. This was four years ahead of the 2017 goal established by the RFTA Board of Directors in 2006. VelociRFTA BRT operates along the 40-mile SH82 corridor from Glenwood Springs to Aspen, serving nine major BRT stations. Supported by transit signal priority in key locations and roughly 18 miles of bus-only or Bus/HOV lanes, BRT provides travel times that are competitive with the private automobile. The current BRT line terminates at the 24th Street station in Glenwood Springs.





TRANSIT ROUTES

RAIL CORRIDORS

Rail operations in the Roaring Fork Valley decreased in phases between the 1960s and the mid-1990s. In 1997, the Roaring Fork Railroad Holding Authority (RFRHA), a public entity created in 1994 by the towns and counties within the Roaring Fork Valley, purchased the Aspen Branch of the Denver & Rio Grande Western Railroad right-of-way (33.3 miles from Woody Creek to Glenwood Springs) from the Southern Pacific Transportation Company for \$8.5 million. The purchase was funded by a consortium of state and local interests, including the Counties of Garfield, the City of Glenwood Springs, other regional communities, the Colorado Department of Transportation, and the Great Outdoors Colorado Trust Fund (GOCO).

As discussed early, the Rio Grande Rail-Trail Corridor is primarily owned by RFTA and co-managed by regional partners, such as Pitkin County, Basalt, Eagle County, Carbondale, and Glenwood Springs. The Corridor has been preserved for trail use and future rail/transportation services pursuant to the federal rail banking provision of the National Trails System Act. Railbanking status protects the transportation corridor for future transportation/transit uses, thus limiting activities that might preclude re-introduction of rail or other mass transportation systems in the Roaring Fork Valley. Maintaining the continuity in conformance with federal rail banking provisions to the active Union Pacific railroad corridor at the Confluence Area is important for the protection of the overall corridor for future utilization.

Transit: Moving Forward

- RFTA is considering opportunities to extend BRT into the downtown and possibly to their facility in West Glenwood. This extension would necessitate a station stop in the downtown.
- RFTA has identified capitalizing on BRT station/park and ride ownership for public/private partnerships (P3s), including for potential transit-oriented development (TOD) projects which could be an effective approach to TOD redevelopment within the study area.
- The RFTA 5-year plan proposes to design and construct a transit center in the Glenwood Spring downtown area. Discussions with RFTA highlighted the potential of having a major transit center on one side of the river that is primarily an interchange of routes and a secondary transit “hub” that would serve as local TOD hub and a regional park-and-ride.



Amtrak Passenger Station on 7th Street

PARKING - EXISTING PARKING SUPPLY, POLICIES, AND ISSUES

The introduction of new uses and activities with the study area, of almost any kind, will likely generate some level of additional demand for parking. Achieving a perfect balance of parking supply that meets parking demand is goal that communities strive for, but rarely achieve with perfection. Adequately meeting parking needs is also a function of physical supply and effective policies, since needs are not uniform geographically nor over the course of a day, week, or time of year. In the end this study cannot tackle all aspects of parking within the study area or even downtown. It can, however, make recommendations that are consistent with the City's current parking strategies from its 2013 Downtown Parking Study Update (2013 Parking Study), as the related to the proposes end uses for the redevelopment areas that are the focus of this effort.

The 2013 Parking Study assessed current downtown parking supply and demand conditions, evaluated potential future parking needs, and recommended possible parking management strategies to maximize the use of available resources. In addition, to this study, the 2017 6th Street Corridor Plan and the 2017 Confluence Redevelopment Plan, both provide localized recommendations for parking as they related to the physical redevelopment recommendations. All of these recommendations are being considered in conjunction with additional observations derived during this study along with community comments on the topic as redevelopment opportunities are considered.

Parking data since 2002

		August 2012 Results (Walker)			September 2010 Results (Walker)		
Area	Type	Inventory	Peak Occupancy	Peak %	Inventory	Peak Occupancy	Peak %
South Area	Off-Street Public	207	144	70%	233	182	78%
	Off-Street Private	766	362	47%	699	388	56%
	On-Street	593	427	72%	563	343	61%
		1,566	933	60%	1,495	913	61%
North Area	Off-Street	1,690	803	48%	na	na	na
	On-Street	-	-	-	-	-	-
TOTALS		3,256	1,736	53%	1,495	913	61%

		October 2006 Results (LSC)			August 2002 Results (Task Force)		
Area	Type	Inventory	Peak Occupancy	Peak %	Inventory	Peak Occupancy	Peak %
South Area	All	1,167	617	53%	1,960	1,605	82%
North Area	(east of Maple only)	318	207	65%	na	na	na
TOTALS		1,485	824	55%	1,960	1,605	82%

Source: Walker Parking Consultants, 2013



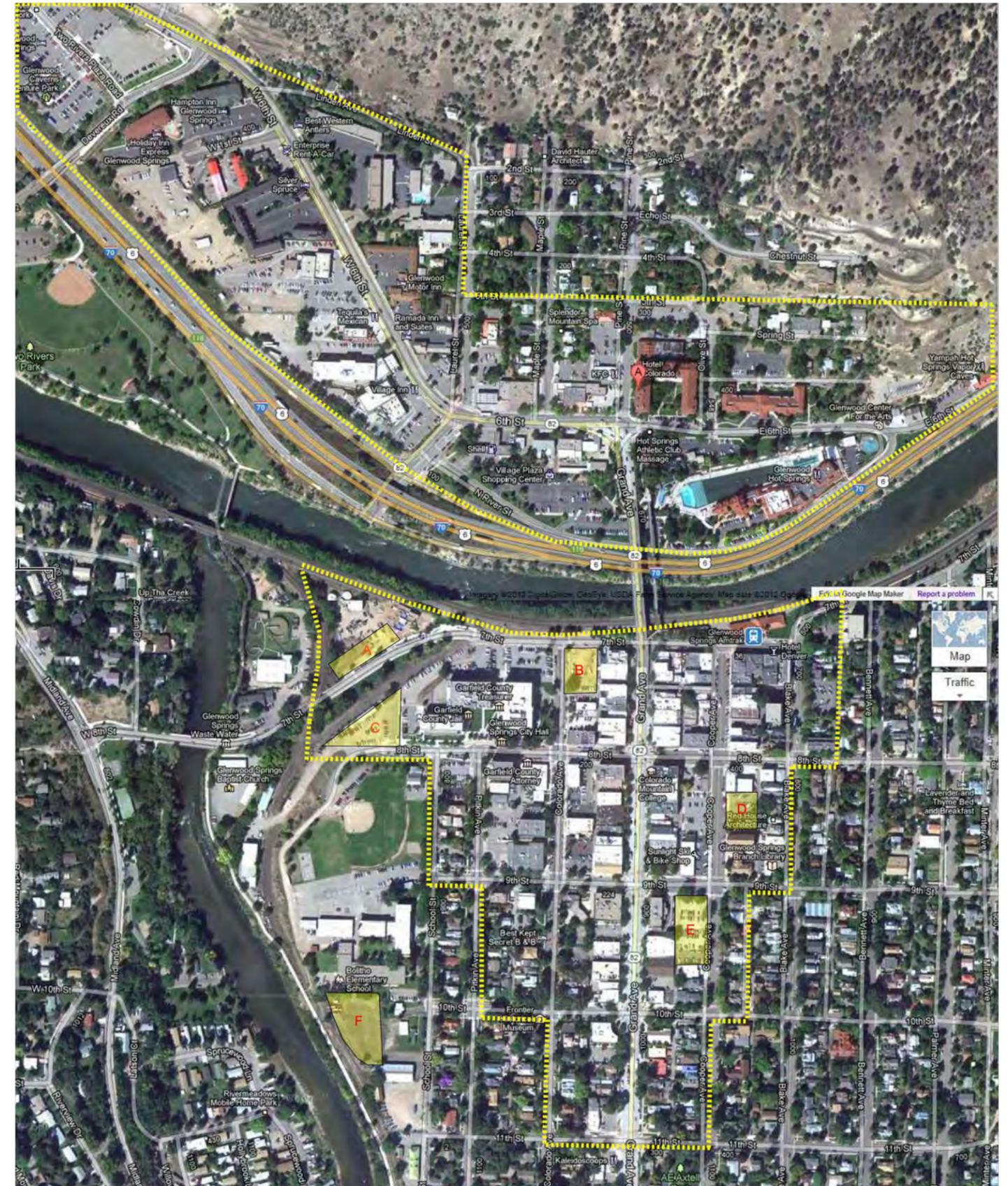
Off-street parking lot at Colorado and 7th Street



Parallel and diagonal on-street parking conditions on Cooper Street

Parking: Moving Forward

- Since the City's overall philosophy for the downtown and surrounding environs is to create a highly-walkable and multi-modal friendly place, there is a "Park Once" mantra being developed. The goal is to create a context where it is truly realistic to expect that visitors to downtown, if they arrive via automobile, will choose to park once and use other modes of travel to reach all of the desired downtown destinations. This mindset is proposed for any beyond what is currently thought of as the downtown, to include the Confluence Area on the south side and the entire area on the north side of the river, including the West 6th Street Area to at least Devereux Road. Based on the survey responses received as a result of work performed in late 2017 as a part of this study, most people stated that drove to downtown and parked on the street, so a successful parking system that relies more heavily on structured parking, will require a change in community mindset combined with the support facilities needed to make it both convenient and attractive.
- Although there may situations where the parking supply is limited, overall the 2013 Parking Study confirmed that there is currently sufficient supply to adequately address the needs of all user groups (employees, visitors, and residents), although some parkers may need to walk up to two blocks to find an available space in relation to their intended destination, at certain times.
- The CMC/library garage came online since the 2013 Parking Study, further expanded the parking supply in the downtown.
- There is no City-owned public parking facilities located on the north side of the river. The 2013 Parking Study and the 2017 6th Street Corridor Study both recommend exploring the development of a parking structure along W. 6th Street, potentially including a park and ride aspect with an adjoin transit facility. This areas is extremely convenient for access to and from I-70 and if it can be support with greater multi-modal improvements, it could serve as an excellent facility to promote a park once strategy. RFTA's current planning also support the potential for such a facility in this location.
- The introduction of denser forms of residential housing in the downtown will require a parking strategy to support these additional downtown dwellers. This could be a combination of on-site parking, ideally not on surface lots, and nearby neighborhood serving facilities in the form of structured parking. Depending on the location, the 2013 Parking Study determined that the current parking supply was adequate to support some additional parking demand, which could aid in getting shorter-phased infill development under construction, while longer-term parking facilities, such as structured parking, are constructed.
- The 2013 Parking Study recommended that the City consider the feasibility of a parking structure on the publicly-owned land at 7th and Colorado Streets that could support both the established downtown development along the Grand Avenue and the new development at the Confluence Area.
- The City utilizes some limited free parking for downtown visitors to support downtown business. The 2013 Parking Study makes a series of recommendations of how to gradually institute policies, including the fee structure, that maintains a visitor-friendly aspect to downtown parking, while creating a structure that support the ability to create a financially sustainable, structured parking system that also foster the best utilization of parking for its intended purposes, i.e. longer-term, employees versus visitor, etc. This includes promoting curbside turnover so that 20% of spaces are available and 80% are full most of the time.
- The current arrangement between the DDA, Downtown Partnership, and the City should be further evaluated to determine how policies and revenue streams can be established to achieve greater financial sustainability for long-term maintenance cost of expanding facilities.



Inventory of existing parking resources
Source: 2013 Downtown Parking Boundary Update, Walker Parking Consultants

BICYCLE/PEDESTRIAN CIRCULATION

Glenwood Springs has a vast network of multi-use, hiking, and biking trail networks including various trail conditions from narrow single tracks and steep mountain hikes to leisurely riverside walks due to its location, history, and geographic surroundings. Mountain ranges and elevation changes provide abundant options for alternative transportation and recreation opportunities for all users and skill levels.

MULTI-USE TRAILS

The Rio Grande Trail network is comprised of ten segments totaling over 42 consecutive miles between Glenwood Springs to Aspen, Colorado. This intercity trail network starts in Two Rivers Park in Glenwood Springs where the trail crosses over the Colorado River and is built within the rail corridor of the Denver and Rio Grande Western Railroad Aspen Branch. Trail operations along this line ceased in phases between the 1960s and the mid-1990's and was acquired with the help of Great Outdoors Colorado, the Colorado Department of Transportation, and Pitkin County Open Space and Trails to create an opportunity to explore transportation alternatives to State Highway 82. The first segment of the trail meanders along the Roaring Fork River utilizing the concrete-paved City of Glenwood Springs River Trail System down to 23rd Street where it changes to asphalt where it diverges and continues up the valley along South Glen Avenue (State Highway 82). This 6.9 mile segment ends at the Colorado Mountain College Park & Ride station passing through protected agricultural and open space lands along its route.

A number of spur trails exist along the Rio Grande Trail corridor and lead to services within the towns including restaurants which are great resources for the trail. These include ways into downtown on Devereux Road, 6th Street, 7th Street, 8th Street, 10th Street, and the greenway on 12th street. All of these spurs access various parts from the downtown to residential parts of Glenwood Springs and offer a wide range of alternative transportation options.

This extensive trail network also connects the major parks within Glenwood Springs and the study area including Veltus Park, Vogelaar Park, and Two Rivers Park which provide users a wide range of other recreational activities.

BICYCLE TRANSPORTATION

There are several opportunities for bicycle transportation within Glenwood Springs. Paved trails are available along the Colorado and Roaring Fork Rivers offering users access to scenery along smooth surfaces with minor elevation changes. The three main trails are the Atkinson Trail, Glenwood Canyon Recreation Trail, and the Rio Grande Trail. These make up roughly 26 miles of paved trails within Glenwood Springs. There are also plenty of off road rides that climb into the mountains above Glenwood Springs.

Many bike shops within Glenwood Springs offer bicycle rentals for all ages abilities providing an excellent way to promote alternative transportation networks.

HIKING/MOUNTAIN BIKING

Prominent hiking and mountain biking areas can be found all over the state but Glenwood Springs prides itself in its trail network on either side of the Colorado and Roaring Fork Rivers. One of the more active hiking and mountain biking areas are within the Wulfsohn Mountain Park Areas west of downtown and located adjacent to the Glenwood Springs Community Center and Glenwood Meadows Shopping Center. Many of the trails are combined offering the same usage on diverse terrain, single-track style of trail not only for mountain bikers but for runners and hikers alike. There are several trail routes in this area alone that make up more than 7 miles of combined single-track trail network ranging from an easy network to intermediate/difficult levels. These individual trails can be combined to create longer loops for extended lengths by the individual user.

Many of the hiking and mountain biking trails within Glenwood Springs are rated in the top 1,000 in Colorado according to the MTB Project, a crowd-sourced trail guide and mapping resource built by outdoor enthusiasts. This alone is a great resource for Glenwood Springs to be able to cater to the diverse activities Colorado has to offer in Glenwood Springs.

There are other opportunities for hikers in the area including trails following several tributary streams that feed into the Colorado and Roaring Fork Rivers, as well as trails to the Glenwood Canyon and other vantage points encompassing over 130 miles of trail network.

PEDESTRIAN CIRCULATION

Glenwood Springs provides a very robust pedestrian network through wide sidewalks and corridors within downtown including access to restaurants, natural hot springs, and vantage points of the Colorado River along Grand Avenue.

Bicycle & Pedestrian Circulation: Moving Forward

- The City has been following an overall schematic trails plan that dates back to the 1980s; however, this plan has served the City well in terms of incrementally building a truly interconnected trail system.
- 7th Street pedestrian connections between Grand Avenue and the Confluence Area will be especially important to achieve greater connectivity and to ensure that redevelopment is truly linked to downtown.
- Trail connections underway between Two Rivers Park that travel under I-70 and link to the North Glenwood will greatly enhance the trail loop network in this area.
- The 6th Street Plan proposes a new trail connection over I-70 from Two Rivers Park and the West 6th Street Area. This connection would provide a very direct and valuable connection to the park, especially if structured parking and mixed-use development occur. Parking is especially needed to support large events in the Glenwood Springs signature public riverfront park.
- Pedestrian and bicycle connections along Devereux Road need to be improved. They are circuitous and have missing gaps making it especially difficult to connect key destinations in this area.
- The ability to create opportunities for trail connections to the upper areas of the Holly Quarry from 6th Street and Devereux Road will provide greater opportunities to link redevelopment on the quarry site with the downtown.
- If a bridge connection can be created between Devereux Road and Midland Avenue, it would provide a larger loop network and greatly increase the accessibility of the Community Center into the overall park and trail system along the two rivers, especially at Two Rivers Park.
- Promoting an overall bicycle friendly environment through small scale improvements such as places for bicycle parking in the downtown and redevelopment areas is important to continue to foster a biking culture in the City.

PARKS, PUBLIC SPACES, AND RECREATION FACILITIES

Existing or previously planned parks and public spaces within the study are functioning in one of two primary capacities. They are either major city and regional destination-oriented places, such as Two Rivers Park, or they are more intimately scaled areas that still function in a similar fashion, even if they also provide a day-to-day function for their surrounding context. In all cases they are different from neighborhood parks that primarily serve a residential audience

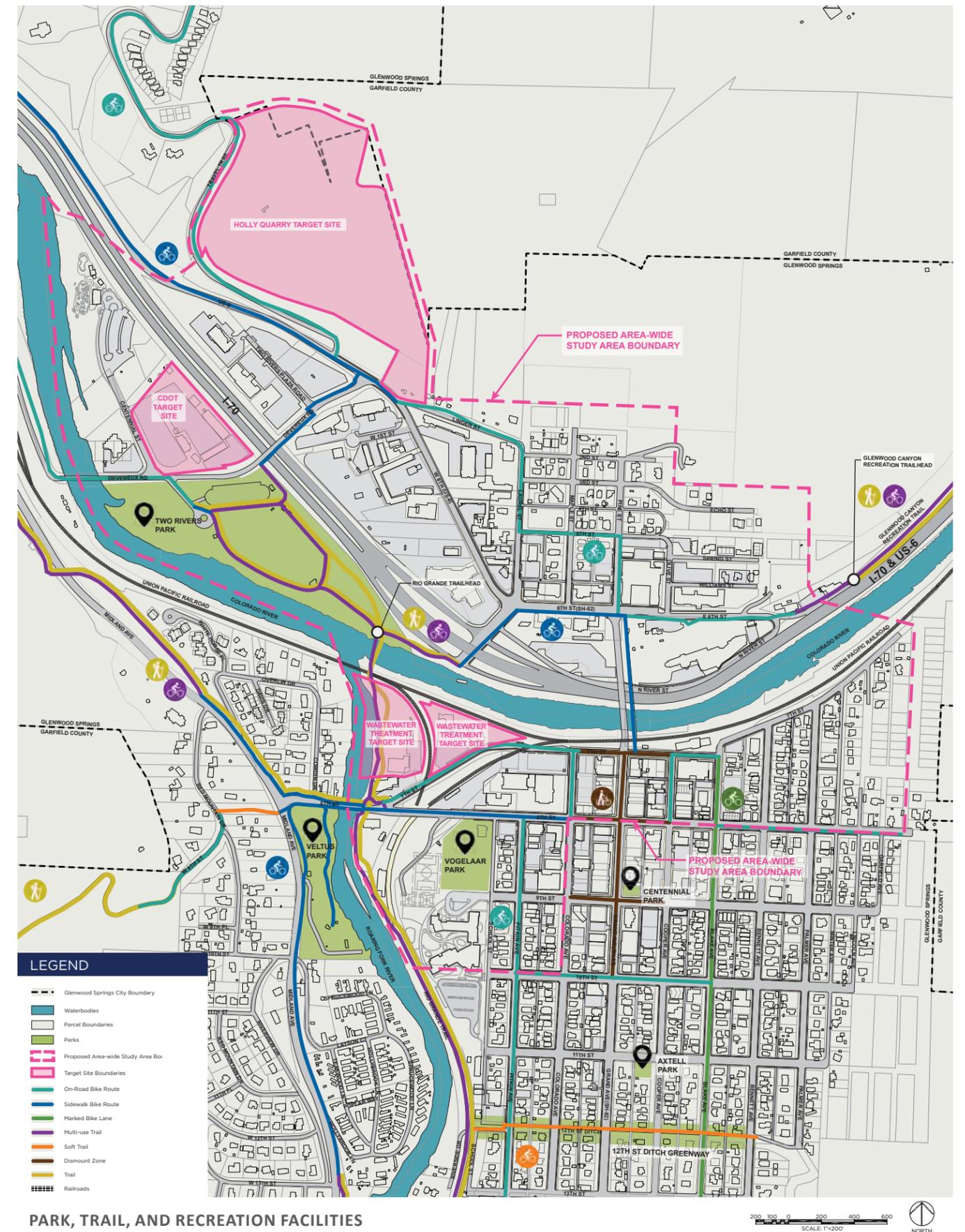
For a city the size of Glenwood Springs, the City's Parks and Recreation Department provides an incredibly diverse and extremely high-caliber level of recreational opportunities for residents and visitors. A key aspect of the City's approach to providing parks and recreation services as the notion that the parks can serve multiple purposes and are not only a public service but also economic development resource. As the Department's Vision Statement states, "...We take Fun... Seriously!"

Based on the City's 2016 Parks and Recreation Master Plan Update there are several trends, projections, and findings that have specific relevance to the study area:

- The population growth projections through 2021 is a very modest 1%. This growth of approximately 485 people could primarily occur within the study area.
- The City's population is relatively young with nearly 64% of the population under the age of 45 years.
- Convenient access to parks and recreation facilities is extremely important to the City's population.
- Public water access, venues for events, trail connectivity, and high-quality facilities are community priorities.

Park, Public Spaces, and Recreational Facilities: Moving Forward

- Two Rivers Park is located in the center of the study area and serves as the City's premiere park. It provides significant Colorado River frontage and access. It is the venue for many of the City's largest events. The Parks and Recreation Department is currently undergoing design of significant improvements to the park, especially focused on enhancing the utilization potential and quality of experience of the parks riverfront edge.
- The City is in need of more and upgraded play areas for children all age groups. As new residents are added in and around the downtown, opportunities for quality inter-generational play are important to serve those population.
- The potential exists to link venues for events such as music festivals that support Two Rivers Park as the primary venue and expands the City's overall ability to host larger events. In many respects, with good pedestrian and bicycle trail connections between them, all of the parks within the study area could be thought of as one functional park or at least inter-connected extensions of each other. This would provide the greatest leverage benefit and make the overall value of the parks greater than the sum of the parts.
- Indoor Ice hockey and soccer are important generators of visitation in the shoulder seasons. The four seasons aspect of parks and public spaces is an important consideration of their design and full utilization.
- The City's is currently advocating a policy of "parks and development" as way to leverage to the two, on City-owned land identified for economic development activities. This approach includes an application for the Vogelaar Park/ Confluence Area and the Landing on E. 6th Street, among others.
- The creation of an enlarge park space at the Confluence Area could be a hybrid of public and privately-owned public spaces, with the band of river's edge remaining in City's ownership. Potential programmatic opportunities for this area include pavilions, level lawn areas for gatherings, seating elements, a beach, pier to tie up boats, adult swings, site-inspired play area, and season recreational elements. Environmental habitat educational play areas are especially desired.
- 7th Street is envisioned as an "events street" which blends aspects of transportation connectivity and function with the ability to support events and social activities in one overlapping facility. The first and most intense phase of this approach is focused on the area underneath the Grand Avenue Bridge to Cooper Avenue.
- As the West 6th Street Area redevelops in a more compact mixed-use form, there will be a need to provide public space to serve potential residents and businesses, especially tourism and entertainment related uses within this area. This area can also serve a vital role in supporting Two Rivers Park, especially if trail connections can be created and enhanced over I-70.
- There are several missing link trail connections that are desired, especially in the Devereux Road and Centennial Street/ W. 6th Street area.
- The possibility of creating additional river edge access is always desirable. This includes along the City's narrow strip of land located along the south side of Colorado River, just east of the Confluence of the Roaring Fork River. This would represent a special opportunity to have public presence on both side of the river in the same location.
- Operation and management of public spaces, including more urban spaces than what the City has traditional owned and operated, will be under the purview of the Parks and Recreation Department. Specialized maintenance may require outside contractor maintenance.



UTILITIES

ELECTRICAL AND TELECOMMUNICATIONS

The electrical and telecom utilities within the City of Glenwood Springs are primarily situated on above-ground infrastructure throughout the city. There are challenges related to electrical and other transmission services in a mountainous region such as Glenwood Springs as routes for transmission lines are limited to mountain passes, where things like mudslides and debris flows pose a risk to service.

Within the City, there have been recent indications that upgrades to the broadband internet service are desired. The City would like to expand access to fiberoptic technology but are limited right now by costs and regulatory hurdles with the state.

There is growing interest in expanding access to broadband internet service. The City would like to expand access to fiberoptic technology to homeowners and residential buildings. At the present time that effort is challenged by costs and by regulatory hurdles with the state.

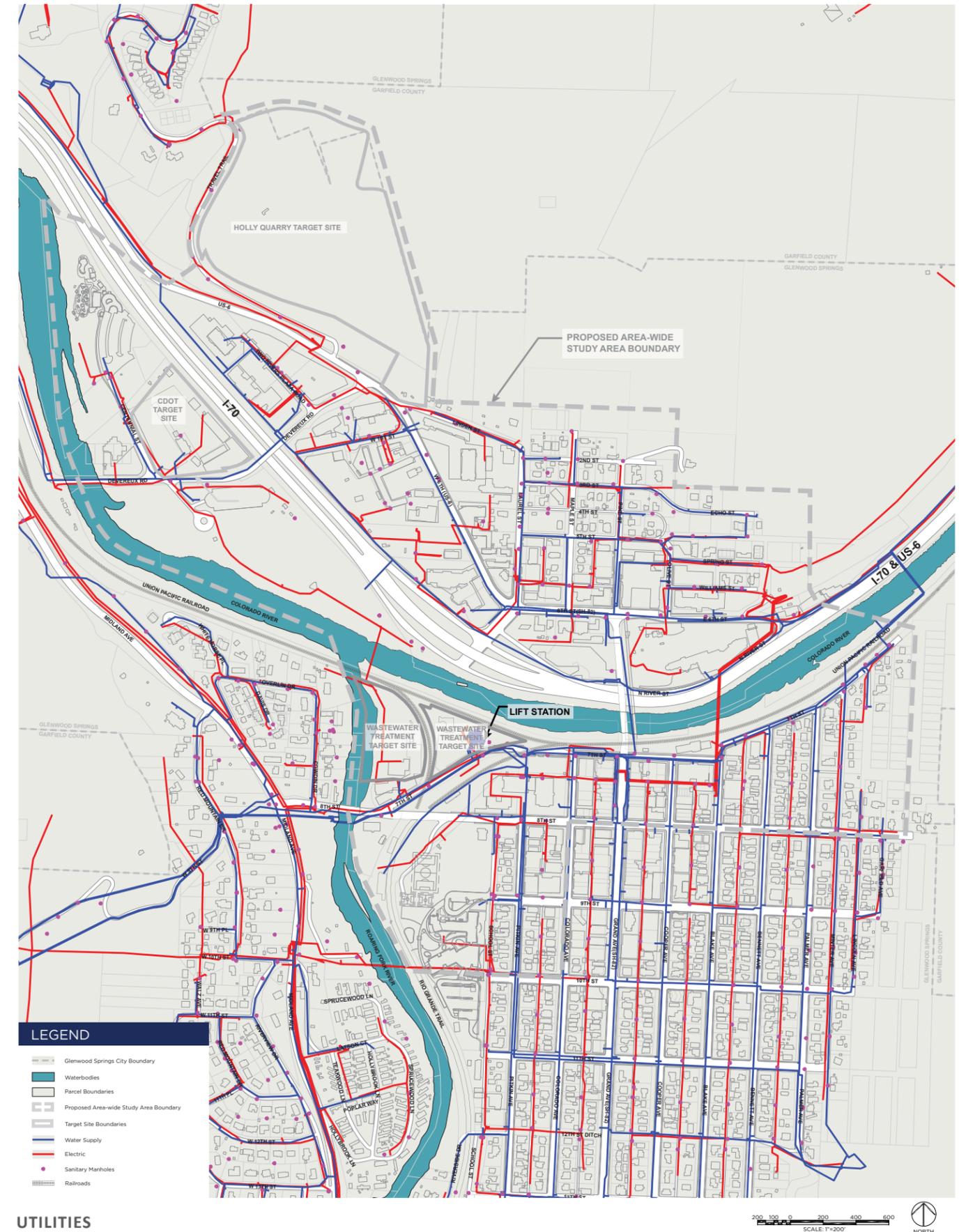
WATER SUPPLY

Potable water supply in the Upper Colorado River watershed has limits due to the climate in the area. Water rights for each city are strictly monitored.

Within the downtown area there are a few concerns centered around water supply lines. At the City pump station, which provides water pressure for much of the city, there are concerns because it is only connected to the network via one pipe. This lack of redundancy puts the City at risk for failures that could leave residents without water.

SANITARY SEWER

The sanitary sewer system for the City has seen a major recent upgrade with the commissioning of the new wastewater treatment plant in 2012. This new plant has allowed for the abandonment of the former treatment plant which was located at the confluence of the Roaring Fork and Colorado Rivers and is now a target for redevelopment.



Business Development Opportunities in Glenwood Springs, CO

Real Estate Opportunities and Market Performance

July 2018

Prepared for:



City of Glenwood Springs, Colorado

Prepared By:





Development Research Partners specializes in economic research and analysis for local and state government and private sector businesses. Founded in 1994, Development Research Partners combines extensive experience in real estate economics and economic development to provide clients with insightful and strategic consulting services in four areas of expertise:

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PURPOSE

This study has been prepared in collaboration with Stromberg/Garrigan & Associates and is part of the overall Brownfields Area-Wide Plan (AWP) being completed by Stromberg/Garrigan & Associates under a USEPA Brownfields Grant to the City of Glenwood Springs. A high-level market analysis in the overall study area is conducted to evaluate three market sectors: (1) housing; (2) commercial (specifically, retail goods and household services); and (3) lodging for business growth and real estate development opportunities. This analysis is intended to assess real estate demand and absorption for each market sector. Findings are then analyzed to assess opportunities in the AWP boundaries with particular focus on the highest priority site, the "Confluence" site where the Roaring Fork River joins the Colorado River.

METHODOLOGY

Developing this high-level market analysis entailed:

- Researching current baseline market conditions;
- Identifying market drivers;
- Measuring market demand and supply, including current unmet demand; and
- Estimating future market trends and identifying opportunities for retail, commercial, lodging, and residential development.

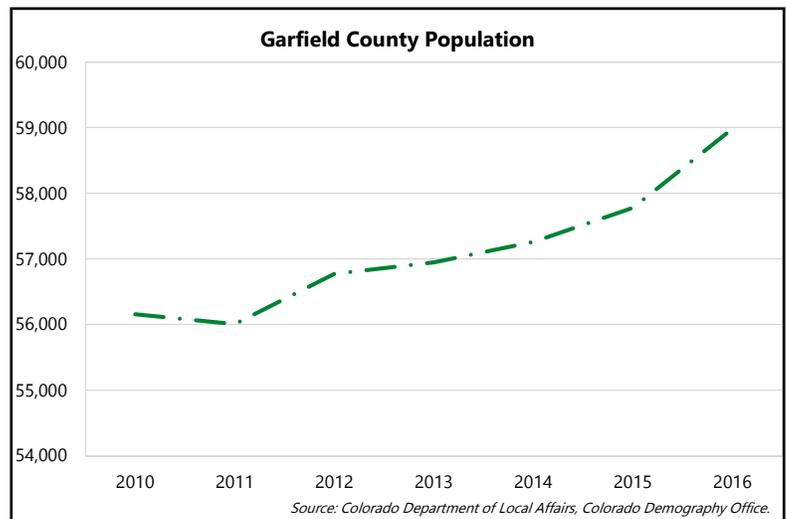
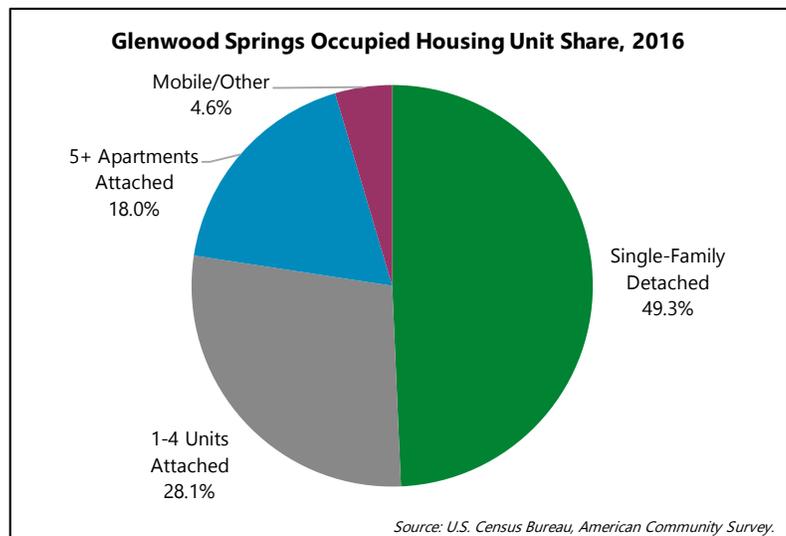
HOUSING MARKET CONTEXT

The City of Glenwood Springs is the largest population center in Garfield County and is located at the crossroads of Interstate 70 and CO Highway 82, providing access to Aspen and U.S. Highway 24. Garfield County population is anticipated to grow by about 5% to 6% annually, representing approximately 500 more households and 1,200 additional persons per year. Glenwood Springs is anticipated to capture around 70 to 100 households per year, although pent up demand may drive much more in-migration in the short term. Total population growth in Glenwood Springs is anticipated to be sourced equally by natural increase and net-migration.

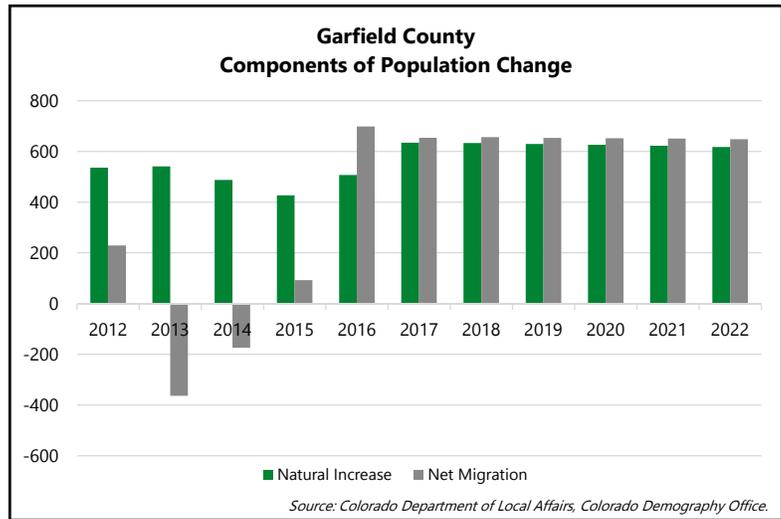
Glenwood Springs' housing vacancy has been below 4% since 2014 and below 3% since 2015. Detached single-family housing has seen a steady price increase and virtually zero vacancy. Attached ownership housing has seen steady demand with rising prices and low vacancy. Similarly, multi-family rentals have also been experiencing rising rental rates and low vacancy.

This indicates not only a residential undersupply, but pent up demand for new units. Housing demand by residents is augmented by demand from second-home owners and those seeking vacation rent-by-owner investment opportunities. The Glenwood Springs housing market is experiencing strong demand in all property types and, with continued population growth, is expected to support new resident housing development into the foreseeable future.

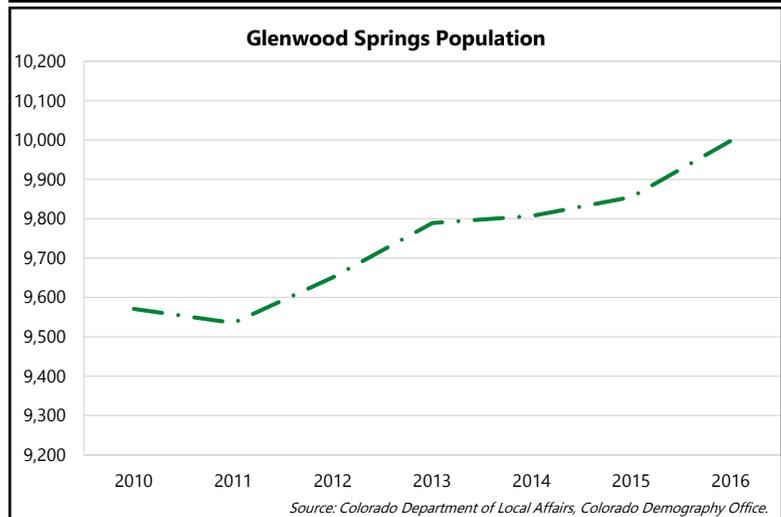
Population change is comprised of natural increase (births minus deaths) plus net migration (people moving in less people moving out). From 2010 (post Great Recession) to 2016, Garfield County has grown by almost 3,000 people. That represents an annual growth rate of about 0.8%, or 470 persons per year.



Population growth is anticipated to increase to about 1,200 persons per year into the foreseeable future. As can be seen in the chart, natural increase has remained positive, floating between about 400 and 600 persons annually. Net migration dipped in the 2012 through 2014 period as oil and gas markets become volatile and people followed jobs leaving the County. The oil and gas industry stabilized since, followed by relatively high levels of in-migration, which exceeded natural growth in 2016. According to State Demography projections, in-migration and natural increase are expected to continue at about the same levels into the future.



Glenwood Springs is the largest municipality in Garfield County with 17% of the County's population. Assuming that Glenwood Springs continues to capture about 17% of the County's population, it can be estimated that Glenwood Springs will grow by about 200 to 250 persons annually.



However, Glenwood Springs' housing inventory is greatly constrained with extremely low vacancy and waiting lists of tenants and buyers. The projected growth rate is at risk due to a lack of housing units to accommodate new households. The tight housing market puts upward pressure on rental rates and leads housing developers to focus on higher profit and more expensive housing units and less on affordable work force housing. Housing market conditions in 2016 persisted throughout 2017.

Glenwood Springs Housing Market, 2016

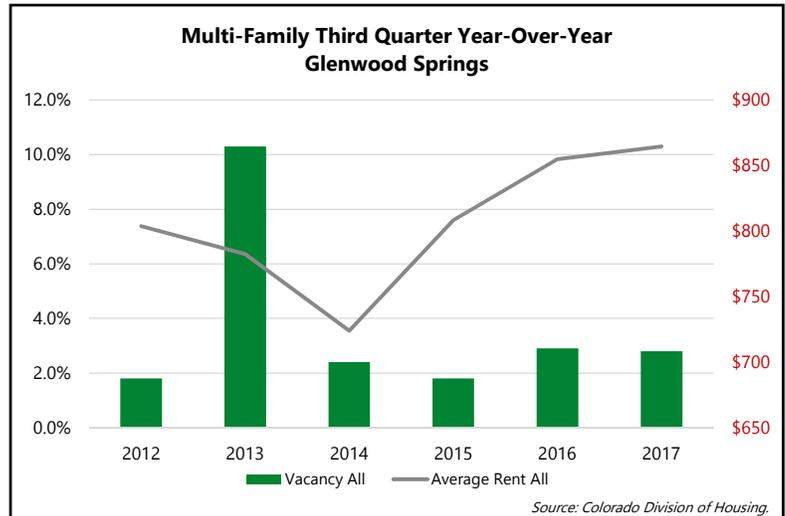
Total Housing Units	4,171
Persons Per Household	2.5
Homeowner Vacancy Rate	0.0%
Rental Vacancy Rate	2.3%

Sources: U.S. Census Bureau, American Community Survey; Colorado Department of Local Affairs, Colorado Demography Office.

MULTI-FAMILY RENTAL MARKET

Glenwood Springs' multi-family rental housing market is experiencing low vacancy and rising rental rates and is considered a landlord's market where renters have little room to negotiate lower rates. There is an undersupply particularly of studio, 1-bedroom, and two-bedroom units that would meet the demands of singles, couples, young families, and roommates. The higher vacancy rate noted for 2-bed/2-bath units is an anomaly and can reflect an important price point change and/or a temporary condition at this particular point in time.

A vacancy of 4%-5% is considered full occupancy and at equilibrium, considering normal tenant churn. The below equilibrium average vacancy indicates a tight rental market with rental rates being bid up without a matching increase in construction.



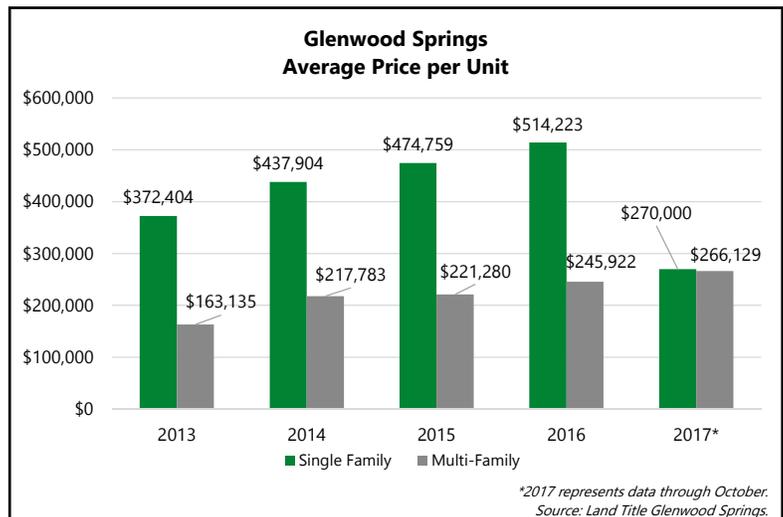
Type	Average Rent	Avg Rent/SF	Vacancy Rate
Efficiency	\$675	\$1.23	0.0%
1-bed	\$783	\$1.26	0.0%
2-bed 1-bath	\$807	\$0.84	0.0%
2-bed 2-bath	\$857	\$0.93	6.1%
3-bed	\$935	\$0.91	2.0%
All	\$864	\$0.95	2.8%

Source: Colorado Division of Housing

HOME OWNERSHIP MARKET

The ownership market is similarly tight and increasingly becoming unaffordable for many would-be Glenwood Springs residents. Condominium and townhome prices (collectively referred to as multi-family) are edging upward at a steady pace. The local economy softened in 2014, began stabilizing in 2015, with recovery in 2016. The most recent trends between 2016 and 2017 illustrate the most likely scenario for attached multi-family housing prices. Prices rose over 20% between 2015 and 2017, and over 8% from 2016 to 2017. A price increase between 5% and 10% annually is anticipated for multi-family units in Glenwood Springs in the near term.

The single-family home market has little available inventory. Relatively low inventory on the market along with few sales causes this market statistic to reflect particular units sold rather than overall market pricing. However, the fact that there is little inventory along with an expected increase in population supports the assumption that single-family home prices will continue to increase without a notable increase in construction.



HOUSING UNIT DEMAND

As previously noted, Garfield County is expected to grow by more than 1,200 persons annually. Assuming that Glenwood Springs continues to capture about 17% of the County’s population, it can be assumed that Glenwood Springs will grow by about 200 to 250 persons annually. Assuming a continued 2.5 persons per household, including related and unrelated household members, this translates into demand for 80 to 100 units annually. Pent up demand is expected to bring absorption 25% to 50% higher than the average demand in a normalized market. Glenwood Springs could absorb an estimated 120 residential units annually for the next five years, and then settle into about 80 units annually in the long-term.

It is difficult to project where new households will actually locate, except to note that they can only go wherever there are units available. Currently, housing choices are very limited and it can be assumed that new households equal demand for new units. Generally, the market expects a 12-month lease-up for a 50-unit phase; 12 to 24 months lease up for a 100-unit phase. There are at least 100 units currently under development in the Meadows targeted to higher-income households; however, there is notable demand for mid-price and workforce-affordable units.

Projected Residential Absorption in Glenwood Springs (units)

Time Period	Years 1 to 5	Years 6+ (annually)
Phase	Housing demand from natural increase, in-migration, and pent up demand.	Expected pace for housing demand due to annual population demand growth.
Total Housing Demand	600 Total Units 120 Units Annually	80 Units Annually

COMMERCIAL MARKET CONTEXT

The City of Glenwood Springs serves as a commercial and retail hub for Garfield and Eagle Counties. As such, the City commands market power in identity and regional location and has opportunities to grow:

- businesses and add square feet for business categories where consumer dollars are leaving the region,
- the entire market through population growth and increased destination tourism, and
- businesses through diversifying goods and services available.

Glenwood Springs is a lifestyle and tourist destination for experience seekers. Businesses that provide shopping, recreational, and entertainment experiences will complement Glenwood Springs' character. Identifying opportunities for retail and commercial services desirable to both residents and visitors is evaluated herein.

Glenwood Springs has various commercial and retail submarkets that are generally located as indicated on the image below:

1. 6th Street Corridor
2. Meadows
3. West 6th Street
4. Downtown
5. South Glenwood
6. Confluence



The Confluence site is strategically located between the Downtown and Meadows submarkets, with easy access to/from the 6th Street Corridor. Lease rates and property sales prices vary widely depending on location and quality. A survey was conducted to better ascertain assumptions regarding lease rates in Glenwood Springs.

Commercial Lease Rates

Asking rents can often be higher than signed leases and data was collected on both asking lease rates as well as recently signed leases, where available. Rent quotes varied by condition and space configuration but there appears to be no distinction in rental rates for office versus retail spaces. The exception is in the Meadows, which is home to national retailers and a "power center." Based on this high-level survey, it is estimated that the Confluence can achieve a \$20 to \$25 gross rental rate for commercial space. The rental rate is likely to be at the lower end during the early lease-up as a pioneering location. The summary results are illustrated below:

Commercial Lease Rate Summary*

Submarket	Asking Rental Rates	Actual Rental Rates
Downtown	\$20 to \$26	\$20 to \$25
Meadows	--	\$27
South Glenwood	\$16 to \$20	\$14

* reported on a "gross" rent basis which includes property expenses; total occupancy cost to tenant

Sources: Development Research Partners, Inc.; LoopNet, local brokerage listings.

Commercial Property Values

A survey of commercial property sales was conducted. There were several properties asking less than \$150 per square foot. However, these properties were under seller duress (i.e. bankruptcy) and priced for quick liquidation or were special purpose buildings with limited buyers. Asking prices for commercial property in the South Glenwood submarket ranged from about \$105 to \$400 per square foot; rather ambiguous, and very location and property condition dependent. Generally, Downtown building sales ranged from about \$205 to \$315 per square foot.

Commercial property prices for the Confluence area are estimated at \$225 to \$275 per square feet.

Commercial Land Values

A high-level land price analysis was conducted using a combination of actual sales and Garfield County Assessor's actual value estimates for Downtown parcels. The data shows an expected premium for smaller sites per square foot with prices ranging from about \$4.50 for a 10-acre parcel to \$94 for a 0.09-acre city lot. The predominant value range for land in the vicinity of the Confluence ranged from about \$20 per square foot to \$50 per square foot depending on location.

It is estimated that vacant land at the Confluence would be priced around \$30 per square foot.

BUSINESS GROWTH DEMAND

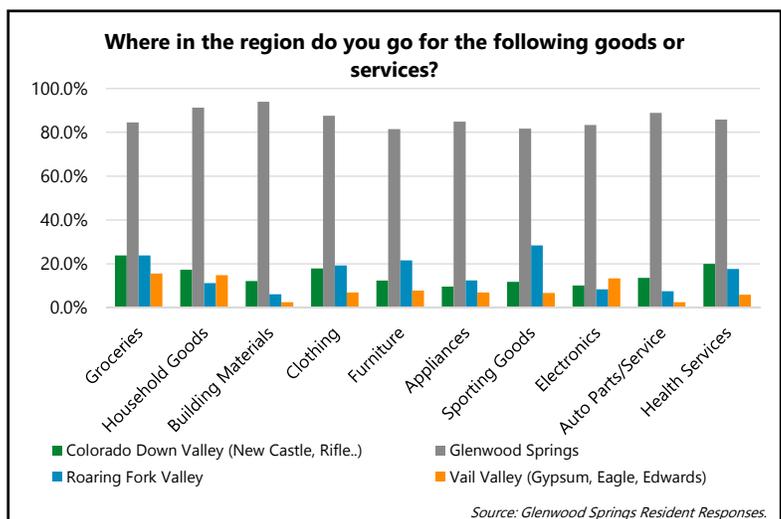
In this section, sources for retail and household services demand are evaluated and business development opportunities are translated into demand for real estate space. Real estate types evaluated include storefront retail and office businesses.

Retail Market Opportunities

Data related to retail market opportunities was gathered in several ways ranging from anecdotal to quantitative, which are reported and integrated in the following sections.

Glenwood Springs Local Market Community Survey

A community survey was conducted by the AWP team. Glenwood Springs' residents were asked where in the region they shop for certain goods. The chart below highlights the results. Categories sum to more than 100% because residents shop in multiple places. The responses indicate Glenwood Springs' residents will tend to shop local as availability allows. However, these responses also reflect that retail dollars leave Glenwood Springs. After Glenwood Springs, local consumers tend to shop in the Roaring Fork Valley and Down Valley, with some spending also occurring in Vail Valley.



Another, contrasting survey question asked residents about how well served Glenwood Springs is in retail categories. This question invited open-ended responses, which intuitively frames the City's retail market.

Community Survey Responses: Needed Goods & Services

From Specific ...

- "Sporting Goods, electronics..."
- "Fabric, sewing supplies..."
- "Movie theater"
- "Movies, Bowling"
- "Pottery classes for kids..."
- "Clothing, household items, health services..."
- "Sporting goods (baseball, basketball, golf, etc.)"
- " ... there are no clothing, electronics in GWS!"
- " ... more craft supplies"

To Universal ...

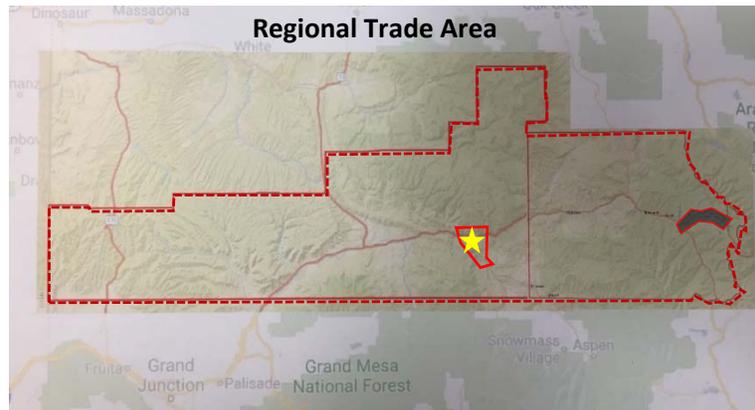
- "We have all of this but not enough variety and price point"
- "More restaurants and coffee shops Downtown and on the 6th Street Corridor, more open spaces used for community events like farmers markets"
- "Movie theatre, co-working space, art/creative classes, upscale bars, dance clubs"

The survey responses point to some very specific goods, services, and experiences that anecdotally are absent. Perhaps the most significant response is *"We have all of this but not enough variety and price point."* With population expected to increase in the coming years, there is an opportunity to grow new businesses offering more diversified and competing products and experiential offerings.

Retail Capture – Leakage Analysis

Consumer demand in Glenwood Springs arises from sources including local residents, regional residents, and visitors. For this analysis, a market Regional Trade Area was identified based primarily on mutually shared retail markets, where resident consumers freely travel back and forth between towns or other shopping destinations. Towns within the market area that primarily generate one directional consumer traffic are considered outside of the Regional Trade Area with their purchases representing part of overall visitor spending. The market is defined:

- Regional Trade Area is Garfield County plus Eagle County, less Aspen and Vail
- Local Market is Glenwood Springs only
- Visitors are consumers from outside the Local Market and Regional Trade Area that spend money in the Local Market and Regional Trade Area



Local residents and regional shoppers seek both necessities and lifestyle-oriented discretionary purchases. Visitors spending can arise from overnight tourists, pass-by convenience stops, emergency stops, or destination shoppers from outside the region or from resort communities. For each demand source this study has conducted a capture-leakage analysis which entailed estimating household demand for goods and services using ESRI data and comparing potential household demand to sales of goods and services by the following four-digit North American Industrial Classification System (NAICS) code business categories:

- | | |
|---|--|
| Special Food Services | Building Material & Supplies Dealers |
| General Merchandise Stores | Beer, Wine & Liquor Stores |
| Florists | Sporting Goods/Hobby/Music Instrument Stores |
| Specialty Food Stores | Book, Periodical & Music Stores |
| Lawn & Garden Equip & Supply Stores | Restaurants/Other Eating Places |
| Electronics & Appliance Stores | Gasoline Stations |
| Drinking Places - Alcoholic Beverages | Auto Parts, Accessories & Tire Stores |
| Miscellaneous Store Retailers | Grocery Stores |
| Office Supplies, Stationery & Gift Stores | Department Stores |
| Clothing Stores | Shoe Stores |
| Used Merchandise Stores | Jewelry, Luggage & Leather Goods Stores |
| Furniture Stores | Automobile Dealers |
| Health & Personal Care Stores | Home Furnishings Stores |

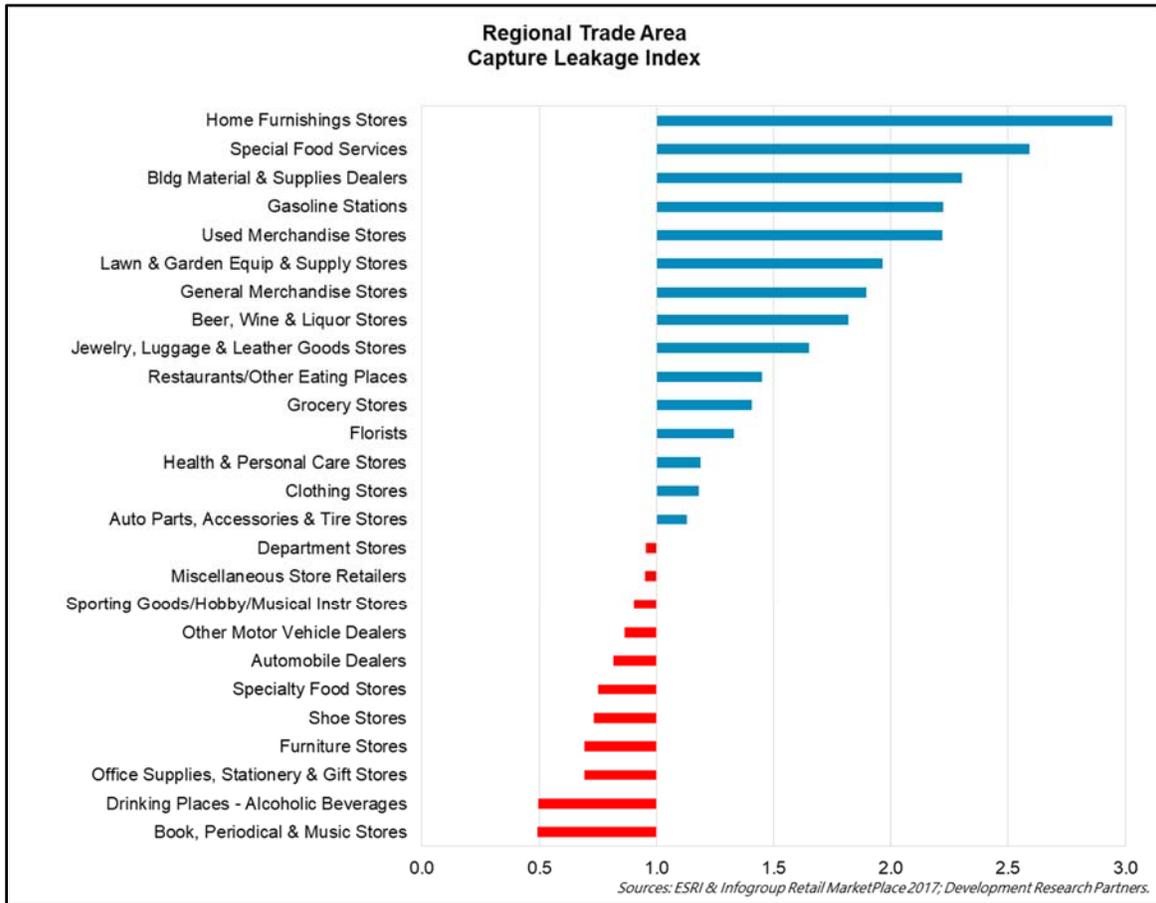
If area sales are less than local demand, it is assumed that resident purchases are made outside of the area and retail “leakage” is occurring wherein dollars are leaving the market. If area sales are more than local demand, it is assumed that outside consumers are making purchases in the local market and retail dollar “capture” is occurring. Leakage further represents market segments that are under-served and are immediate opportunities for business growth.

An index has been developed from local market data wherein local sales are divided by local demand: if the index is less than one the market is in a leakage position for that consumer good and local dollars are being spent outside the local market. If the index is greater than one it indicates the market is capturing a net amount of outside dollars for that consumer good.

Regional Trade Area Capture - Leakage

A Capture-Leakage analysis simply compares estimated local demand for a product compared to local sales of that product. It is a methodology to organize and report data; however, there are several ways the results can be interpreted. The community meetings and anecdotal data captured in the community survey create a perspective with which to interpret the data.

In the diagram below the red bars indicate retail categories where residents are buying more goods from outside the Regional Trade Area. These represent opportunities to grow businesses or add diversity to serve unmet local demand by growing local businesses and jobs. Because these are unmet consumer demands, they represent immediate opportunities.



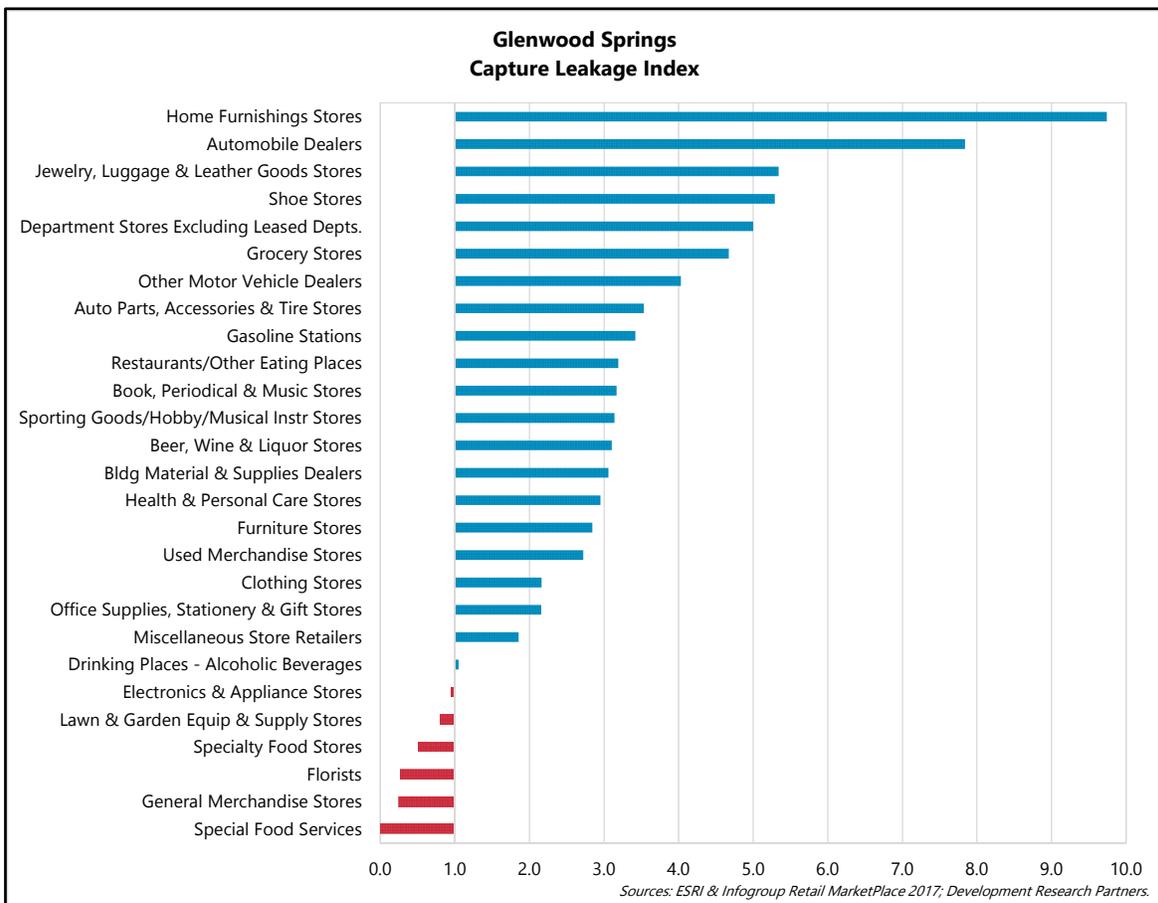
The blue bars represent retail categories where sales exceed the estimated needs of the local community indicating visitors (Aspen, Vail, tourists, travelers, and others) are making these types of purchases, and hence the Regional Trade Area is capturing consumer dollars. While it is easy to make the statement that the Regional Trade Area is over-served in these categories, this data also represents an opportunity to diversify products and price points, thus pulling additional consumer dollars into the local economy. Categories with a Capture-Leakage Index of 1.5 or less represent a next opportunity for business expansion after unmet demand categories.

Overall, Regional Trade Area business opportunities for growth encompass the following retail categories:

- | | |
|---|---|
| Book, Periodical & Music Stores | Sporting Goods/Hobby/Musical Instr Stores |
| Drinking Places - Alcoholic Beverages | Miscellaneous Store Retailers |
| Office Supplies, Stationery & Gift Stores | Auto Parts, Accessories & Tire Stores |
| Furniture Stores | Clothing Stores |
| Shoe Stores | Health & Personal Care Stores |
| Specialty Food Stores | Florists |
| Automobile Dealers | Grocery Stores |
| Other Motor Vehicle Dealers | Restaurants/Other Eating Places |

Local Market Area Capture-Leakage

Capture-Leakage data was also indexed for the Local Market, which consists of just the City of Glenwood Springs, and is illustrated below. Overall, the City appears to serve its residents' needs relatively well. As expected with its tourism-based economy, its retailers also capture a significant level of consumer dollars from the rest of the Regional Trade Area and from visitors, as shown by the blue bars.



Underserved retail categories, the red bars, include:

- Drinking Places – Alcoholic Beverages
- Electronics and appliance stores
- Lawn and garden equipment
- Specialty food stores and services
- General merchandise stores
- Florists

Needed goods and services stated by various residents in the Community Survey match closely with what the Capture-Leakage analysis shows to be under-served in the City, validating both methodologies. It should be noted that diversity and healthy market competition can be also be achieved by bringing in new businesses to offer a selection to local consumers.

Glenwood Springs is well suited for experiential retailers such as:

Food & Beverage	Destinations	Entertainment
Specialty Food	Books	Sports & Crafts
Butcher Shops	Music	Performing Arts
Bakeries	Culinary Arts	Evenings Out
Fish and Seafood	Attractions	
Spice Shops		
Craft		

Estimated Retail Space Needed

Retail demand and market need should open opportunities to expand the retail market in Glenwood Springs. This section summarizes analysis to estimate the additional square feet needed to accommodate these opportunities and the timeframe over which this expansion is expected to happen.

The analysis examines absorption from three different drivers:

- Current unmet (latent) local demand
- Capture from all visitors from outside the City
- Local population growth

Assumptions behind this analysis include:

- Glenwood Springs comprises about 16% of all retail sales in the overall Regional Trade Area;
- Local Glenwood Springs households spend an estimated \$28,000 each in the City annually;
- \$100 in retail spending in Glenwood Springs supports about 4.1 square feet of retail space;
- Visitor spending from all sources supports about 54,000 square feet of retail in the City;
- Visitor spending is estimated to grow by 4% annually.

Potential Retail Concepts

European Style Indoor Market



An Evening Out



Independent Storefronts, open patio seating



Summary of Retail Growth Findings Single Year Potential

	Regional Trade Area	Glenwood Springs Local Market		
	Current Retail Spending	Current Retail Spending	Current Retail Space Needs	Annual Growth Space Needs
Current Local Leakage	\$86.1M	\$13.8M	57,000 sf	--
Retail Capture from Visitors	\$612.3M	\$98.0M	11,000 sf	11,000 sf
Local Population Growth Demand	--	--	17,000 sf	8,000 sf
TOTAL RETAIL POTENTIAL			85,000 sf	19,000 sf

Source: Development Research Partners analysis.

Local Household Services Opportunities

In this section, sources for household services demand are evaluated and business development opportunities are inferred and translated into demand for real estate types. Local household-serving business categories are evaluated based on U.S. Economic Census data. Real estate types used by these service providers include storefront offices and traditional office space. Business types considered are limited to:

- Nursing and Residential Care Facilities
- Computer Systems Design
- Consulting
- Seniors'/Disabled Day Care and Services
- Chiropractors
- Dentists
- Optometrists
- Therapists - physical, occupational, speech, other
- Lawyers
- Doctors
- Personal Household Services
- Credit Intermediation - banks
- Day Care

Assumptions behind this analysis include:

- Glenwood Springs is home to around 23% of household service providers in the Regional Trade Area;
- Based on anticipated population growth, demand for commercial space for household services is expected to grow by 15,000 square feet annually;
- Each household supports approximately 17.5 square feet of household services space.

COMMERCIAL REAL ESTATE ABSORPTION

The amount of property square footage that will be leased up (absorbed) by new and growing businesses is estimated in this section. The absorption analysis considers demand for both retail goods and household services previously identified.

Household counts will grow throughout Garfield County at an estimated rate of 2% annually with Glenwood Springs capturing an estimated 17% of that growth. Glenwood Springs captures an estimated 16% of regional household consumption spent within the region. This capture is used to estimate retail sales share and associated demand for retail square feet.

Visitor spending is estimated to increase 4% annually using lodging tax collection trends as an indicator of overall visitor activity; a conservative estimate of this indicator is used to account for visitors that may be from Aspen, Basalt, Vail, and other destination shoppers, in addition to overnight stays or pass-through travelers.

The table on the following page summarizes estimated retail demand and absorption, estimated household services demand and absorption, and total projected commercial absorption.

Projected Commercial Absorption in Glenwood Springs (SF)

Time Period	Years 1 to 5	Years 6+ (annually)
Phase:	Absorption of existing yet unserved (latent) local demand; and meeting demand of additional households to Glenwood Springs.	Established market equilibrium meeting local demands and keeping pace with annual demand growth.
Description:	Latent (under-served) demand from existing City of Glenwood Springs residents and regional residents that shop in the City. This incorporates destination shopping from Vail, Aspen area, and visitors.	Annual household growth estimated at 2% annually for the region; Glenwood Springs assumed to capture 16% of all regional household spending, and visitor spending estimated to increase 4% annually.
Regional Retail Demand in Glenwood Springs		
Real Estate Product Type: Retail Storefront		
Estimated Absorption (sf):	Over 5 years	Annually starting year 6
Latent Local Demand:	57,000 sf	na
Household Growth:	84,000 sf	8,000 sf
Visitors:	54,000 sf	11,000 sf
Total Retail Absorption:	195,000 sf	19,000 sf
Business Examples:	Motor Vehicle & Parts Dealers, Furniture & Home Furnishings Stores, Electronics & Appliance Stores, Bldg Materials, Garden Equip. & Supply Stores, Food & Beverage Stores, Health & Personal Care Stores, Gasoline Stations, Clothing & Clothing Accessories Stores, Sporting Goods, Hobby, Book & Music Stores, Sporting Goods/Hobby/Musical Instrument Stores, General Merchandise Stores, Food Services & Drinking Places, Restaurants/Other Eating Places	
Regional Household Services Demand in Glenwood Springs		
Real Estate Product Type: Office Space and/or Office-Storefront		
Estimated Absorption (sf):	Over 5 years	Annually starting year 6
Latent Local Demand:	61,000 sf	na
Household Growth:	28,000 sf	6,000 sf
Visitors:	na	na
Total Household Services Absorption:	89,000 sf	6,000 sf
Business Examples:	Nursing and Residential Care Facilities, Computer Systems Design, Household Consultants, Seniors'/Disabled Day Care and Services, Chiropractors, Dentists, Optometrists	
Total Projected Commercial Absorption in Glenwood Springs (SF)		
Absorption (SF):	284,000 sf	25,000 sf

Some of this absorption may occur in existing buildings in Glenwood Springs, such as in Downtown or outlying commercial areas. The current amount of vacant square footage is unknown but is likely to be offset by possibly greater than projected visitor driven demand for household services, stronger than anticipated housing development and population growth, stronger than projected visitor demand as projects strengthen Glenwood Springs' image as a tourist destination.

With regard to the location for retail and growth to occur, the nature of demand is evaluated as to the primary markets served. Based on a subjective analysis, the distribution of new business growth is anticipated to be concentrated as indicated:

5-Year Development Horizon

District	Projected Absorption
6th Street Corridor	41,000 sf
Meadows	91,000 sf
West 6th Street	7,000 sf
Downtown	64,000 sf
South Glenwood	45,000 sf
Confluence	36,000 sf

LODGING MARKET CONTEXT

The following steps were undertaken to evaluate Glenwood Springs' lodging market and opportunities:

- Research existing accommodations for amenities and market segmentation
- Identify recent lodging market performance regarding occupancy, rates, and seasonality
- Identify hotel overnight visitor categories to Glenwood Springs
- Evaluate the role that lodging properties play in Glenwood Springs
- Explore ways that lodging properties may better integrate with the community's vision

A survey of hotel and motel properties in Glenwood Springs was conducted for this analysis. Without consideration for quality or condition, the survey revealed the following:

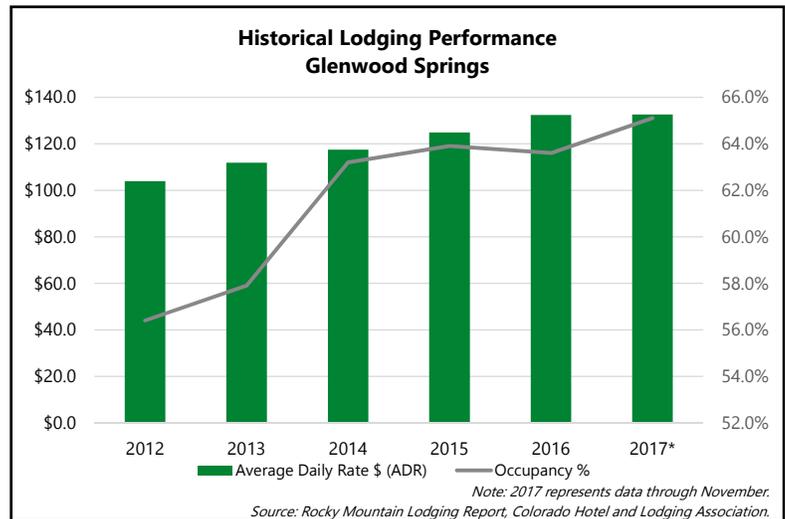
Glenwood Springs Lodging Market Profile

- 22 Properties
- 1,659 Rooms
- 5 with Bars and/or Restaurants
- 10 with meeting space
- 2 with banquet space
- 7 with a "fitness center"
- Most with pools and/or hot tubs

Source: Development Research Partners.

The lodging market has been slowly gaining strength over the past five years with both rental rates and occupancy trending higher each year. Overall occupancy is around 65%, similar to the national average, but still leaving notable capacity to fill rooms. Average daily rates are now hovering around \$112 per room night, which is also in line with the national average.

Glenwood Springs has established itself as a rest stop and destination serving travelers, outdoor recreation enthusiasts, and wilderness explorers. Key lodging clients include:

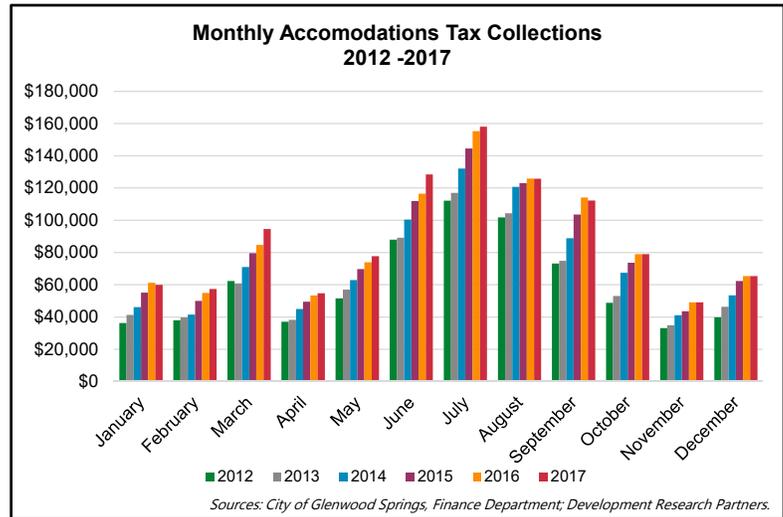


Key Lodging Clients

- Destination business travelers seeking a home-base
- Budget vacation travelers seeking outdoor recreation and area attractions
- Spontaneous pass-through travelers seeking shelter
- Pass-through travelers with pre-determined stops for recreation, dining, and/or entertainment
- Tourists seeking historic towns and accommodations

LODGING MARKET OPPORTUNITIES

Given Aspen Mountain and Snowmass Ski areas' proximity, and short distance to Vail, Glenwood Springs is often associated with winter sports destinations. Reviewing monthly accommodations tax receipts highlights the City's position as more of a summer and fall destination, similar to many other Colorado mountain town destinations lacking a ski resort. The high season months are March, June, July, August, and September. The low season months are January, February, April, November, and December. There is an opportunity to grow winter non-skiing outdoor recreation businesses to fill vacancies during the low and shoulder seasons.



Glenwood Springs has accommodations for business, historical-stay, and budget travelers. As Glenwood Springs' population grows, so will demand for friends and family hotel nights. These established markets should continue to be served. However, while the occupancy rates indicate surplus capacity, the research survey shows many aging low-budget motels and expensive historic hotels. There are limited service business-style hotels in the Meadows area; however, they are not walkable to the commercial core. There are several aging limited-service hotels on the 6th Street Corridor, but these are aging and missing the curb appeal of a modern mid-priced hotel. This notion is supported by hotel review services such as Trip Advisor that describes Glenwood Springs as having an aging hotel inventory. Providing grant or loan funding for existing hotel and motel upgrades and/or upgraded grounds and facilities may enable independent operators and others the ability to improve the traveler experience.

There is a lack of lodging diversity that easily integrates with Downtown and 6th Street attractions. Glenwood Springs should retain its independent and historic hotels and budget-minded accommodations. However, adding modern mid-priced lodging options, walkable from Downtown and 6th Street, would fill a market niche missing in the market. Perhaps even diversifying this market niche would support multiple properties over time. The City may be more attractive for a wider variety of visitors and would bring visitor dollars right to the core commercial district. National reservation systems, which complement existing hotels, will provide additional exposure for Glenwood Springs to more travel market segments.

There is opportunity to develop mixed-use hotel projects that may include an experiential business on a first floor with a mid-level service hotel on upper floors. Priced to a mid-priced market, and perhaps located in Downtown or the 6th Street Corridor, would provide a new type and location to the lodging market and perhaps attract a different visitor type. Adding more conference or banquet space may also attract small business conferences and destination wedding business to the City.

A collaboration with arts and entertainment industries may yield a new "Glenwood Springs Experience." This is especially true with the expansion of local attractions. Lodging is a component of the larger "Leisure and Hospitality" economic sector that includes arts, entertainment, recreation, and food services, all retail categories noted as under-served in the market. The expansion of arts and entertainment businesses will further bolster the attraction of destination travelers and bring additional lifestyle components to the City.

More focused market analysis is required to estimate an exact number of new lodging rooms that are feasible. Based on accessibility to the City's destinations, it seems likely that a mid-priced boutique hotel could be supported in the 6th Street Corridor, and that new development in the Confluence would support a boutique hotel as part of that project.

This study presented a high-level market analysis to evaluate three market sectors: (1) housing; (2) commercial (specifically, retail goods and household services); and (3) lodging for business growth and real estate development opportunities in Glenwood Springs, CO. The analysis assessed real estate demand and absorption for each market sector.

Housing Market

The City of Glenwood Springs is the largest population center in Garfield County and is located at the crossroads of Interstate 70 and CO Highway 82, providing access to Aspen and U.S. Highway 24. Garfield County population is anticipated to grow by about 5% to 6% annually, representing approximately 500 more households and 1,200 additional persons per year. Glenwood Springs is anticipated to capture about 17% of the growth in the County.

Glenwood Springs’ housing vacancy has been below 4% since 2014 and below 3% since 2015. Detached single-family housing has seen a steady price increase and virtually zero vacancy. Attached ownership housing has seen steady demand with rising prices and low vacancy. Similarly, multi-family rentals have also been experiencing rising rental rates and low vacancy.

This indicates not only a residential undersupply, but pent up demand for new units. Housing demand by residents is augmented by demand from second-home owners and those seeking vacation rent-by-owner investment opportunities. This translates into demand for 80 to 100 units annually. Pent up demand is expected to bring absorption 25% to 50% higher than the average demand in a normalized market. Glenwood Springs could absorb an estimated 120 residential units annually for the next five years, and then settle into about 80 units annually in the long-term.

Commercial Market

Glenwood Springs serves as a commercial and retail hub for Garfield and Eagle Counties, and is a lifestyle and tourist destination for experience seekers. Businesses that provide shopping, recreational, and entertainment experiences will complement Glenwood Springs’ character.

Data related to retail market opportunities was gathered in several ways, ranging from anecdotal to quantitative. Needed goods and services stated by various residents in the Community Survey match closely with what the Capture-Leakage analysis showed to be under-served in the City, validating both methodologies. Glenwood Springs is well suited for experiential retailers such as:

Food & Beverage	Destinations	Entertainment
Specialty Food	Books	Sports & Crafts
Butcher Shops	Music	Performing Arts
Bakeries	Culinary Arts	Evenings Out
Fish and Seafood	Attractions	
Spice Shops		
Craft		

Local household-serving business categories were also evaluated, such as doctors, dentists, optometrists, lawyers, banks, and computer systems design. Sources for retail goods and household services demand were evaluated and business development opportunities were translated into demand for real estate space.

The analysis concluded that Glenwood Springs could absorb 284,000 square feet of commercial space during the next five years, and then an additional 25,000 square feet per year in year 6 and beyond, as indicated in the following table.

Projected Commercial Absorption in Glenwood Springs (SF)

Time Period	Years 1 to 5	Years 6+ (annually)
Regional Retail Demand in Glenwood Springs		
Real Estate Product Type: Retail Storefront		
Estimated Absorption (sf):	Over 5 years	Annually starting year 6
Latent Local Demand:	57,000 sf	na
Household Growth:	84,000 sf	8,000 sf
Visitors:	54,000 sf	11,000 sf
Total Retail Absorption:	195,000 sf	19,000 sf
Regional Household Services Demand in Glenwood Springs		
Real Estate Product Type: Office Space and/or Office-Storefront		
Estimated Absorption (sf):	Over 5 years	Annually starting year 6
Latent Local Demand:	61,000 sf	na
Household Growth:	28,000 sf	6,000 sf
Visitors:	na	na
Total Household Services Absorption:	89,000 sf	6,000 sf
Total Projected Commercial Absorption in Glenwood Springs (SF)		
Absorption (SF):	284,000 sf	25,000 sf

Lodging Market

The lodging market has been slowly gaining strength over the past five years with both rental rates and occupancy trending higher each year. Overall occupancy is around 65%, similar to the national average, but still leaving notable capacity to fill rooms. Average daily rates are now hovering around \$112 per room night, which is also in line with the national average.

Glenwood Springs has accommodations for business, historical-stay, and budget travelers. However, while the occupancy rates indicate surplus capacity, the research survey shows many aging low-budget motels and expensive historic hotels. There is a lack of lodging diversity that easily integrates with Downtown and 6th Street attractions. Glenwood Springs should retain its independent and historic hotels and budget-minded accommodations. However, adding modern mid-priced lodging options, walkable from Downtown and 6th Street, would fill a market niche missing in the market. Perhaps even diversifying this market niche would support multiple properties over time. The City may be more attractive for a wider variety of visitors and would bring visitor dollars right to the core commercial district.

More focused market analysis is required to estimate an exact number of new lodging rooms that are feasible. Based on accessibility to the City's destinations, it seems likely that a mid-priced boutique hotel could be supported in the 6th Street Corridor, and that new development in the Confluence would support a boutique hotel as part of that project.

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