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CITY OF Grand Junction COLORADO

GRAND JUNCTION CITY COUNCIL
MONDAY, AUGUST 28, 2023
SPECIAL WORKSHOP, 5:30 PM
FIRE DEPARTMENT TRAINING ROOM AND VIRTUAL
625 UTE AVENUE

1. **Discussion Topics**
   a. I-70 Interchange at 29 Road
   b. 4th and 5th Street Improvements Update
   c. Transportation Engineering Design Standards (TEDS) Update
   d. Redlands 360 Planned Development Update
   e. Riverside Education Center (REC)
2. **City Council Communication**

   An unstructured time for Councilmembers to discuss current matters, share ideas for possible future consideration by Council, and provide information from board & commission participation.
3. **Next Workshop Topics**
4. **Other Business**

What is the purpose of a Workshop?

The purpose of the Workshop is to facilitate City Council discussion through analyzing information, studying issues, and clarifying problems. The less formal setting of the Workshop promotes conversation regarding items and topics that may be considered at a future City Council meeting.

How can I provide my input about a topic on tonight's Workshop agenda?
Individuals wishing to provide input about Workshop topics can:

1. Send an email (addresses found here https://www.gjcity.org/313/City-Council) or call one or more members of City Council (970-244-1504);

2. Provide information to the City Manager (citymanager@gjcity.org) for dissemination to the City Council. If your information is submitted prior to 3 p.m. on the date of the Workshop, copies will be provided to Council that evening. Information provided after 3 p.m. will be disseminated the next business day.

3. Attend a Regular Council Meeting (generally held the 1st and 3rd Wednesdays of each month at 6 p.m. at City Hall) and provide comments during "Citizen Comments."

Grand Junction City Council

Workshop Session

Item #1.a.

Meeting Date:	August 28, 2023
Presented By:	Greg Caton, City Manager, Trenton Prall, Public Works Director
Department:	City Manager's Office
Submitted By:	John Shaver, City Attorney Trent Prall, Public Works Director

Information

SUBJECT:

I-70 Interchange at 29 Road

EXECUTIVE SUMMARY:

This agenda item is to discuss the I-70 Interchange at 29 Road and answer remaining questions. Consulting engineering staff will be present for the discussion.

BACKGROUND OR DETAILED INFORMATION:

This agenda item is to provide an update on the status of the I-70 Interchange at 29 Road and answer questions associated with the purpose and need of the interchange as well as discuss the issuance of transportation bonds as a potential funding source for this project. Issuance of bonds would require voter approval and draft ballot language is attached for discussion purposes.

BACKGROUND

An interchange at 29 Road has been identified since the 1990s in many local and regional plans as a way to enhance local and regional connectivity, as part of a larger plan to provide connections in and around Grand Junction. The proposed interchange improvements, in coordination with other regional improvements, have been envisioned to complete the transportation loop around Grand Junction, provide critical community access, support economic opportunity, and enhance local and regional connectivity. Some of the efforts to evaluate and further develop an interchange at 29 Road have included the following.

1999	Identified the need for an I-70 interchange in northeast Grand Junction
2018	Studied the benefits and potential environmental impacts of a 29 Road interchange (PEL Study attached for reference)
	Positioned the City and County for future state and federal funding opportunities

2022 Developed vision and goals for future design concepts with local governments
Built consensus and documented key issues and opportunities with business, school, economic development, airport, and planning organizations
2023 Analyzing and presenting potential interchange configurations for community input

Continuation of these efforts is in process to complete the additional analysis necessary, develop a preliminary and final design, and secure funding for construction. The construction of the I-70 Interchange at 29 Road, and the associated road improvements along 29 Road between I-70 and Patterson Road were most recently estimated at $80 million. The City of Grand Junction and Mesa County have a long history of working together to find solutions to fund a project of this magnitude, which may include the issuance of debt.

PURPOSE OF PROJECT
The purpose of the project is to enhance the eastern Grand Valley transportation network between the I -70 Business Loop East Interchange and Horizon Drive Interchange to:
1. Improve local and regional connectivity
2. Provide enhanced access to planned land use surrounding I-70 in Grand Junction, Colorado

PROJECT NEED
The proposed project will provide improved local and regional connectivity by:
• Addressing limited regional transportation network connectivity with access to/from I-70 between I-70 Business and Horizon Drive interchanges, and;
• Extending the functional longevity of the existing transportation system connecting to I-70.

It will also improve access to I-70 by:
• Providing transportation infrastructure needed to accommodate planned land use surrounding I-70, and specifically, the future Matchett Park and the associated Community Recreation Center, and;
• Providing transportation infrastructure needed to accommodate projected and regional traffic demands.

FISCAL IMPACT:

There is no fiscal impact for discussion only.

SUGGESTED ACTION:

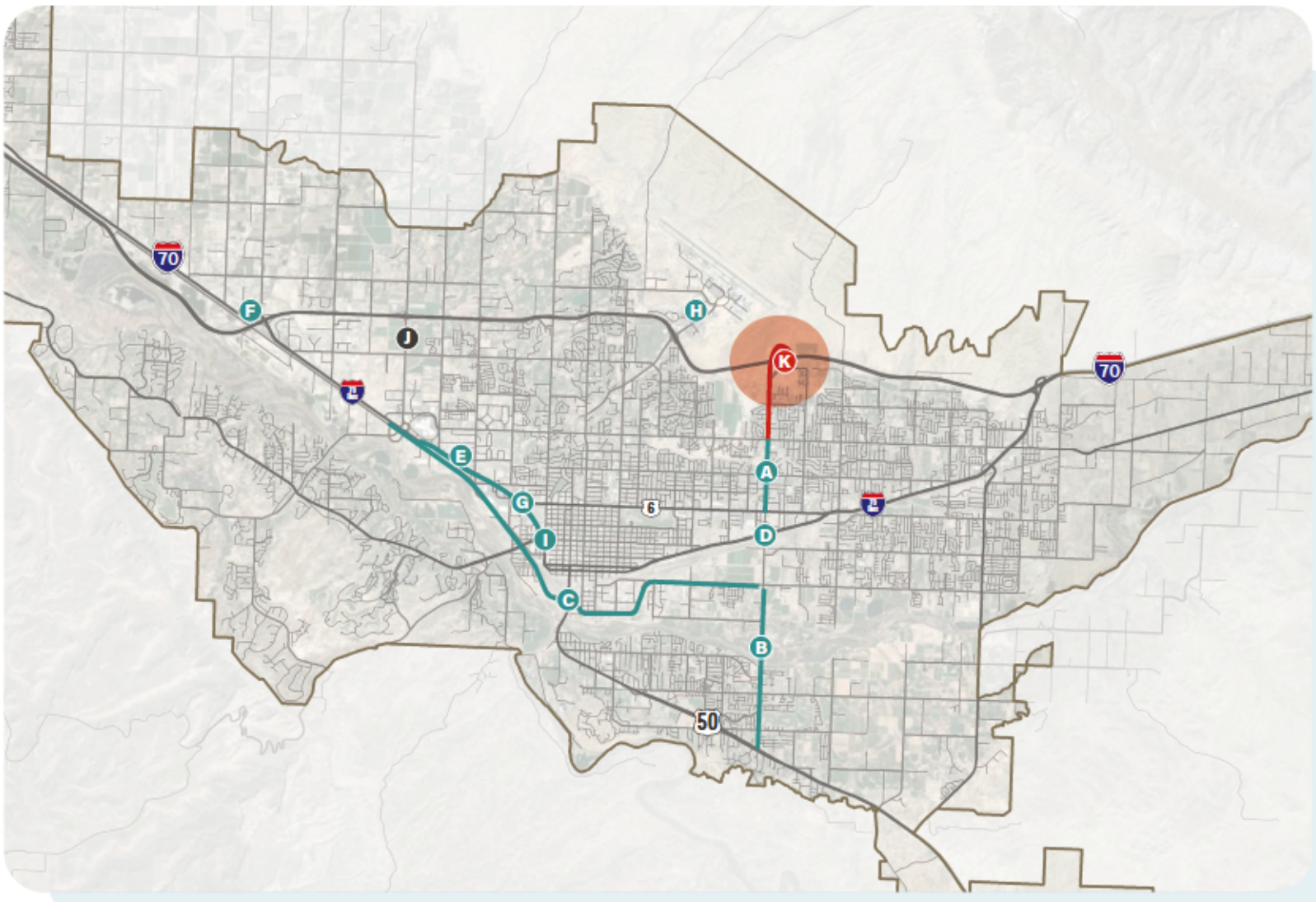
For Discussion Only

Attachments

1. Project Information Graphic
2. RES-29 Road 20230809

29 ROAD INTERCHANGE

Years In the Making



COMPLETED REGIONAL IMPROVEMENTS

- (A) **2001** Extended of 29 Road from North Avenue to Patterson Road
- (B) **2006** Constructed 29 Road bridge over the Colorado river and widened the corridor
- (C) **2008** Completed Riverside Parkway from Redlands Parkway to 29 Road
- (D) **2011** Constructed 29 Road bridge over the I-70 Business Loop
- (E) **2011-2013** Phased completion of I-70 Business Loop from 24 Road to Rimrock Avenue
- (F) **2014** Upgraded interchange at I-70 and 22 Road to a diverging diamond
- (G) **2017** Constructed intersection improvements at I-70 Business Loop and North Avenue/US 6
- (H) **2017** Improved I-70 and Horizon Drive interchange to include roundabouts
- (I) **2022** Constructed intersection improvements at I-70 Business Loop and 1st Street and Grand Avenue

UNDER CONSTRUCTION

- (J) **2024** Construct additional lanes on 24 Road south of I-70 to increase capacity

(K) COMING SOON!

Construct I-70 and 29 Road interchange and 29 Road improvements north of Patterson Road

A Little History on the I-70 & 29 Road Interchange

Since the 1990s, Mesa County and the City of Grand Junction worked to identify improvements for the 29 Road Corridor and the addition of a new interchange at I-70. These improvements, in coordination with other regional improvements, will complete the loop around Grand Junction, provide critical community access, support economic opportunity, and enhance local and regional connectivity.

1999 – Identified the need for an I-70 interchange in northeast Grand Junction.

2018 – Studied benefits and potential environmental impacts of a 29 Road interchange. Positioned the City and County for future state and federal funding opportunities.

2022 – Developed vision and goals for future design concepts with local governments.

– Built consensus and documented key issues and opportunities with business, school, economic development, airport, and planning organizations.

2023 – Analyzing and presenting potential interchange configurations for community input

2024 & Beyond – Complete additional analysis, develop preliminary and final design, and secure funding. Once funding is in place, the interchange and 29 Road improvements will move toward construction.

RESOLUTION ___-23

A RESOLUTION SETTING A TITLE AND SUBMITTING TO THE ELECTORATE ON NOVEMBER 7, 2023, A MEASURE CONCERNING THE ISSUANCE OF BONDS TO FINANCE CERTAIN TRANSPORTATION IMPROVEMENTS AND TO COLLECT, RETAIN AND SPEND REVENUES AS DEFINED BY ARTICLE X, SECTION 20 OF THE COLORADO CONSTITUTION FOR PAYMENT OF TRANSPORTATION DEBT AND MAINTENANCE OF TRANSPORTATION INFRASTRUCTURE AND PROVIDING OTHER DETAILS RELATING THERETO

RECITALS:

The City of Grand Junction, Colorado is a home rule municipal corporation duly organized and existing under the laws and Constitution of the State of Colorado and the City Charter. The City Council is duly authorized by the Charter and the Constitution to act for and on behalf of the City and the Council does hereby find and determine that it is in the public interest to finance the construction of road, sidewalk, and pedestrian improvements at, near and along 29 Road. Those improvements would include the construction of an interchange at 29 Road and Interstate 70 (I-70) and reconstruction of 29 Road south of the new interchange for approximately 1 mile.

The City has experienced significant growth, which when coupled with aging transportation infrastructure and the heretofore incomplete "beltway" project, which was planned to be comprised of the 24 Road and I-70 interchange, the Riverside Parkway and an interchange at 29 and I-70, as well as the need for more effective, and efficient walking, biking, and driving routes on 29 Road, the City Council has determined that it will refer this measure to the voters to ask for authorization for debt to complete the "beltway" and related 29 Road improvements (29 Road Improvement Project). The City and Mesa County have invested millions of dollars in the 29 Road railroad and Colorado River bridges and the continuation of the improvements to 29 Road north of Patterson Road will serve to utilize the prior investments more fully.

The estimated cost of the 29 Road and I-70 interchange, and 29 Road improvements from I-70 to Patterson Road is significant, and without a commitment now the cost of the 29 Road Improvement Project will only increase.

DRAFT

The 29 Road Improvement Project, including but not limited to the 29 Road and I-70 interchange with this ballot question will be funded without increasing taxes; however, it is necessary to issue bonds and to use funds above limits established by Article X, Section 20 of the Colorado Constitution ("TABOR") for purposes of the Project and to help fund the repayment of the debt.

The City Council is seeking voter approval of the plan to construct the 29 Road and I-70 interchange together with improvements to 29 Road as provided in this resolution, and the various studies that inform the Council's decision to refer a question to the voters.

NOW THEREFORE, BE IT RESOLVED by the City Council of the City of Grand Junction that:

1. All actions heretofore taken not inconsistent with the provisions of this resolution by the City and the officers thereof, directed toward the election and the objects and purposes herein stated are hereby ratified, approved and confirmed.

2. Pursuant to the Charter and all other applicable laws of the State of Colorado, the Council hereby determines that an election shall be held on November 7, 2023, at which there shall be submitted to the registered electors of the City the question set forth herein.

3. The Council hereby authorizes and directs the City Clerk to submit the following ballot title to the registered electors on Tuesday, November 7, 2023.

City of Grand Junction Referred Measure __

WITHOUT ANY INCREASE OF ANY EXISTING TAX RATE AND WITHOUT IMPOSING ANY NEW TAXES SHALL THE CITY BE AUTHORIZED TO INCUR ADDITIONAL DEBT FOR TRANSPORTATION PROJECTS COLLECTIVELY KNOWN AND REFERRED TO AS THE I-70 AND 29 ROAD INTERCHANGE AND 29 ROAD IMPROVEMENT PROJECT ("29 ROAD IMPROVEMENT PROJECT") AND TO KEEP AND SPEND FUNDS IN EXCESS OF AMOUNTS WHICH THE CITY IS PERMITTED TO KEEP AND SPEND UNDER TABOR IN ORDER TO PAY DEBT SERVICE AND FINANCING AND CONSTRUCTION COSTS OF THE 29 ROAD IMPROVEMENT PROJECT. WITHOUT ANY INCREASE OF ANY EXISTING TAX RATE AND WITHOUT IMPOSING ANY NEW TAXES SHALL CITY OF GRAND JUNCTION, COLORADO (CITY) DEBT BE INCREASED UP TO $80,000,000.00 WITH A REPAYMENT COST OF UP TO $160,000,000.00 TO PROVIDE FINANCING FOR THE

DRAFT

PURPOSE OF PAYING FOR CERTAIN TRANSPORTATION IMPROVEMENTS WHICH INCLUDE

- ***29 ROAD AND I-70 INTERCHANGE***

- ***29 ROAD WIDENING, INCLUDING BUT NOT LIMITED TO ACQUISITION OF NECESSARY RIGHT OF WAY, CONSTRUCTION OF SIDEWALKS, BIKE LANES AND PEDESTRIAN FACILITIES FROM THE INTERCHANGE TO PATTERSON ROAD***

SHALL SUCH DEBT BE PAYABLE FROM SUCH CITY REVENUES AS THE CITY COUNCIL MAY DETERMINE AND BE ISSUED WITH SUCH TERMS AS THE CITY COUNCIL DETERMINES TO BE NECESSARY AND IN THE BEST INTERESTS OF THE CITY; AND, SHALL THE CITY BE AUTHORIZED TO CONTINUE TO COLLECT, RETAIN AND SPEND ALL REVENUES IN EXCESS OF AMOUNTS WHICH THE CITY IS PERMITTED TO COLLECT, RETAIN, AND SPEND UNDER ARTICLE X, SECTION 20 OF THE COLORADO CONSTITUTION (TABOR) FOR THE PURPOSE OF PAYING CITY DEBT ISSUED FOR THE 29 ROAD IMPROVEMENT PROJECT AND TO MAINTAIN NEW AND EXISTING TRANSPORTATION INFRASTRUCTURE CONSTRUCTED WITH THIS AUTHORIZATION.

_____ YES_____ NO

4. If a majority of the votes cast on the question to authorize the bonds and project financing submitted at the election shall be in favor as provided in such question, then the City acting through the Council shall be authorized to proceed with the necessary action to issue the bonds and finance the project(s) in accordance with the question. Any authority to issue bonds and finance the project(s), if conferred by the results of the election, shall be deemed, and considered a continuing authority and the partial exercise of the authority so conferred shall not be considered as exhausting or limiting the full authority so conferred. If a majority of the votes cast on the question to incur debt submitted at the election is in favor of incurring debt as provided in such question, the City intends to issue such debt in the approximate aggregate principal amount of $80,000,000.00 to pay the costs of the projects described in the debt question, including the reimbursement of certain costs incurred by the City prior to the execution and delivery of such debt, upon terms acceptable to the City, as authorized in an ordinance to be hereafter adopted and to take all further action which is necessary or desirable in connection therewith. The officers, employees, and agents of the City shall take all action necessary or reasonably required to carry out, give effect to, and consummate the transactions

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contemplated hereby and shall take all action necessary or desirable to finance the project and to otherwise carry out the transactions contemplated by this resolution. This resolution is intended to be a declaration of "official intent" to reimburse expenditures within the meaning of Treasury Regulation §1.150-2. The City shall not use reimbursed moneys for purposes prohibited by Treasury Regulation §1.150-2(h).

5. Pursuant to Article XX of the State Constitution and the Charter, all State statutes that might otherwise apply in connection with the provisions of this ordinance (including, without limitation, § 31-11-111, C.R.S.) are hereby superseded to the extent of any inconsistencies or conflicts between the provisions of this ordinance and such statutes. Any such inconsistency or conflict is intended by the City Council and shall be deemed made pursuant to the authority of Article XX of the State Constitution and the Charter.

6. Pursuant to §1-11-203.5, C.R.S., any election contest arising out of a ballot issue or ballot question election concerning the order of the ballot or the form or content of the ballot title shall be commenced by petition filed with the proper court within five days after the title of the ballot issue or ballot question is set, and for contests concerning the order of a ballot, within five days after the ballot order is set by the county clerk and recorder and not thereafter.

7. The officers of the City are hereby authorized and directed to take all action necessary or appropriate to effectuate the provisions of this resolution.

8. If any section, paragraph, clause, or provision of this resolution shall for any reason be held to be invalid or unenforceable, the invalidity or unenforceability of such section, paragraph, clause or provision shall in no manner affect any remaining provisions of this resolution, the intent being that the same are severable.

INTRODUCED, READ, AND APPROVED this 16th day of August 2023.

_____

Anna M. Stout
President of the City Council

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ATTEST:

_____

Amy Phillips
City Clerk

DRAFT

Grand Junction City Council

Workshop Session

Item #1.b.

Meeting Date:	August 28, 2023
Presented By:	Trenton Prall, Public Works Director
Department:	Public Works - Engineering
Submitted By:	Trent Prall, Public Works Director

Information

SUBJECT:

4th and 5th Street Improvements Update

EXECUTIVE SUMMARY:

The City and DDA have been working on the development of improvements to 4th and 5th Streets from Ute to North Ave that would help increase bikeability and walkability downtown. The proposed design calls for narrowing of the existing through lanes, conversion of diagonal parking to parallel parking, creation of a parking separated bike lane and sidewalk widening to enhance the pedestrian experience with accommodations for landscaping, art, and outdoor dining. While the current design is for a one-way, two lane configuration, staff has completed a study responding to a suggestion for a one-way, one lane configuration. This workshop is to discuss the proposed change and update council on next steps.

BACKGROUND OR DETAILED INFORMATION:

In 1981, the Downtown Development Authority (DDA) identified the conversion of 4th and 5th Street from one-way to two-way as a goal in its original Plan of Development. This was confirmed again in the 2019 DDA Plan of Development. The City's Greater Downtown Plan also referenced the need to study under 36.12.030 Downtown District goals and policies. (7) Policy 1g. Study alternatives for 4th and 5th Streets which includes returning these streets to the two-way grid system between Ute Avenue and North Avenue..

In 2021-2022, the City/DDA completed the 4th-5th Street One-way to Two-way Feasibility study which included alternatives for both an enhanced one-way design as well as an enhanced two-way configuration. City Council and DDA board concurred to move forward with improvements that would maintain the one-way configuration but would also meet the goals developed for the project: enhance safety, improve

walkability and bikeability, activate economic development and optimize traffic circulation. The enhanced one-way configuration still allows for the conversion to two-way if appropriate at some point in the future.

The proposed design calls for narrowing of the existing through lanes, conversion of diagonal parking to parallel parking, creation of a parking separated bike lane and sidewalk widening to enhance the pedestrian experience with accommodations for landscaping, art, and outdoor dining.

Proposed improvements for 2024 include installation of “quick-build” elements such as bollards and striping to "set" both corridors from North Ave to Ute Ave, into the final configuration providing a pilot period. Curb and gutter modifications will need to be completed at Main Street, Rood Ave, and Belford Ave on both corridors. For 2025 through 2028, permanent improvements are proposed to approximately two blocks each year.

In May and June, DDA and City staff met one-on-one with adjacent businesses and property owners as the City finalized the final design. Significant concern was raised regarding the loss of parking in particular within a block of Main Street. It was suggested that the DDA/City investigate a one way, one lane configuration that would preserve more parking but more importantly make the corridors and cross streets even more bicycle and pedestrian friendly while preserving more trees.

The one way, one lane configuration was not contemplated in the original study and therefore the City retained the previous traffic engineering consultant for analysis. It appears that the one way, one lane configuration will work. Staff is working with CDOT on concurrence as it has the potential to impact their facilities at both I-70B/Ute Ave as well as Hwy 6 / North Ave.

The reconfiguration to a one lane, one way configuration has the potential to reduce implementation costs as it would allow for the design to fit within existing infrastructure.

FISCAL IMPACT:

This item for discussion purposes only.

SUGGESTED ACTION:

For discussion only.

Attachments

1. 5th St-Ute to Rood One Way-One Lane Concept - 230823

Angled Parking Remains

Angled Parking Remains

Close Driveway Access and Add Parallel Parking

Close Driveway Access and Add Parallel Parking

11' Through Lane

11' Through Lane

8' Parallel Parking

11' Lane - RT - Drops at Colorado

6' Bike Lane

Amenity Space

Driveway Access Remains

Right Turn Only - Lane Drop

8' Bike Lane

Amenity Space

5TH ST

UTE AVE

COLORADO

Angled Parking Remains

Angled Parking Remains

Parking and Access Remains - Can bump out further to increase sidewalk area

11' Through Lane

8' Parallel Parking

8' Bike Lane

8' Parallel Parking

Amenity Space

Amenity Space

Pedestrian Bump Out

MAIN ST

ROOD AV

DESCRIPTION	DATE
REVISION XXX	202X
REVISION XXX	202X
REVISION XXX	202X
REVISION XXX	202X

PROJECT NO. F2201			
DRAWN BY DJM	DATE 09/2022		
DESIGNED BY DJM	DATE 01/2023		
CHECKED BY EM	DATE 02/2023		
APPROVED BY KH	DATE 02/2023		

SCALES: PLAN & PROFILE
HORIZONTAL: 1" = 40
0 10 20 40
VERTICAL: 1" = N/A

CITY OF Grand Junction COLORADO

PUBLIC WORKS
ENGINEERING DIVISION

4TH & 5TH STREETS IMPROVEMENTS
5TH STREET (UTE AVE. TO ROOD AVE.)
EXHIBIT

6

Grand Junction City Council

Workshop Session

Item #1.c.

Meeting Date:	August 28, 2023
Presented By:	Trenton Prall, Public Works Director, David Thornton, Principal Planner
Department:	Community Development
Submitted By:	David Thornton, Principal Planner

Information

SUBJECT:

Transportation Engineering Design Standards (TEDS) Update

EXECUTIVE SUMMARY:

In July of 2022, the City hired Fehr and Peers to work on rewriting and updating the City's Transportation Engineering Design Standards (TEDS) manual. This effort has occurred alongside the City's work with Fehr and Peers on the Pedestrian and Bicycle Plan and will incorporate changes reflecting community values for multimodal transportation and support implementation of the adopted Pedestrian and Bicycle Plan.

BACKGROUND OR DETAILED INFORMATION:

The City of Grand Junction has completed a final draft of its Transportation and Engineering Design Standards (TEDS) Manual.

The TEDS manual update and rewrite began in mid-2022 guided by a Technical Advisory Committee (TAC) to review outdated information and provide thoughtful improvement recommendations. The TAC committee is made up of representatives of City departments, CDOT, Mesa County, the Regional Transportation Planning Office, neighboring jurisdictions, private developers, and transportation engineering consultants in the Grand Junction area that regularly use the TEDS manual.

The rewrite/updating process involved two key passes, a manual assessment, and draft updates. During the first phase, the project team reviewed the existing TEDS manual to identify all updates needed to achieve the project goals. The draft updates were done through a repetitive process with the consultant, City staff, and the TAC, and included two drafts before the final version.

During the second phase, the second draft update was made available for public input.

The project team conducted a listening tour, meeting with various users and development industry members that were affected by the changes the TEDS manual has to the City's development standards. The proposed final draft took the comments and concerns received from the entire community into account as well as recommendations by the TAC producing the final recommended draft for this important rewriting and updating of TEDS.

The TEDS Manual is now being proposed for consideration by the Planning Commission and City Council for city adoption. The following public hearings are being proposed:
September 26, 2023 – Planning Commission Public Hearing at City Hall Auditorium, 250 N. 5th Street at 5:30 p.m.
November 1, 2023 – City Council Public Hearing at City Hall Auditorium, 250 N. 5th Street at 5:30 p.m.

The TEDS Manual establishes requirements and provides guidance to the City and developers on how streets and multimodal transportation infrastructure are to be designed within Grand Junction. It includes guidance and requirements for preparing transportation impact statements (TIS), street design standards, access control, traffic signal design, street lighting, pavement, and pedestrian, bicycle, and transit facility design standards.

The TEDS Manual has not had a major update for almost 20 years. Some aspects of the manual are out of date and not reflective of current community values or current design practices being applied within the City. The manual also incorporates recommendations from the recently adopted Pedestrian and Bicycle Plan and improves usability.

The TEDS Manual has been rewritten and updated to incorporate the following general improvements:
- Reflect current community values for multimodal transportation (including for pedestrians, bicyclists, and transit users)
- Incorporate current state and national design standards
- Improve the usability of the manual
- Support implementation of the vision established in the recently adopted Pedestrian and Bicycle Plan

FISCAL IMPACT:

This item is for discussion purposes only. If City Council moves forward with adoption, capital projects will be budgeted according to the requirements in the design standards.

SUGGESTED ACTION:

For Discussion Only

Attachments

1. Final Draft - TEDS
2. TEDS Manual Appendix - 2023
3. TEDS_Manual_Update_Major_Changes_Made_082423
4. TEDS_Manual_Update_Informational_Sheet_082423
5. Public Comments with City Response
6. Public Comments - draft TEDS

TRANSPORTATION ENGINEERING DESIGN STANDARDS (TEDS)

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29.36 Street Lighting, Utilities and Mailboxes

29.40 Striping and Signing

29.44 Traffic Signals and Construction Zones

29.48 Transit, Bicycle, and Pedestrian Facilities

29.52 Deleted – (Reference Transit Design Standards TEDS Chapter 29.48, RTPO to host the document)

29.56 Alley Standards

29.60 Deleted – (Private Streets, Shared Driveways and Loop Lanes in Zoning Code)

29.64 Design Exceptions

29.68 Alternative Street Standards

See APPENDIX (Includes Local, Collector and Arterial Street Sections and other documents)

PROPOSED

29.01 INTRODUCTION

29.01.010 Forward

Applicability

The standards contained herein regulate all transportation improvements within the public rights-of-way, and all private work to be dedicated to the public, either as right-of-way or as an easement, and to site circulation. The standards are to be treated as law and applied to all development as defined by the Zoning and Development Code (Title 21 of the Grand Junction Municipal Code). To that extent they are imposed to provide for coordinated, modern development with safe and efficient transportation facilities for the benefit of and to serve and protect users. The standards apply within the City of Grand Junction Urban Development Boundary, which includes all areas within the city limits and portions of unincorporated Mesa County. The Urban Development Boundary can be seen on the Urban Development Boundary layer on the Grand Junction GIS Development Map.

All facilities and improvements within the public rights-of-way shall be designed by or under the direct supervision of a registered professional engineer licensed to practice in the State of Colorado. All drawings, designs, sections, detail and supporting data submitted to the City or County for approval must bear the engineer's seal and signature and a statement that:

> *This design complies with Grand Junction Municipal Code Title 29, the current Transportation Engineering Design Standards, dated mmmm dd, yyyy.*

All designs submitted shall be in accordance with the latest edition of the TEDS manual.

Some projects financed wholly or in part with state or federal funds are subject to the standards prescribed by agencies other than the City and County. Such standards may be more or less restrictive than the City of Grand Junction and Mesa County standards. The City and County require that the more restrictive standards shall be met.

The TEDS addresses frequent construction and development problems and questions. The standards by adoption and application ensure consistent transportation engineering design practices for new development and redevelopment of land within the City of Grand Junction Urban Development Boundary. Some of the material contained in this document has been drawn from standards of other cities and states and nationally established texts and publications.

The TEDS applies to all new developments except in special cases as noted, limited and defined herein or defined in the Zoning and Development Code. Infill development within the City of Grand Junction Urban Development Boundary may be constrained by existing improvements. If such a condition exists, where existing infrastructure has been built but does not meet current TEDS, the Director may allow the existing infrastructure to remain if it is adequate to serve the existing and proposed traffic (vehicle, ped, bicycle) and in good working condition. If it is in poor condition or inadequate, all requirements shall be constructed unless an affirmative waiver of TEDS is obtained in accordance with Chapter 29.64.010.

On Colorado highways within the Urban Development Boundary, the Colorado Department of Transportation (CDOT) Roadway Design Manual, the State Highway Access Code, and any corridor-specific access control plan shall apply but only if more restrictive than TEDS.

If a proposed development within the City of Grand Junction Urban Development Boundary requires access to a County roadway or work will be performed in the County right-of-way, approval from the County must first be obtained.

29.01.020 Companion Documents and Software Recommended For Use with the Transportation Engineering Design Standards

Publications

City:

- City of Grand Junction Municipal Code, Title 21 - *Zoning & Development Code* [GJMC Title 21]
- City of Grand Junction *Standard Contract Documents for Capital Improvements Construction* [Std Contract Docs]
- City of Grand Junction *Circulation Plan* [GJMC Title 31.08]
- City of Grand Junction *Pedestrian & Bicycle Plan* [Ped/Bike Plan]
- City of Grand Junction *Pedestrian Crossing Treatment Installation Guidelines* [Crosswalk Guide]
- City of Grand Junction *Fire Department Access* [GJ Fire Access]

County:

- Mesa County *Design Standards* [County Standards]
- Mesa County *Transit Design Standards and Guidelines*

State:

- Colorado Department of Transportation *Roadway Design Guide* [CDOT Road Design]
- Colorado Department of Transportation *State Highway Access Code* [CDOT Access Code]
- Colorado Department of Transportation *Pedestrian Crossing Installation Guide* [CDOT Ped Crossing Guide]

Federal:

- Transportation Research Board *Highway Capacity Manual*
- Transportation Research Board NCHRP *Guide for Roundabouts* [TRB Roundabouts]
- Federal Highway Administration *Manual on Uniform Traffic Control Devices* [MUTCD]
- Federal Highway Administration *Separated Bicycle Lane Planning and Design Guide* [FHWA Separated Bike Lane Guide]

Professional Organizations:

- Institute of Transportation Engineers *Trip Generation Guide* [ITE Trip Gen Guide]

- American Association of State Highway and Transportation Officials *A Policy on Geometric Design of Highways and Streets*
- American Association of State Highway and Transportation Officials *Guide for Bicycle Facilities*
- American Association of State Highway and Transportation Officials *Roadside Design Guide*
- American Association of State Highway and Transportation Officials *A Guide for Erecting Mailboxes on Highways*
- National Association of City Transportation Officials *Urban Bikeway Design Guide* [NACTO Bikeway Design Guide]
- National Association of City Transportation Officials *Designing for All Ages and Abilities* [NACTO All Ages Design Guide]
- National Association of City Transportation Officials *Don't Give Up at the Intersection* [NACTO Don't Give Up At Intersection]
- Colorado Asphalt Pavement Association *Guideline for the Design and Use of Asphalt Pavements for Colorado* [CO Pavement Guidelines]

Software

- *Synchro or other software as approved by the city transportation engineer that aligns with methodologies from the latest Highway Capacity Manual* (Signal Timing and Analysis)
- *SIDRA* or other software as approved by the city transportation engineer (Roundabout Analysis)
- AASHTO93 and M-E Design (Asphalt Pavement Design)
- *WinPAS* from American Concrete Pavement Association

29.04 STREET CLASSIFICATION AND STANDARDS

29.04.010 Street Classifications and Standards

All streets have different functions. The primary function of local streets is to serve land uses directly while the primary function of major streets is to move vehicles quickly and efficiently from one point to another. Ensuring that each street type can meet or maintain its primary function is crucial to the overall operation of the street system.

The streets in the Grand Junction urbanized area are classified according to their function in the transportation network. The major street types are Principal Arterial, Minor Arterial, Major Collector and Minor Collector. All others are local streets. The functionally classified streets have been identified on a functional classification map that has been adopted by the City of Grand Junction and accepted by Mesa County. Reference to the *Street Plan Functional Classification Map,* Figure 3 in the Grand Junction Circulation Plan and on the Grand Junction Circulation Plan and the Street Classifications layers on the Grand Junction GIS Transportation Map. Different access controls and design standards apply to different roadway classifications. The purpose is to preserve or enhance safety and traffic flow.

The Pedestrian and Bicycle Plan is referenced throughout this manual for compliance with the adopted plan. The existing and proposed routes in the Pedestrian and Bicycle Plan can be seen in the Pedestrian and Bicycle Plan layer on the Grand Junction GIS Transportation Map. Existing trails and bike routes can be seen in the Trails layer on the Grand Junction GIS Transportation Map.

Roadway segments with existing access management plans provide specific access control requirements on those roadways and should be referenced when applicable. The streets within the City of Grand Junction Urban Development Boundary with access control plans are shown on the Access Management Plans layer on the Grand Junction GIS Transportation Map. These include:

- The Patterson Road Access Management Plan
- The Pear Park Plan
- Access Control Plan's on CDOT Highways
    - Clifton Access Control Plan
    - CO 340 Access Control Plan
    - US 50 Access Control Plan
    - US 6 and I-70B Access Control Plan

The City Council and County Commission have adopted standard drawings and details for the construction of streets and location for utilities. These standards include minimum

right-of-way and street width requirements, and include construction details for major and local streets. These street section drawings will be referenced throughout the document and can be found in the Appendix.

The adopted Street Classification Map in the Grand Junction Circulation Plan as well as the Street and Utility Standard drawings are available online and in various formats including AutoCAD Files.

29.08 TRANSPORTATION IMPACT STUDIES

29.08.010 Transportation Impact Study

The Transportation Impact Study (TIS) will assess the impacts of proposed development on the existing and planned street system. Comprehensive and coordinated transportation planning is critical to providing a balanced transportation system. The application of sound design principles for new streets, preserving street capacities in existing areas, ensuring smooth traffic flow, accommodating all transportation modes, and preserving or increasing safety are part of the TIS. To evaluate the impacts of development proposals on the transportation system, a professionally prepared TIS shall be required. This chapter provides standards for the preparation of a TIS. In addition, the following documents shall be referenced for more detailed information:

(a) Street Classification Map, figure 3 in the Grand Junction Circulation Plan, or on the Grand Junction Circulation Plan and the Street Classifications layers on the Grand Junction GIS Transportation Map.

(b) Mesa County Functional Classification Map

(c) City of Grand Junction Standard Contract Documents for Capital Improvements Construction

(d) Pedestrian & Bicycle Plan

(e) Mesa County Transit Design Standards and Guidelines

(f) Corridor Guidelines

For Projects with direct or indirect access onto a state highway.

(a) CDOT State Highway Access Code

(b) CDOT Roadway Design Manual

The primary responsibility for assessing the transportation impacts associated with a proposed development rests with the developer, and including but not limited to the City, County, Colorado Department of Transportation (CDOT) or Regional Transportation Planning Office (RTPO) which operates Grand Valley Transit (GVT) serving in a review capacity.

29.08.020 Procedure

The following required steps describe the procedures required for the preparation and submittal of a TIS. This process can be altered slightly depending on the complexity of the project:

(a) General Meeting or Pre-Application Meeting

(b) Determination of Base Assumptions

(c) Submittal

(d) Review Agency Comments and Recommendations

29.08.030 General Meeting or Pre-Application Meeting

As a general rule, a TIS shall be required for all land use applications for new development in the City and as required by Mesa County Land Development Code. The requirement to prepare a TIS - or portions of a TIS - may be waived by the Transportation Engineer if the peak hour vehicle trip generation of the proposed project is less than 100 trips.

If the peak hour vehicle trip generation is estimated to be between 10 trips and 99 trips and the TIS requirement is waived by the Transportation Engineer, the applicant may still be required to complete a Traffic Assessment to determine if turn lanes are needed and if the proposed circulation serves pedestrians, bicyclists, and access to transit. A Traffic Assessment may include the following portions of a TIS: 1) Project Description, 2) Trip Generation, 3) Site Design and Circulation Evaluation, 4) Turn Lane Warrant Analysis, 5) Sight Distance Evaluation, and 6) Pedestrian and Bicycle Analysis.

If the applicant can demonstrate to the satisfaction of the Transportation Engineer that no other concerns exist with the transportation aspects of the proposed project, then a memo shall be prepared by the engineering consultant documenting the trip generation and safety improvements of the project and conclusions of the TIS.

The peak hour trip threshold of 100 is consistent with the Colorado Department of Transportation (CDOT) thresholds for requiring impact studies on state highways. The peak hour trip threshold of 10 – 99 for completing a Traffic Assessment is also consistent with CDOT thresholds on state highways. The methodology documented in the current edition of the *Institute of Transportation Engineers' (ITE) Trip Generation Manual* should be used to identify the peak hour vehicle trip generation rates for a project. The current edition of ITE *Trip Generation Manual* is adopted and incorporated by this reference.

The applicant shall provide, to the Development Engineer and the Transportation Engineer, information regarding:

(a) The project including type of land use (single family, townhomes, multi-family, office, retail, etc.) and size (number of dwelling units, square footage, etc.).

(b) The project site plan showing all proposed access locations and proposed land uses in relation to the accesses.

(c) Anticipated project completion date and project phasing.

(d) Any other information necessary or required to evaluate the project.

The appropriate agencies shall review the project information and provide comments regarding transportation issues including, but not necessarily limited to, accesses (locations/type), impacts on adjacent neighborhoods, the size of the study area and the study methodology.

29.08.040 Determination of Base Assumptions

The consultant preparing the TIS shall complete the Base Assumptions form. The Transportation Engineer will evaluate the TIS - Base Assumptions. The assumptions, once approved, shall confirm the base parameters and assumptions to be utilized by the traffic consultant in preparation of the TIS.

A Base Assumptions Form shall specify:

(a) Study Area Boundaries

(b) Study Years

(c) Future Traffic Growth Rates

(d) Study Intersections

(e) Time Period for Study

(f) Trip Generation Rates

(g) Trip Adjustment Factors

(h) Overall Trip Distribution

(i) Mode Split Assumptions

(j) Committed Roadway Improvements by other projects, CDOT, Grand Junction and Mesa County

(k) Other Relevant Transportation Impact Studies

(l) Areas Requiring Special Study

29.08.050 Pedestrian & Bicycle Analysis

As part of the Pedestrian and Bicycle Analysis the Applicant shall complete the Pedestrian & Bicycle Analysis Worksheet (see Appendix) and document the existing conditions of adjacent pedestrian and bicycle infrastructure. The Pedestrian and Bicycle Analysis Worksheet is intended to identify impacts (if any) and potential mitigations (if needed) to existing or planned pedestrian and bicycle infrastructure by the proposed development. A transportation engineer is not required to complete the Pedestrian and Bicycle Analysis Worksheet.

Documentation of the existing pedestrian and bicycle infrastructure should include the following areas near the development:

(a) Pedestrian and bicycle infrastructure adjacent to the proposed development.

(b) Pedestrian and bicycle infrastructure between the proposed development and the nearest adequate facilities if there are no or substandard pedestrian or bicycle facilities adjacent to the development.

(c) Pedestrian and bicycle infrastructure to destinations within a quarter mile of the development that will likely generate pedestrian or bicycle trips (such as grocery stores, transit stops, housing, employment centers, recreational facilities, services, and schools).

As part of this analysis the Applicant shall identify missing or substandard pedestrian and bicycle infrastructure by specifically noting the following conditions for each.

For pedestrian infrastructure:

(a) Pavement width

(b) Pavement condition

(c) Pavement material

(d) Whether the walkway is attached (directly adjacent to the street), detached (separated by a landscaped or hardscaped buffer), part of a multiuse trail independent of a street, or missing.

(e) Width of the buffer (between the sidewalk and the street) as applicable.

(f) Presence of obstructions in the walkway (such as street poles, etc.).

(g) Presence of pedestrian crossings and whether they are marked or unmarked, controlled (by a stop sign or signal) or uncontrolled.

(h) ADA compliance of pedestrian ramps at crossings.

(i) Number of conflicting driveways and lengths.

For bicycle infrastructure:

(a) Presence of a bicycle facility and type of facility (Bicycle facilities are defined by the Pedestrian and Bicycle Plan and described in section 29.48 Transit, Bicycle, and Pedestrian Facilities of the TEDS Manual.)

(b) Width of the bicycle facility and width of the buffer if applicable

The Pedestrian & Bicycle Plan shall be referenced and complied with for planned pedestrian and bicycle facilities within the study area boundaries. Pedestrian and bicycle standard widths and buffers by street type or context can be found in Chapter 29.20 for Local, Industrial, and Commercial Streets, and 29.28 for Collector and Arterial Streets, and Trails.

The analysis shall also discuss how pedestrians and bicyclists would access the proposed project to/from the adjacent neighborhood(s), and the need for special facilities to enhance pedestrian and bicycle connectivity.

The Pedestrian & Bicycle Analysis Worksheet (which can be found in the Appendix) will also identify existing pedestrian and bicycle facilities that may be impacted by the development and the extent of the impact, such as whether those facilities will result in an improvement, degradation, or no change to pedestrian and bicycle facilities. The form will also identify whether there is a proposed bicycle facility identified in the Pedestrian & Bicycle Plan on or adjacent to the proposed development and whether the development will impact the planned bicycle facility.

The form will also identify whether the proposed development is within an existing or planned shared micromobility zone as identified by the city. If so, the applicant should identify how the proposed development will include or accommodate storage space for shared micromobility devices. Similarly, the form will identify if the proposed development is within an overlay zone and whether the site plan is within compliance of the pedestrian and bicycle elements of the overlay zone.

29.08.060 Submittal

Copies of the TIS shall be submitted to the City Community Development or County Planning Department, as part of the required planning information. Revisions to the TIS shall be made as required if:

(a) Necessary to have a complete TIS; or

(b) When changes to the development necessitate additional revisions to the study. Electronic files of capacity analyses must be submitted with the TIS.

29.08.070 Review Agency Comments and Recommendations

The review agency or designee shall analyze, evaluate and/or review the TIS according to the adopted standards. Evaluative comments concerning the TIS shall be forwarded to the Project Planner. The Project Planner shall provide all review agency comments to the applicant. As a result of the engineering review the applicant may be required to:

(a) Perform and submit supplemental analyses and/or address specific transportation issues or;

(b) Prepare, perform, and submit a new study. Engineering review, shall to the extent practicable, cite references to this Manual, the Code, laws, rules, or regulation deficiencies in the TIS.

Review and evaluation of TISs are, and shall be, initially and principally based on local conditions and community expectations as articulated by local government and its officials. An example of such a local expectation is that eliminating existing left-turn phasing of a traffic signal at a nearby impacted intersection would not be a satisfactory solution to improving traffic level of service at that intersection.

If the TIS is based on assumptions that conflict with local conditions, and/or community expectations which may affect the usefulness or predictions proven by the TIS, the TIS will be rejected.

29.08.080 Transportation Impact Study Report Contents

A Colorado licensed professional engineer shall prepare the TIS. The engineer shall have experience in traffic and transportation engineering. A statement of qualifications must be included in the submitted study. Certification as a Professional Traffic Operations Engineer by the *Institute of Transportation Engineers* is preferred. Each TIS shall address:

(a) Project Description

(b) Existing Conditions

(c) Future Background Traffic Projections

(d) Project Traffic

(e) Total Traffic Projections

(f) Future Total Traffic Projections

(g) Site Circulation and Design Evaluation

(h) Transportation Impact Analysis

(i) Mitigation Measures

(j) Neighborhood Transportation Impact Analysis

(k) Conclusions

(l) Recommendations

(m) Any other information necessary or required to evaluate the project

29.08.090 Project Description

A description of the proposed project shall be prepared and include the type of land use and size of the proposed project, generally known as density and intensity. Intensity may be described in terms of floor area ratio or square footage of proposed development. Phasing plans shall be proposed, including the anticipated completion date. The proposed site plan shall be included; the site plan shall include a description of all proposed vehicular access locations, dimensions, and movements. The project description shall include how pedestrian and bicycle travel shall be accommodated. This shall include a discussion of types of sidewalks (attached/detached), pathways, trails, and connections to local and perimeter destinations.

29.08.100 Existing Conditions

The TIS shall identify the existing transportation system conditions. Existing conditions shall include a description of the surrounding roadway network, bicycle facilities, and pedestrian facilities; an evaluation of the peak hour capacity and level of service at the study intersections and traffic crash history.

29.08.110 Description of Existing Transportation System

The study description of the existing roadway network shall include, but not necessarily be limited to, the number of travel lanes, presence or lack of pedestrian and bicycle facilities, posted speed limits, and adjacent land use(s). Traffic and intersection data compiled by the City and/or County Engineering Departments may be available. All recent (within two years) average daily traffic data that is available for the roadway network shall be shown on a figure in the study. Intersection peak hour traffic data shall be no older than one year; if new counts are necessary this is the sole responsibility of the applicant. The applicant may, at the direction of the Transportation Engineer, be required to collect data at a shorter interval. All traffic count data shall be included in an appendix to the TIS.

The TIS shall describe the existing bicycle and pedestrian facilities and shall include any facilities directly adjacent to the project site and within one-quarter mile or as described in section The Pedestrian and Bicycle Analysis section. The Pedestrian & Bicycle Plan shall be referenced and complied with for planned pedestrian and bicycle facilities within the study area boundaries.

Bicycle facilities are defined by *the* Pedestrian and Bicycle Plan and described in section 29.48 Transit, Bicycle, and Pedestrian Facilities of the TEDS Manual.

Special attention shall be given to the bicycle and pedestrian connections to specific uses including but not limited to: schools, parks, employment centers, commercial areas, shopping, and adjacent land uses.

29.08.120 Capacity Analysis and Level of Service

The procedures set forth in the current edition of the *Highway Capacity Manual* (HCM) shall be used in analyzing the capacity and operational characteristics of vehicular, pedestrian and bicycle facilities.

HCM delay and queuing reports (such as Synchro or Sidra reports) shall be included in the appendices to the TIS report.

Roundabout analyses shall use SIDRA software or approved methodology. All worksheets shall be included in the appendices of the TIS report.

29.08.130 Future Traffic Projections

The future traffic projections shall be determined for each of the study years identified earlier as part of the base assumptions. Future traffic projections for the TIS analysis shall include:

(a) Planned System Improvements – Capital Projects

(b) Planned or in Process Development Projects

(c) Background Traffic Growth

A description of project-specific planned transportation system improvements identified in City, County or CDOT capital improvement plans shall be provided. This shall include, but not be limited to: signalization, intersection improvements, roadway widening, bicycle/pedestrian projects, and transit capital and operating/service improvements.

The future traffic analysis shall include known development projects that are within the study area and would impact the study intersections. Projects outside the study area currently being developed shall also be considered. Every project(s) and the cumulative effect shall be listed in the TIS and include location, size, and proposed land use.

The background traffic growth within the study area shall also be accounted for when determining future traffic projections. Background traffic growth is defined as the expected growth in traffic from regional changes to land use and the transportation network exclusive of the project. Growth factors suggested by the consultant in the Base Assumptions form will be reviewed by the appropriate agency prior to use in the TIS.

The resulting future peak hour traffic projections at the study intersections shall be depicted on a figure in the TIS.

29.08.140 Project Traffic

(a) The transportation impacts of the project shall be generally determined based upon the following three-step process:

(1) Determination of Trip Generation

(2) Determination of Trip Distribution

(3) Assignment of Project Traffic

(b) Trip Generation.

The trips generated by the project shall be determined and provided in tabular form. The trip generation shall be determined for total build-out conditions and for any development phases. The trip generation table shall indicate the number of average daily trips and AM and PM peak hour trips and any other peak hour periods relevant to the development type.

The development of trip generation estimates for the project shall be based upon data from the current edition of the *Institute of Transportation Engineers' - Trip Generation Manual*. This includes using the selection process identified in the *Trip Generation Manual* to identify the appropriate land use code and trip generate rate. However, other data sources or trip generation rate studies may be utilized if the manual does not contain data for the type of project or other reliable data exists which better reflects the trip generation characteristics of the project. The use of other trip generation sources shall be discussed with the Transportation Engineer before being used, and if agreed, shall be memorialized in writing signed by the Transportation Engineer.

Adjustments to the standard trip generation of the proposed project may be made to account for internal site trips, pass-by trips, or other site specific/project specific characteristics of the proposed project. Adjustments for these characteristics shall be discussed with the City or County Transportation Engineer before use; in most cases the TIS shall follow guidelines set forth in documents such as the ITE *Trip Generation Manual*. The adjusted trip generation for the proposed project shall be provided in tabular form or illustrated on figures.

Pass-by trip percentages represent the percent of expected trips generated from the site that would have traveled along the adjacent roadway network even if the land use did not exist. The percent of pass-by trips may be deducted from the expected trip generation from a proposed development of the corresponding land use. The ITE *Trip Generation Manual* should be used to identify any applicable pass-by trip percentages.

(c) Trip Distribution.

The trip distribution for the proposed project shall be identified in the TIS. The distribution pattern shall be based upon: the project's location within the urban area, the traffic model maintained by the MPO, existing traffic volume data, project marketing data, and engineering judgment. A figure showing the percentage of site traffic on each street shall be provided as part of the traffic study graphic material.

(d) Trip Assignment.

The project traffic shall be assigned to the roadway system according to the established trip distribution. The resulting project site generated traffic shall be depicted on figures for build-out conditions and any project phases. Daily and peak hour traffic volume information shall specifically be included.

29.08.150 Total Traffic Projections

The total traffic projections shall be determined for each of the study years identified in the base assumptions. The project-related traffic shall be added to the existing peak hour traffic. The resulting total traffic projections shall be depicted on a figure in the TIS. For each of the study years, the total traffic projections shall include the future traffic plus the project-generated traffic. The future total traffic projections shall be depicted on figures for each study year.

29.08.160 Site Design and Circulation Evaluation

The project shall be analyzed to determine if the proposed circulation serves pedestrians, bicyclists and vehicles. The site design shall be evaluated to determine if facilities for vehicles, pedestrians and bicycles meet design standards and/or Codes. The project shall comply with the adopted Pedestrian and Bicycle Plan.

The project shall be evaluated to determine if traffic flows are properly designed. Proper design shall minimize areas where motorists would tend to speed, minimize potential conflict areas between vehicles and pedestrians/bicyclists, and to establish circulation patterns that avoid unnecessary traffic congestion, cut-through traffic and conflict points. Adequate throat lengths for on-site stacking at exit points is required (see 29.16.100). At signalized driveways, the HCM 90th percentile worst lane queue model shall determine the necessary storage. Businesses with drive-thrus must conduct a queuing analysis for the drive-thru to demonstrate that the queue will not extend back onto the public street.

29.08.170 Transportation Impact Analysis

The TIS shall determine if the project creates any significant impacts at the study intersections and/or corridors within the study area boundaries. The peak hour capacity and level of service at each of the study intersections and /or corridors shall be evaluated for:

(a) Future Background Traffic Conditions for each Study Year;

(b) Total Existing Traffic Conditions; and

(c) Future Total Traffic Conditions for each Study Year.

The capacity and level of service analysis for each traffic scenario and each study year needs to include mode split assumptions, if any. The findings shall be shown in the TIS in tabular form or illustrated on figures.

29.08.180 Calculations for Capacity and Level of Service

HCM delays and queues shall be calculated for signalized intersections using the current version of the Highway Capacity Manual. Synchro is the preferred software, however additional software that that utilize the current HCM methodologies may be utilized with prior approval from the Transportation Engineer. The HCM delay and queues shall be calculated for the identified peak hours for existing conditions, the projected traffic with build-out of the project, or at completion of phases of larger projects. An appropriate 15-minute peak hour factor shall be used. The performance evaluation of signalized intersections shall include the following:

(a) Critical movements shall be identified and must meet or exceed the threshold requirement of 35 seconds of delay or less;

(b) No movements shall have an adverse effect on the coordinated progression of the street system as determined by an approved coordination model consistent with the methods of HCM;

(c) HCM 90th percentile worst lane queues shall be calculated and shall not obstruct upstream intersections or major driveways;

(d) The analysis of a signalized corridor must show a reasonable progression band, identified as a usable (unblocked) band for major traffic movements.

Unsignalized intersections shall be analyzed using the current Highway Capacity Manual methods. In the performance evaluation of stop controlled intersections, measures of effectiveness to consider include the delay, volume/capacity ratios for individual movements, average queue lengths and 95th-percentile queue lengths to make appropriate traffic control recommendations. The Highway Capacity Manual recognizes that the delay equation used in the capacity analysis procedure will predict Level of Service F for many urban intersections that allow minor-street left-turn movements, regardless of the volume of minor-street left-turning traffic. In recognition of this, the TIS should evaluate the results of the intersection capacity analysis in terms of all of the measures of effectiveness.

Roundabouts shall be analyzed using the current version of SIDRA or approved methodology.

29.08.190 Mitigation Measures

The TIS shall include feasible measures that would mitigate the project's vehicular traffic impacts. The mitigation measures shall be in addition to the required improvements necessary to preserve corridor and intersection capacity. The acceptable mitigation measure(s) shall minimize the demand for trips by single occupant vehicles and increase the use of alternative modes. Mitigation listed in order of priority includes:

(a) Transportation Demand Management Measures

(b) Traffic Signal Operation Improvements

(c) Street Widening and Other Physical Improvements

29.08.200 Transportation Demand Management (TDM) Measures

Transportation Demand Management measures are designed to facilitate the use of alternate transportation modes in order to decrease demand on the roadway system by single occupant vehicles. Example of TDM measures include:

(a) Vehicle trip reduction incentives and services offered by employers to encourage employees to utilize alternative modes of travel such as carpooling, vanpooling, riding public transit, bicycling, walking and telecommuting.

(b) Provision of a mix of land uses in close proximity, facilitating walking, bicycling or transit trips.

A detailed description of the proposed TDM measures and implementation plan shall be included in the TIS for any project seeking TDM-related trip reductions. If the proposed TDM program is acceptable to the Transportation Engineer, the applicant shall be allowed to reduce total project vehicle trips by an amount commensurate with applicable trip reduction policies.

The intersection capacity and level of service shall be calculated to reflect the application of the proposed mitigation measures; the calculation shall show that the project-related impacts have been reduced to an acceptable delay (see thresholds identified in 29.08.180) for all movements and transportation modes (vehicle, bicycles, pedestrians). The findings shall be shown in tabular form.

29.08.220 Traffic Signal Operational Improvements

Required traffic signal operational improvements may include upgrading signals with additional signal phases and/or signalization of an unsignalized intersection, addition of turn lanes and/or construction of a roundabout.

The need for new traffic signals shall be based on warrants established in the Manual on Uniform Traffic Control Devices, MUTCD. In determining the location of a new signal, traffic progression is of paramount importance. On arterial streets a spacing of one-half mile for all signalized intersections is necessary to achieve reasonable operating speed, capacity and optimum signal progression. Pedestrian movements shall be considered in the evaluation and adequate pedestrian clearance provided in the signal phasing assumptions.

The applicant shall submit an analysis addressing proposed access, proposed signals and capacity and level of service based on the City's operational practices. All assumptions shall be documented in the TIS. An approved traffic engineering analysis must be made to properly locate all proposed accesses that may require signalization. The roadway to be analyzed for signal progression shall be established by the City or County and shall include all existing and proposed signalized intersections.

(a) The progression pattern calculations must match the existing cycle length on the corridor under analysis.

(b) Signal phasing assumptions must relate to traffic volumes in the capacity analysis of individual intersections.

(c) Approved computerized progression analysis techniques must be of the type which utilize turning movement volume data and pedestrian clearance times in the development of timing plans.

(d) The green time allocated to the cross street shall be considered no less than the time which is required for a pedestrian to clear the main street using MUTCD standards.

(e) Existing timing and phasing data for City and/or County signals on the corridor(s) being analyzed will be provided to the consultant on written request.

(f) Elimination of or substantial changes to existing phases and/or timing will not be allowed without written approval of the Transportation Engineer.

(g) Existing signal operations shall be presumed to reflect the local conditions and community expectations as determined and directed by the Transportation Engineer.

(h) If optimum usable bandwidth, as that term is defined by the Transportation Engineer, would be reduced if a traffic signal were installed then the intersection shall remain unsignalized and turning movements shall be limited.

29.08.230 Street Widening and Other Physical Improvements

Mitigation measures that include street widening and other physical improvements must be physically feasible and must meet minimum standards and Code(s) for both on-site and off-site improvements.

29.08.250 Conclusions

The findings of the TIS shall be provided in a summary report.

29.08.260 Recommendations

The TIS should include an executive summary including recommendations. Recommended improvements/mitigation measures to achieve standards and safety improvements shall be stated. The recommendation section of the report shall describe the location, nature, and extent of proposed improvements. A sketch of each improvement shall be provided showing the length, width, and other pertinent geometric features of the proposed improvement.

29.12 ACCESS MANAGEMENT

29.12.010 Access Management

Access management is a means to protect the safety, traffic operations, and the assigned functional purpose of the street system while considering the access needs of the various elements of the system. Access management addresses the problems of congestion, capacity loss, and accidents. Providing access to land development while simultaneously preserving the flow of traffic, bicycles, and pedestrians on the surrounding road system in terms of safety, capacity needs, and speed is the goal of access management. Access is defined as any driveway or other point of ingress/egress such as a driveway, alley, street, road, or highway that connects to the public street system.

The street system provides mobility to the traveling public. This travel may serve one of two distinct purposes. The first is to provide throughput, allowing travelers to move efficiently. The second is to provide direct access to properties. Arterial streets are traditionally designed to prioritize throughput for motor vehicles by intentionally limiting access. In contrast, local streets provide direct access to properties, but do not provide high throughput for motor vehicles. To accommodate throughput for motor vehicles on city streets, access on collectors and arterials must be intentionally managed.

However, limiting access on collector and arterial streets can also limit mobility of non-motorized and mass transit modes along those corridors. Therefore, the design of streets should consider the impacts to active transportation and transit users and how they may use the system differently. The Active Transportation Corridors defined in the Pedestrian and Bicycle Plan are along a mix of arterial, collector, and local streets, but are effectively the arterial street network for people walking and biking. Thus, travel for these users should be prioritized on these corridors. In some cases limiting access for motor vehicles can improve throughput for both motor vehicles and active transportation users, such as limiting driveways and turning movement conflicts along an arterial street. However, in other cases they may conflict. For example, long gaps in an arterial road without a traffic signal can improve throughput for motor vehicles along that corridor, but can decrease mobility for active transportation users trying to cross the street. Therefore, access control measures must be sensitive to the mobility needs of all modes of transportation.

The existing and future function of each street is critical in determining the number, location, and design of access points and access control. Access management extends beyond simply specifying the number and separation of driveways and access points. Included are roadway design, such as auxiliary lanes, medians, stopping sight distance, channelization, and land development issues such as sign standards, internal site circulation, driveway layout, and alternative travel modes.

Appropriate access management strikes a balance in preserving the functional integrity of the street and providing access. Speed, capacity, and safety are the significant reasons for instituting access management. With proper access management, the speed differential between vehicles can be minimized or separated and proper access management will reduce the number of conflict points, resulting in fewer accidents. When the traffic on the street system can travel safely and efficiently, capacity is preserved. Access management recognizes the interests of both landowners and roadway users in providing a transportation system that better meets the needs of all interests.

29.12.020 State Highways

Refer to the current edition of The State Highway Access Code. Under that code, all accesses constructed on a State Highway require an access permit approved by the State. The Access Code requires owners of land adjacent to a State Highway that is being developed or redeveloped to apply for an Access Permit for each access to the State Highway if the use of the property is being changed or the existing access modified. The definition of property change is included in Section 2.6 of the Code.

29.12.030 City or County Streets

Local jurisdictions approve the design, number, and location of access points. When changes in land use occur which result in changes in the type or nature of access operation, the access shall be approved with the development plans and constructed to meet current standards.

29.12.040 Backing Into the Right-of-Way

Parking pods that require backing maneuvers into a public street will be allowed only on streets posted at 25 mph or less and with an ADT of 3000 vehicles or less. Parking pods shall be privately owned, or a revocable permit obtained if in public right of way, and privately maintained. Landscape islands shall be required every 8 spaces.

Backing into alleys will be allowed from normal parking stalls, regardless of land use, under the following conditions:

(a) The parking is designed so the parking stall and aisle meet the requirements of section 21.06.090 of the Zoning and Development Code. The needed aisle width can include the existing alley.

(b) A maximum of four spaces in a row will be allowed. This standard is designed for perpendicular parking spaces and a 50' wide lot. Wider lots can create more spaces, up to a maximum of 8 spaces. Angle parking will be addressed on a case-by-case basis to achieve the intent of this standard.

29.12.050 Provision of Access

If a property has frontage on more than one street, access will be permitted only on those street frontages where design and safety standards can be met. The primary access shall be on the lower-order street. Refer to the current edition of the State Highway Access Code for access requirements off a state highway.

29.12.060 Restriction of Turning Movements

Turning movements may be limited where necessary for the safe and efficient movement of traffic, both on and off-site.

29.12.070 Number of Access Points and Joint Access

Each development applying for access to a collector or arterial street shall analyze its own internal circulation system and access points, as well as impacts to the surrounding properties and street system as part of the required TIS.

Cross-access connections and/or stub streets to abutting properties will be required between commercial and residential properties unless it can be shown that this won't facilitate better circulation or it creates safety hazards. The project site design shall include a circulation and access system that will safely and efficiently accommodate traffic from adjacent properties.

One access point per property ownership will be permitted, unless an approved site plan or TIS shows that additional access points are required to adequately handle driveway volumes and that the additional access points will not be detrimental to safety, traffic flow, and pedestrian and bicycle travel on adjacent public streets. Additional access points may also be allowed at the discretion of the director. Temporary access may be granted to accommodate phased development of a site. Temporary accesses are subject to removal, relocation, redesign or reconstruction after permanent approved access is constructed.

29.12.080 Cross-Access Corridors

Cross-access corridors shall be designed to provide common access and circulation among parcels, to assist in local traffic, pedestrian, and bicycle movement. Cross access should be designed to include the following elements:

(a) Sufficient separation between the public street and the cross-access corridor to allow storage and circulation to occur within the site.

(b) Sufficient width to accommodate **two-way travel** aisles designed to accommodate automobiles, service and delivery vehicles.

(c) Stub-outs to the abutting properties that will be tied in to provide cross-access.

(d) Linkage to other cross-access corridors in the area, if applicable.

(e) Sidewalks and/or trails to connect pedestrians and bicycles from existing facilities to, or through, the parcel to surrounding properties that will develop in the future and/or to existing facilities in a nearby location.

Wherever a cross-access corridor is designated on a subdivision plat, site plan or other development application, the property owner shall grant and record an easement allowing cross-access to and from the other properties in the area.

29.12.090 Stub Streets

A stub street is an existing or planned street that is or will be extended to the property line(s) of a development for the purpose of future extension onto adjacent property. A stub street may be for access and/or as a part of the comprehensive circulation system.

29.12.100 Abandoned Accesses

Existing driveways shall not be abandoned, relocated, altered, or reconstructed without a permit from the appropriate agency..

29.12.110 Exclusive Turn Lanes

Exclusive turn lanes are described in detail in the CDOT State Highway Access Code and in Chapter 29.28.

29.12.120 Field Access

Field access is defined as access used solely for agricultural purposes and traffic generation does not exceed one vehicle (two trip ends) per day when averaged over one calendar year. When an agricultural property changes to a new or more intensive land use, all field accesses to the property shall be considered abandoned and access points for the new or more intensive use will be determined by the standards contained within this document.

29.12.130 Access Exceptions

Exceptions to these standards shall be allowed only as set forth in Chapter 29.64.

29.16 ACCESS DESIGN AND SITE CIRCULATION

29.16.010 Access and Site Design

Access is defined as any driveway or other point of ingress/egress such as a street, road, highway or driveway that connects to the public street system. This chapter defines the types of accesses, their locations, and geometric requirements.

Acceptable site design is achieved when three major elements – access location and design, site circulation and parking, building footprint and location – are integrated. Site circulation can directly affect the safety, traffic operations and the assigned functional purpose of the street system. Good site circulation is necessary to protect the integrity of the public streets as well as public safety within the site.

On collector and arterial streets, shared accesses will be required wherever possible to minimize the number of access points along a street. Shared access provides for safer and more efficient operation of the flow of traffic on the street and shall minimally meet the above requirements. Access easements are required.

29.16.020 Access Locations

All entrances and exits to vehicular traffic areas shall be located and constructed to minimize traffic congestion on the public street system.

29.16.030 Spacing and Offsets

On local residential streets, single-family residential driveways on the same side of the street shall be located a minimum of 5 feet, from property line, to allow for maneuvering to occur without trespass. In locations where the 5 feet minimum spacing cannot be met due to limited lot frontage or other field constraint, the Development Engineer may permit a variance from the spacing standard.

On local commercial and industrial streets, driveways on the same (spacing) or opposite side (offset) of the street shall be spaced a minimum of 50 feet apart, measured from edge of access to edge of access. On collector streets, driveways on the same or opposite side of the street shall be spaced a minimum of 150 feet apart. (see Driveway Spacing, Width, and Offset Requirements by Street Classification). On minor arterial streets where no other access to lower order streets is available, driveways on the same or opposite side of the street may be allowed but must be spaced a minimum of 150 feet apart and may be restricted to right-in, right-out movements. On principal arterial streets where no other

access to lower order streets is available, driveways on the same or opposite side of the street may be allowed but must be spaced a minimum of 300 feet apart and may be restricted to right-in, right-out movements. Greater distances may be required for left turn storage lanes.

No new residential driveways shall be allowed on arterial streets serving less than three units and allowable driveways must be designed so vehicles are not backing into the street.

29.16.050 Corner Clearance

Corner clearances are defined as the distance between the edge of a driveway (exclusive of the taper) and the edge of the nearest intersecting street. The clearance is necessary so that accesses do not interfere with street intersection operations and should provide drivers with adequate perception-reaction time to potential conflicts. On corner lots, the access location shall be on the street of lowest functional classification.

Minimum Corner Clearance (ft)
Measured from Flowline to Near Edge of Access

Street Classification Of Street Where Access Is Proposed	Clearance From Unsignalized Intersections	Clearance From Signalized Intersections	Single Family Residential Driveways
Local (≤ 300 ADT)	50'	150'	35'
Local (> 300 ADT)	50'	150'	50'
Collector	150'	150'	100'
Minor Arterial	150' *	300' *	N/A*
Major Arterial	300' *	300' *	N/A*

*May be restricted to right-in, right-out only access. Single family access to arterial streets is not acceptable practice and will be permitted only in extreme hardship cases.

29.16.060 Access Design - Types of Access

Generally, all new private property access shall be designed as curb cuts. Radii type curb returns with handicap ramps will be required for accesses when the peak hour right turn entering volume exceeds 20 vehicles in the peak hour. Auxiliary lanes shall be constructed when turn volumes meet the minimum criteria in the right turn warrant chart in section 29.28.170.

29.16.070 Design Vehicles

All accesses shall be designed to accommodate the turning characteristics of the largest vehicle that will most commonly utilize the proposed access. Most residential and small commercial driveways only need to accommodate passenger cars; other commercial or industrial developments will usually require at least one access that can accommodate the efficient entry or exit of larger vehicles.

29.16.080 Curb Cut Width

The width of the curb cut for a driveway will be wider than the driveway width to accommodate the turning radius of the entering and existing vehicles. The design turning radius shall be at least 15 feet. The effective turn radius (which accounts for on-street bike lanes or parking if applicable) shall be 20 feet for multi-family residential access and 25 feet for commercial access. The effective radii for industrial uses or truck delivery accesses shall be individually designed for the type of truck that will frequently use the access, with a maximum required radius of 50 feet.

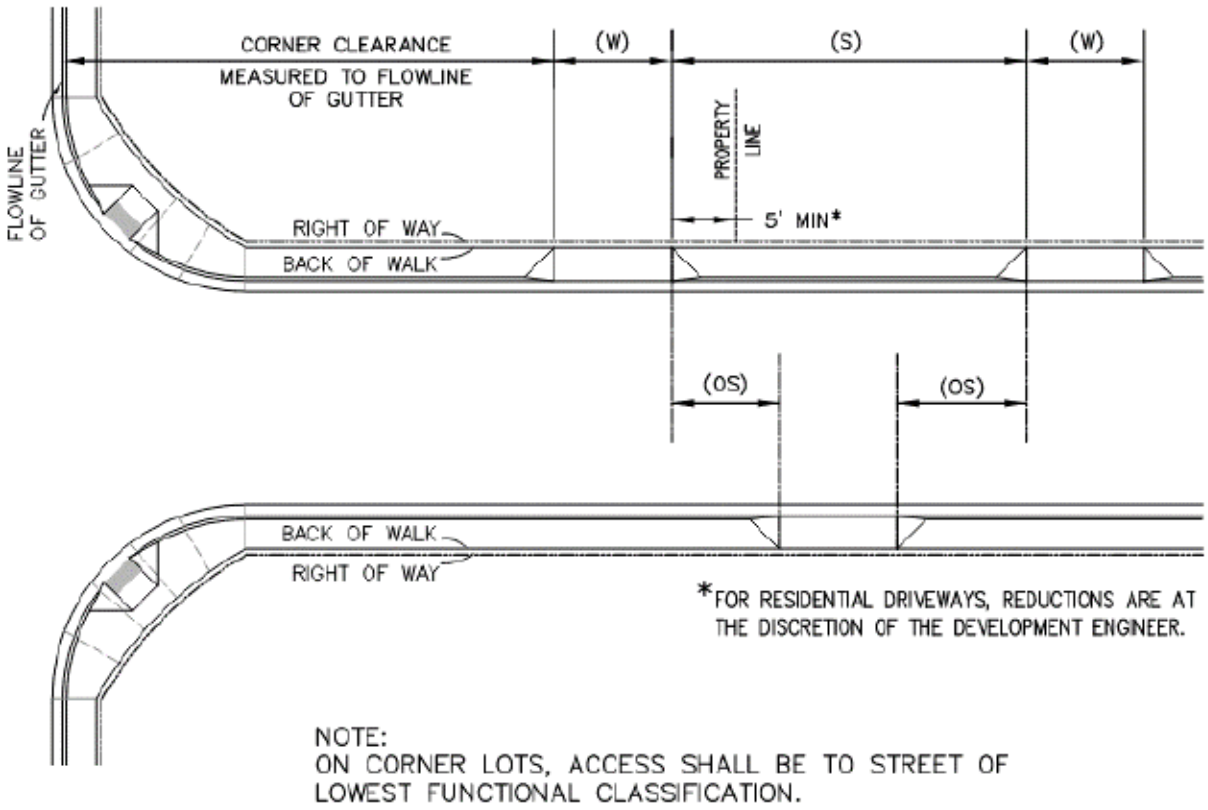
29.16.090 Driveway Width

Single-family residential driveway widths shall be between no more than 33 feet. All other access drive widths shall be between 25 feet and 36 feet. Multi-lane driveways shall be designed to accommodate a standard ingress lane of 14 feet and egress lanes of 11 feet.

Driveway Spacing, Width, and Offset Requirements by Street Classification

Street Classification (Land Use)	Driveway Spacing (S)	Driveway Width (W)	Offset (OS)
Local (Residential)	10' Min.	33' Max.	No Requirement
Local (Commercial and Industrial)	50' Min.	25' Min. 36' Max.	50' Min.*
Collector	150' Min.	25' Min. 36' Max.	150' Min.*
Minor Arterial	150' Min	25' Min. 36' Max.	150' Min.*
Principal Arterial	300' Min.	25' Min. 36' Max.	300' Min.*

* Greater offsets may be required for left turn storage lanes.



29.16.100 Throat Lengths and Vehicle Storage

Adequate vehicle storage capacity shall be provided for both inbound and outbound vehicles. Adequate storage facilitates the safe and efficient movement of vehicles between the street and the development.

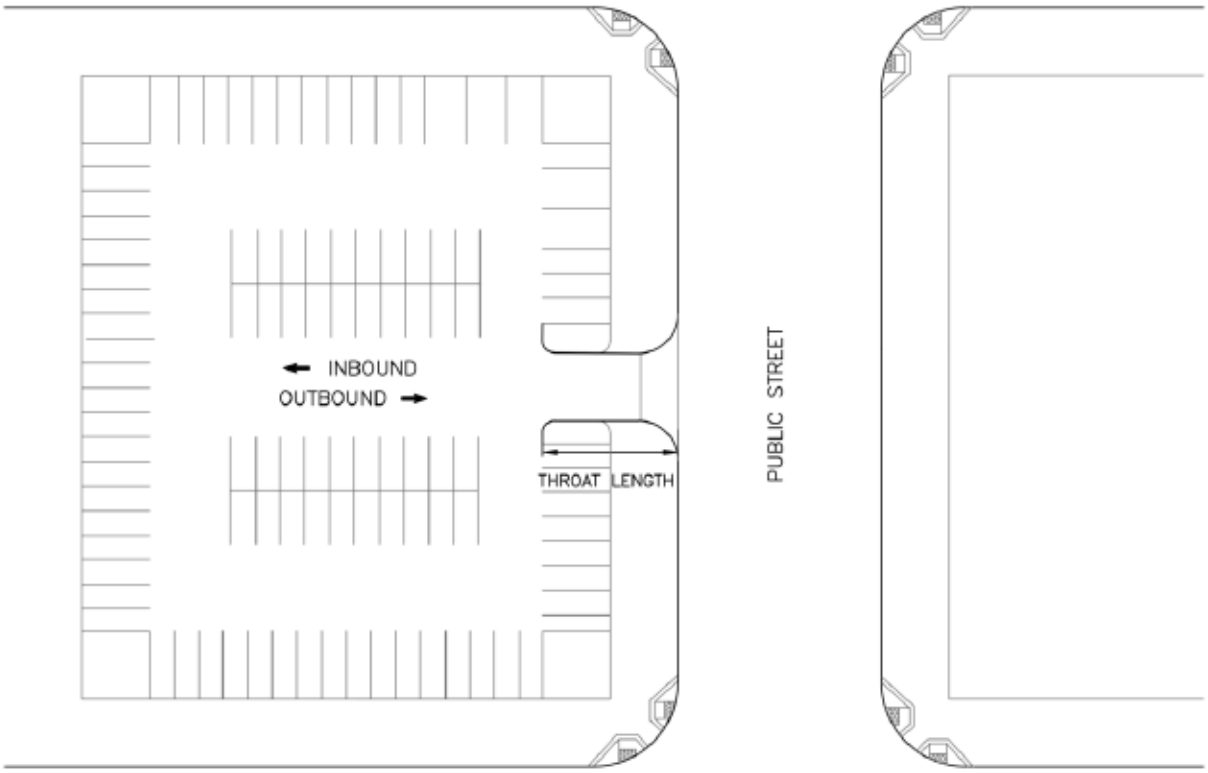
The access throat shall be of sufficient length to prevent vehicles from spilling onto the public street system. Inbound vehicle storage areas shall be of sufficient size to ensure that vehicles will not obstruct the adjacent street, sidewalk, or circulation within the facility. The throat shall be of sufficient length to provide adequate storage of outbound vehicles without them interfering with on-site circulation. Outbound vehicle storage areas shall be provided to eliminate backup and delay of vehicles within the development. At signalized intersections, adequate storage for the outbound movement must be provided to enable vehicles to exit efficiently on green.

The requirements for vehicle storage (see On-Site Driveway Vehicle Storage Lengths) in parking lots and at drive-up type facilities are generally based on a typical vehicle spacing of 20 feet, but may be increased where larger vehicles can be expected.

29.16.110 Accesses Serving Off-Street Parking Lots

On-site storage is measured from the flowline of the street to the first parking stall or aisle of a parking lot (see Throat Length Extents). Vehicle storage equivalent to or greater than the minimum distances shall be provided at accesses serving the site. The recommended distance for accesses with two approach lanes may be adjusted, subject to the TIS findings, roadway geometry, traffic volumes, and site layout.

Throat Length Extents



On-Site Driveway Vehicle Storage Lengths (feet)

Parking Spaces Per Exit Lane	Storage Length Required			
	Multi-Family Residential	Retail	Office	Industrial
0-25	25	25	25	25
25-200	25	50	25	50
201-400	25	75	100	150
401-600	50	150	200	More Lanes
601-700	100	200	More Lanes	More Lanes
> 700	200	More Lanes	More Lanes	More Lanes

Vehicle Storage Requirements for Drive-Up Facilities

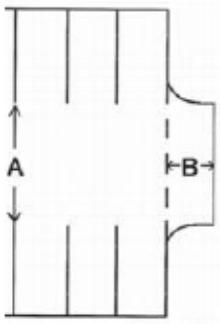
Type of Facility	Vehicle Storage
Automated Tellers	4 spaces per machine
Drive-In Bank	3 spaces per 1,000 sf
Drive-In Restaurant	Identified through TIS
Automatic Car Wash	7 spaces per wash line
Self-Service Car Wash	2 spaces per wash line
Drive-In Theater	15% of the total parking capacity
Service Stations	1 space per nozzle + 1 space/island/direction
Drive-In Liquor Store	3 spaces per window[1]
Drive-In Dry Cleaners	2 spaces per window[1]

Adapted from Table 9-4, NCHRP 348 *Access Management Guidelines for Activity Centers*

[1]Measured from the pick-up window and includes the vehicle at the window.

29.16.115 Dead-End Parking Aisles

Parking stalls located at the end of a dead-end parking aisle must be provided with adequate backing and turnaround space. The required depth of the turnaround space shall be determined as follows:



Depth of Dead-End Parking Aisles

Width of Driving Aisle (A)	Depth of Turnaround Space (B)
24' or less	6'
25'	5'
26'	4'
27'	3'
28'	2'
29'	1'
30' or more	0'

29.16.120 Commercial Uses

The vehicle storage area that shall be provided for various drive-through commercial uses shall be:

(a) Based on a 20' length vehicle and a 12'wide lane.

(b) Separated from normal parking circulation aisles.

(c) Designed using the appropriate design vehicle turning template.

29.16.130 Grades

C:\Users\davidth\Downloads\Driveways.jpgAccess grades shall meet the same standard grades identified for intersections in Chapter 29.28.

29.16.140 Sight Distance

Adequate sight distance (see GJMC 29.28.140) and sight zones (see GJMC 29.28.150) shall be provided at all access intersections and internal street or drive aisle intersections within a development.

29.16.150 Channelization Islands

Channelizing islands are discouraged. Use of medians to control turning movements will be required where physical conditions allow.

Channelized islands will only be allowed in situations where medians to control access are not feasible. If allowed, the islands shall not be smaller than 100 square feet and shall provide vertical curb and exposed colored aggregate or patterned concrete treatment. Patterns and color shall match those of any nearby islands or medians. Additional right-of-way or easement may be required to accommodate these designs. The ends of the islands shall typically be constructed with 2-foot flowline radii.

Refer to the Intersection Chapter (Chapter 8 in the 2023 version) of the CDOT Roadway Design Guide for additional guidance.

29.16.160 Pedestrians and Bicycles

Pedestrians and bicyclists are especially vulnerable to turning vehicles at access drives. The consolidation of access points benefits pedestrians and bicyclists by reducing the number of conflict points along the roadway. Access designs for pedestrian and bicycle facilities shall conform to Chapter 29.20 and Chapter 29.28 requirements and with the Grand Junction Standard Contract Documents for Capital Improvements Construction.

29.16.170 Transit

Where applicable, accesses shall be designed to accommodate busses or other transit vehicles in accordance with the Mesa County Transit Design Standards and Guidelines. These accommodations shall occur at shopping centers, malls, multifamily developments, or other mixed-use developments where transit vehicles may be frequent users of the on-site circulation system.

29.16.180 Emergency Vehicles

All accesses shall be designed to readily accommodate emergency vehicles that would ordinarily respond at the particular establishment (Refer to the current version of the Grand Junction Fire Department Access document and the locally adopted fire code).

29.16.190 Utilities and Lighting

Accesses shall be located to ensure that utility poles, electric boxes, and signs do not interfere with the visibility of the access or available sight distances. The design of site lighting shall maximize the visibility and location of the access.

29.16.210 Delivery and Service

Proposed development that includes truck loading/unloading shall provide adequate space for all truck operations. Adequate space minimally means that all truck operations be performed entirely on-site and off the public street system. Sufficient apron space shall be provided at all loading/unloading areas. Sufficient apron space is the area required for truck backing maneuvers. Delivery areas shall be separated from general traffic areas. Separation of delivery vehicle traffic from customer traffic shall occur entirely on-site. On-site roadways used by delivery vehicles shall be designed to accommodate the heavier payloads and turning characteristics of the largest vehicle expected to use the site.

29.16.220 Transit and Pedestrians

In larger mixed-use developments, multi-family developments, shopping centers, and malls, on-site roadways shall be designed to accommodate transit. This includes the design of pick-up/drop-off areas as well as the circulating roadways. Transit stops shall be located within a reasonable walking distance of the main building entrance while minimizing potential conflicts with circulating vehicles. Continuous pedestrian walkways and crossings that meet ADA standards and follow a direct (non-circuitous alignment) must be designed on-site and connected with each other and to the adjacent pedestrian network to reduce conflicts between pedestrians and vehicles and provide convenient access between the land uses and transit.

29.16.230 Inter-parcel Circulation

Inter-parcel circulation with shared access is required between adjacent commercial properties for vehicles, bicycles, and pedestrians. Inter-parcel circulation with shared access may be required between residential and commercial. This will be evaluated on a case-by-case basis to consider the context of the situation. This will reduce the number of curb cuts on public streets and will increase the safety and comfort for all modes of transportation on the adjacent street and capacity of the street system. Within larger development sites public streets may be required as part of a connected network to facilitate inter-parcel circulation of vehicles, pedestrians, and bicyclists.

29.16.240 Landscaping

Site landscaping requirements are detailed in the Zoning and Development Code. Landscaping at access points must meet the requirements for sight distance (see GJMC 29.28.140) and the sight zone (see GJMC 29.28.150). Landscaping islands shall also consider the same requirements.

29.20 LOCAL & MINOR COLLECTOR STREETS, LANDSCAPING & TRAFFIC CALMING

29.20.010 Street Standards

Geometric street standards have been developed to provide livability for residents, safety for both vehicular and pedestrian traffic and efficient movement. This chapter sets the minimum standards for geometric design of local and minor collector streets that provide access to residential, commercial, and industrial land uses. These streets deserve special discussion because they are the most common streets built for development. Local streets are defined as streets whose primary function is to serve the abutting land use. Design criteria for both horizontal and vertical alignments are established in this chapter. Design criteria for major collector and higher classification streets are discussed in Chapter 29.28.

29.20.020 Local and Minor Collector Streets

Streets shall conform with the adopted Street Plan Functional Classification Map, Figure 3 in the Grand Junction Circulation Plan. Minimally, the plan identifies locations where collector street connections are desired and identifies general alignments for local streets. Street layouts shall continue streets in adjoining subdivisions or their anticipated locations when adjoining property is not yet developed to provide interconnectivity.

29.20.030 Block and Lot Dimensions

Refer to the Zoning and Development Code for block and lot dimension requirements.

29.20.040 Right of Way, Street Lane Widths, and Street Lengths

The required right-of-way width for a street is stated in the Street Sections. Additional widths may be required for needed through lanes, turn lanes, speed change lanes, and where it is necessary to accommodate slopes, irrigation crossings, drainage structures, and timing of adjacent development.

29.20.050 Cul-de-Sacs and Dead End Streets

No cul-de-sac shall be more than 750 feet long, measured from the center of the intersection to the center of the turnaround.

No more than 30 single family/duplex units shall be located on a cul-de-sac street. All cul-de-sacs shall have a turnaround at the terminus point. For single or two-family residential developments that exceed 30 units, a separate and approved fire apparatus access road will be required. If it is a multi-family residential development, the number of units can exceed 30 units and the fire code will govern.

Surface drainage of a cul-de-sac shall be conveyed toward the intersecting street, if possible, and if not possible a drainage easement shall be provided leading out of the cul-de-sac.

Fire Department Access standards contain additional details to assist developers and designers in meeting the requirements of the fire department (Fire department Access B.2-5) When two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

Unless the street meets all of the requirements for a cul-de-sac, no dead end streets shall be allowed except in cases where such streets are designed to connect with future streets on adjacent land. In that case, if any lots in the subdivision are dependent upon the dead end street for access, the plat shall include a temporary turnaround easement at the terminus of the street.

A single access street system shall be allowed for a maximum 100 dwelling units. Before the 101st unit can be platted, a secondary access is required to be constructed or financially secured. This secondary access must be platted as public right-of-way and constructed to public street standards to the property line of the subdivision. A temporary turnaround shall be constructed if the stub street access is longer than 150 feet.

Pedestrian pathways or trails may be required off the end of cul-de-sacs to adjacent streets or cul-de-sacs to provide direct pedestrian and bicycle connectivity. See the Zoning and Development Code for pathway and trail connection requirements.

29.20.060 Alignments

(a) Horizontal Alignment

Designs must conform to the pattern of thoroughfares designated in the Street Plan Functional Classification Map in the Grand Junction Circulation Plan. Proposed streets align with existing or platted streets with which they are to connect.

Local streets (if not ending in a cul-de-sac) shall extend to the property lines of the project. A temporary turn around area capable of supporting a fire truck (HS-20 loading) shall be required at the end of the street improvement if a cul-de-sac is not provided and the street is longer than 150' from the flowline of the intersecting street. Proposed streets with widths different from existing streets to which they are being connected must be transitioned using the pavement transition taper standards.

(b) Curve Radii

(1) All curve designs shall be based on the Horizontal Curve Design Criteria.

Horizontal Curve Design Criteria

Design Criteria[1]	Local		Minor Collector[3]
	Hillside[2]/ Residential	Industrial[3]/ Commercial[3]	
Design Speed (mph)	20	25	25
Center[4] Line Radius (ft)	110	200	200
Horiz. Sight Dist. (ft)	150	200	200
Reverse Curve Tangent (ft)	0	0	0
Approach[5] Tangent at Intersections	50	75	75

1 These criteria are to be used without super-elevation.

2 Hillside is defined as having grades of 10% or greater, as defined in section 21.06.010(f) of the City Zoning and Development code.

3 Design speeds and associated horizontal curve design criteria shown for Local Industrial/ Commercial Streets and Minor Collector Streets are typical, but may vary depending on context. In situations where design speeds are different than what is shown in the table, consult the current edition of the "A Policy on Geometric Design of Highways and Streets," AASHTO for associated design criteria.

4 Radii shown are based on the street having a crown section with a pavement cross-slope of 2% on each side of the crown.

5 Where a curved road approaches an intersection, these tangent sections must be provided on the approach to the intersection to provide for adequate sight distance for traffic control devices at the intersection. The distance shall be measured from the flowline of the through street.

(2) Intersections shall meet the minimum effective turn radii at public street intersections (which accounts for on-street bike lanes or parking if applicable) and must meet a minimum curb return flowline radius of 15 feet.

Minimum Effective Turn Radii at Public Street Intersections

Through Street[2]	Intersecting Street				
	Arterial	Collector	Local Residential	Local Commercial	Local Industrial[1]
Local Residential	30'	25'	20'		
Local Commercial	30'	30'	20'	30'	30'
Local Industrial		30'		30'	30'

1 Radii at intersections with industrial streets shall be designed on a case by case basis considering the turning requirements for the type of truck that will most commonly use the street.
2 At signalized intersections where right turn channelization islands are provided or high truck and bus volumes may use the access, a larger flowline radius may be required.
3 When bike lanes or parking are present consider a reduced flowline radii to match the effective flowline of the intersection, with a minimum flowline of 15'.

(c) Bulb-Outs

If on-street parking is present on minor collectors and local commercial streets, steps should be taken to prevent vehicles from parking too close to the intersection. Bulb-outs should be used to reduce the intersection width and prevent parking in the sight zone. This will result in shorter crossing distances for pedestrians, increased sight distance, and increased visibility of pedestrians especially for turning vehicles, which will increase pedestrian safety and comfort at intersections. Bulb outs are not required on local residential or industrial streets but can be used as a traffic calming device.

(d) Tangent Distance Between Curve

There is no minimum tangent distance between curves for residential or commercial street design.

(e) Superelevation

Superelevation is not allowed on residential street curves.

29.20.070 Vertical Alignment - Grades

Design grades and vertical sight distance address drainage and/or safety concerns for vehicles and pedestrians. Grades of streets shall not be less than 0.5%, nor more than 8%. In hilly terrain (defined as having grades of 10% or greater, as defined in section 21.07.020 of the City Zoning and Development code), the maximum grade for local residential streets is 12% for a maximum distance of 500 feet. To help keep the grade of gutters at a minimum of 0.5% a maximum allowable grade break of 1% is allowable in sags and on crests. See section 29.20.150 for requirements for grades at intersections. See GJMC 29.28.050 for design control requirements for vertical curves.

29.20.080 Cross Section

(a) Street Cross Slopes

The typical cross slope is 2% crown to provide for adequate drainage to the pavement edge. The minimum cross slope is 1% and the maximum is 4%. At the discretion of the City Engineer, the cross lope may deviate based on demonstrated physical constraints. Typical sections are shown in the Grand Junction Standard Contract Documents for Capital Improvements Construction.

(b) Roadside Barrier and Bridge Rails

Roadside barriers shall be required in accordance with warrants, design criteria and standards for roadside barriers and bridge rails as defined in the most recent version of the AASHTO Roadside Design Guide.

29.20.090 Stopping Sight Distance

Stopping sight distance is defined as the length of roadway ahead visible to the driver. The minimum stopping sight distance available on a roadway must be sufficiently long to enable a vehicle traveling at or near the roadway design speed to stop before reaching a stationary object in its path or react to a traffic control device such as a stop sign.

The appropriate stopping sight distance (see GJMC 29.28.070) shall be provided. The distances shown assume vehicles traveling on wet pavement on flat grades. Factors that take in to account the effect of grade on stopping sight distance shall be used in determining appropriate stopping sight distance where the grades are 3% or higher.

29.20.100 Bicycle Treatments

Bicycle facilities shall be provided in accordance with the adopted Pedestrian and Bicycle Plan. Provisions for bicycle facilities shall be in accordance with the current version of the AASHTO Guide for Development of Bicycle Facilities.

The standard cross-section of off-street multi-use trails is included. Refer to Chapter 29.48 for design guidance on bicycle facility types, and minimum adherence standards. Refer to the NACTO Urban Bikeway Design Guide and the FHWA Separated Bike Lane Planning and Design Guide for additional guidance on designing bikeway facilities identified in the Pedestrian and Bicycle Plan.

29.20.110 Intersections

There are two general types of intersections: unsignalized and signalized. Each of these shall have several different configurations and levels of traffic control. A roundabout is a form of an unsignalized intersection and is specifically discussed in GJMC 29.28.220 All intersection design shall conform to the guidelines set forth in AASHTO and the MUTCD.

29.20.120 Unsignalized Intersections

There are two appropriate levels of traffic control at unsignalized intersections: two-way stop controlled and all-way stop controlled. The appropriate use of each of these is discussed in the following sections.

(a) Two-way Stop Controlled Intersections

(1) Two-way stop controlled intersections shall be installed in new subdivisions.

(2) STOP signs shall be installed in accordance with the MUTCD.

(3) At intersections of two different types of roadways, a STOP sign shall be used on the minor street to stop the lesser flow of traffic. STOP signs will generally be used at all intersections that do not meet the all-way stop control or traffic signal warrants.

(b) All-way Stop Controlled Intersections

An all-way or "multi-way" stop installation shall be used only as warranted in Part II of the MUTCD.

`29.20.130 Signalized Intersections

Signals will not normally be considered for residential streets or commercial streets. Where signals may be warranted, the criteria in GJMC 29.28.130 shall be followed, and documented in a Transportation Impact Study (see Chapter 29.08).

29.20.140 Angles

Public streets shall intersect at 90° angles or as close to 90° as topography permits, in any event no less than 80°. Intersections on horizontal curves shall be avoided.

When an intersection is on a curve the center line of the intersection must be radial to the curve.

29.20.150 Grades At Intersections

Intersections shall be on grades as flat as practical. At unsignalized intersections, the maximum allowable grade in the intersections is 4% and extends a minimum of 50 feet in each direction from the outside edge of the traveled way of the intersecting street. At signalized intersections, the maximum grade is 2% within the intersection and extends 200 feet in each direction from the centerline of intersecting roadway. Grades above 4% will only be allowed on local and collector streets in areas with steep topography or other unusual circumstances that prevent a flatter grade, and must be documented as a design exception (see Chapter 29.64).

When intersecting with State Highways, refer to Section 4 of the State Highway Access Code.

29.20.160 Spacing and Offsets

(a) Commercial Streets

Four legged intersections shall be spaced at least 300 feet apart from centerline to centerline. Where T-intersections are used, the centerlines of streets not in alignment shall be offset a minimum of 150 feet and be 150 feet from the nearest four-legged intersection. If the left turn storage requirements for adjacent intersections overlap, the minimum spacing must be increased to provide adequate left turn storage in both directions. If exclusive turn lanes are required, the design shall conform to the criteria in GJMC 28.28.170.

(b) Local Residential Streets

Four legged intersections shall be spaced at least 300 feet apart from centerline to centerline. Where T-intersections are used, the centerlines of streets not in alignment shall be offset a minimum of 150 feet.

29.20.170 Intersection Sight Distance

Street intersections and private access to public streets shall be planned and located to provide as much sight distance as possible. At a minimum, there must be sufficient sight distance for the driver on the minor street or driveway to cross or turn onto the intersecting street. Minimum sight distance values are provided (see GJMC 29.28.140) for passenger cars turning left or right from a minor street. When grades are steeper than 3.0%, adjustment factors must be applied.

The operating speed on each approach is assumed to be, in order of desirability, a) the 85th percentile speed, b) the posted speed if based on an engineering study, or c) in the case of a new facility, 80 percent of the design speed.

29.20.180 Sight Zones

The location of sight zones at intersections are identified in GJMC 29.28.140 and sight zones along streets are identified in the Street Sections (see appendix). Within the sight zone there shall be no sight obscuring sign, wall, fence, berming, or other object higher than 30 inches, or in the case of trees, no foliage lower than 8 feet (trees of any diameter may be planted as long as no foliage is lower then 8 feet). Vertical measurement shall be made from the flowline of the adjacent gutter or, if no gutter exists, from the edge of the nearest traveled way. Objects that may be located in the sight zones are items such as hydrants, utility poles, and traffic control devices. These shall be located to minimize visual obstruction.

29.20.190 Pedestrian Treatments

In order to provide pedestrian safety, comfort, and access, accommodations for pedestrians shall be designed into all intersections and in accordance with the Pedestrian and Bicycle Plan. This includes sidewalks, crosswalks, pedestrian refuge islands and accessible ramps. The design shall conform to the standards set forth by the Americans with Disabilities Act and meet the details specified in the Grand Junction Standard Contract Documents for Capital Improvements Construction.

29.20.200 Landscaping – Site Distance at Intersections

Any landscaping in the sight distance triangles at intersections shall be low growing, and shall meet the sight distance requirements in Section 29.20.180.

29.20.210 Traffic Calming

According to the Institute of Traffic Engineers (ITE), "Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users." This differs from standard traffic control devices such as stop signs, which are regulatory. Traffic calming strategies are engineered to be self-enforcing physical measures.

This section provides guidance for appropriate applications of traffic calming on the existing street system, as well as the application of traffic calming measures during the planning and design stages of new sub-divisions. Refer to ITE's Traffic Calming Measures for additional guidance on design and considerations of each traffic calming tool.

29.20.220 Methods to Divert Traffic from Residential Streets

Residents frequently complain that their residential street is being used by high speed and/or cut through traffic. One treatment of the traffic is the use of closures, diverters, and one-way treatments. Multiple treatments can be implemented on one street as part of a formal "Slow Streets Program" along with supporting signage such as "Local Traffic Only."

(a) Street Closure

Streets may be fully or partially closed from one end to give drivers no choice but to travel another route, with vehicle access provided from the end that is not closed. A street closure is the most drastic form of traffic calming and shall be carefully considered before implementation. Street closures can lead to increased traffic on nearby streets as drivers are re-routed to other routes. Closures should be made passable by pedestrians and bicyclists.



Permanent Partial Closure

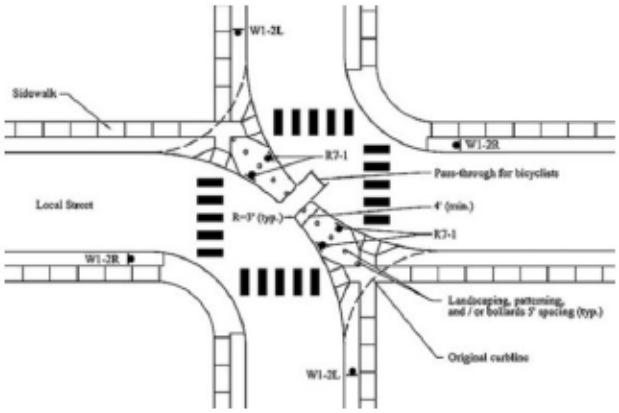


Retrofit Partial Closure

(b) Diagonal Street Diverters

A diagonal street diverter can also be considered a partial street closure. With a diverter, traffic traveling in one direction is not given access to a street. As with street closures, implementation of diverters may shift traffic to another street where access is not regulated. Street diverters should provide cut throughs for pedestrians and bicyclists.





Source (drawing): Delaware Department of Transportation

(c) One-Way Streets

One-way streets may be effective in decreasing the number of vehicles traveling on a given roadway. Traffic patterns shall be assessed to determine the effects of a one-way street on a given circulation pattern. Although traffic volumes are generally decreased by one-way treatments, speeds can often increase as drivers are channelized through the street.

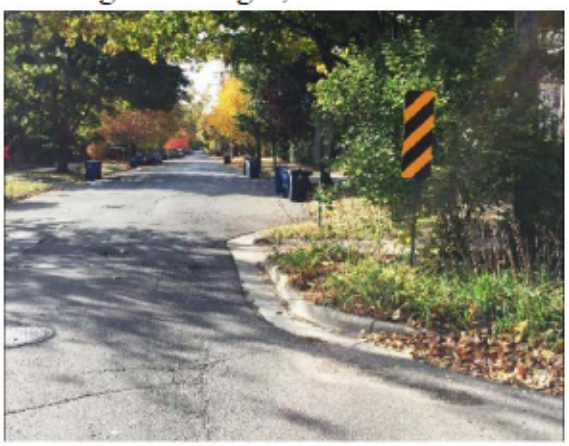
29.20.230 Methods to Slow Traffic on Residential Streets

Where speed is the recognized problem, the following methods can be effective in slowing existing traffic on residential and collector streets. These treatments are

appropriate on streets where the block length is at least 600 feet. For blocks less than 600 feet traffic circles at the intersections are the preferred traffic calming tool.

(a) Chokers

Research has shown that traffic moves slower on narrow streets. Chokers reduce the width of a street by narrowing the road at a 'choke point'. Depending on the road segment length, one or several chokers can be used.



Permanent Choker
(source: City of Ann Arbor, Michigan)



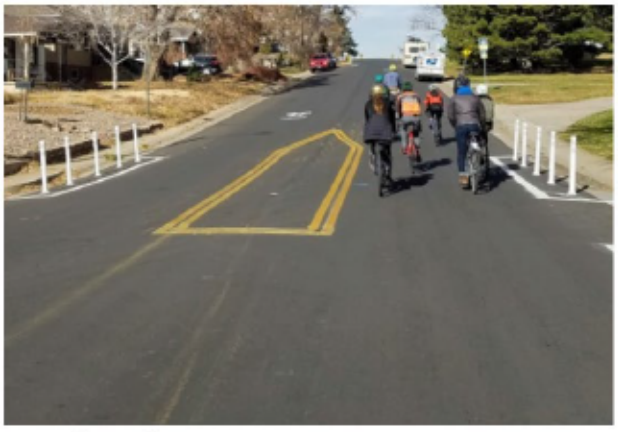
Retrofit Choker
(source: City of Denver, Colorado)

(b) Medians

A median can be installed on a street where width tends to encourage speed. Medians narrow the lanes, reducing the comfort of the driver while driving at higher speeds. Median treatments are particularly effective with landscaping.



Permanent Median
(source: James Barrera, Harrocks New Mexico)



Retrofit Median
(source: City of Denver, Colorado)

(c) Chicanes

A chicane is essentially half of a choker. A chicane is placed on one side of the road to narrow a lane of traffic. A chicane can be used singly but is usually placed as a series on both sides of the road.



Permanent Chicane
(source: City of Denver, Colorado)



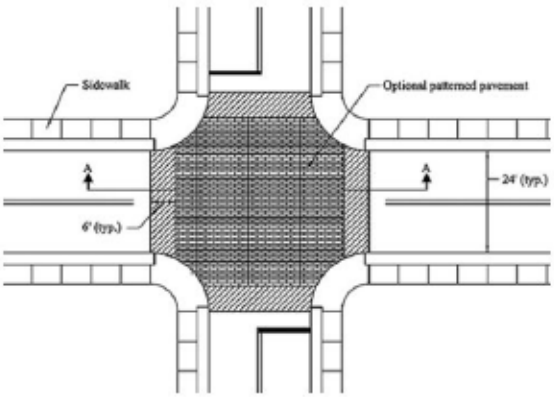
Retrofit Chicane

29.20.240 Methods to Slow Traffic at Intersections

(a) Raised Intersections

Raised intersections are flat raised areas covering entire intersections, with ramps on all approaches and often with brick or other textured materials on the flat section.

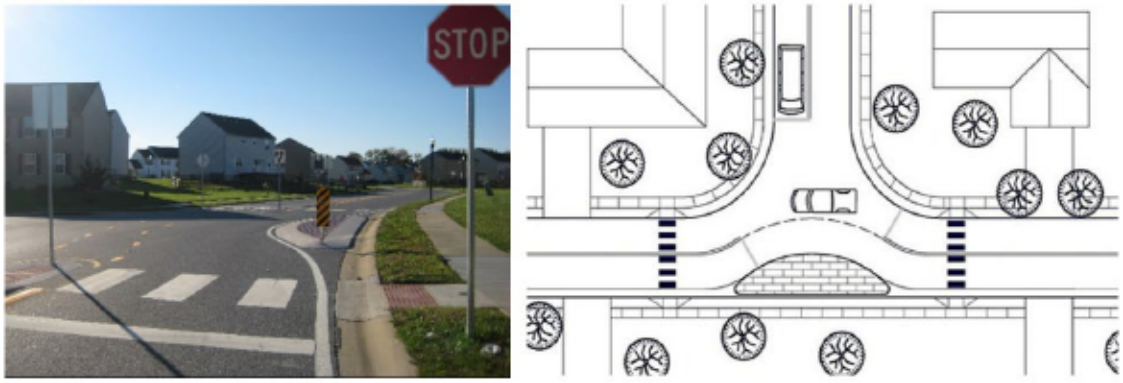




Source: (photo) Chuck Huffine, Phoenix AZ; (drawing) Delaware Department of Transportation

(b) Realigned Intersections

Realigned intersections are changes in alignment that convert T-intersections with straight approaches into curving streets meeting at right angles – a straight shot along the top of the T becomes a turning movement.



Source: Delaware Department of Transportation

(c) Traffic Circles

Traffic circles are set in the center of a three- way (driveways excluded) or four-way intersection to slow traffic coming from each direction. A traffic circle can be effective in creating a neighborhood gateway by providing a unique feature that can be creatively landscaped. This includes mini traffic circles which can be applied as a retrofit to existing STOP controlled intersections.



Example of a mini traffic circle

(d) Bulb-Out/Corner Extension

A bulb-out or corner extension is the horizontal extension of the sidewalk and curb at an intersection, typically in place of on-street parking, resulting in a narrower roadway. Bulb-outs are most feasible on streets with on-street parking and are effective at narrowing the crossing distance for pedestrians, increasing visibility of pedestrians, slowing turning vehicles, and preventing drivers from parking too close to an intersection and blocking sight lines and/or the crosswalk.



Permanent Bulb-Out



Retrofit Bulb-Out
(source: City of Denver, Colorado)

(e) Other Methods

Other methods may be considered (such as hardened center lines) as approved by the jurisdiction.

29.20.250 Traffic Calming in New Developments

Long, wide streets with limited parking will generally increase speeds. As new developments occur, traffic calming can be planned as a feature of the neighborhood to keep vehicle travel speed low for maximum livability and safety of all street users. In large developments and developments that connect to existing residential streets, designs to control speeds and volumes are required. Design features such as curvilinear streets, T-intersections and entry treatments can reduce the need for traffic calming devices such as speed humps and chokers. Generally, horizontal calming measures will provide greater efficiency and livability in new developments.

The design speed of residential streets shall be 20 MPH. The design of local streets shall include positive traffic calming measures and devices. They are required when a straight street exceeds 600 feet in length. Horizontal curves used for traffic calming must have a length of curve consistent with the Horizontal Design Criteria Table in 29.20.060(b)(1). Such measures and devices shall be sufficient to minimize the ability of the average motorist to exceed 20 MPH. Narrow streets may not need specific measures.

29.24 FIRE DEPARTMENT ACCESS

29.24.010 Fire Department Access

The Grand Junction Fire Department responds to a multitude of emergencies in various types of buildings and occupancies. To provide effective fire-fighting operations, the Fire Department must be able to reach all structures by way of approved access. Thus, street design and access must meet the requirements established in the current version of the Grand Junction Fire Department Access standards and the locally adopted fire code. The only potential exceptions to the requirements identified in Fire Department Access standards that would be considered are modifications of the Alternative Street Designs (see Chapter 29.68) that are submitted and approved through a formal Design Exception Process (see Chapter 29.64).

29.28 ARTERIAL AND MAJOR COLLECTOR GEOMETRIC DESIGN, INCLUDING ROUNDABOUTS

29.28.010 Geometric Standards

Geometric standards have been developed to provide adequate safety for the traveling public. This chapter sets the minimum standards for geometric design of streets classified as major collector and above, as shown on the Street Plan Functional Classification Map, Figure 3 in the Grand Junction Circulation Plan. These streets are intended for higher traffic volumes and throughput than the local streets and minor collector streets discussed in Chapter 29.20. They function in transition from direct land use access to movement of traffic.

Roundabouts provide safety improvements, less delay than other forms of control, community enhancement and increased traffic circulation at some intersections. Roundabouts can efficiently handle many intersections with decreased delay and greater efficiency than traffic signals. This section defines the roundabout and provides a link to general design criteria.

29.28.020 Arterial and Collector Streets

(a) Arterial Streets

Principal arterials shall be designed to provide a high degree of mobility and serve longer trips, implying a higher operating speed and level of service. These streets are designated on the Street Plan Functional Classification Map in the Grand Junction Circulation Plan. Minor arterial streets interconnect with and augment the Principal arterial system. These streets accommodate trips of shorter lengths and may also serve more access functions than principal arterial streets.

(b) Collector Streets

Collector streets provide both land access and movement within residential, commercial and industrial areas. Operating speeds are lower than arterial streets.

(c) Pedestrians and Bicyclists

Pedestrians and bicyclists are users of the street system and street design needs to include consideration for them. The adopted Pedestrian & Bicycle Plan shows existing and future pedestrian and bicycle facilities.

29.28.030 Right of Way, Street Lane Widths, and Street Lengths

The required right-of-way width for a street is indicated in the Street Sections located in the Appendix. Additional widths may be required for needed through and turn lanes, and where it is necessary to accommodate slopes and drainage structures.

29.28.040 Alignments - Horizontal Alignment

Streets shall extend to the boundary lines of the land to be subdivided. Proposed streets with widths different from existing streets to which they are being connected must be transitioned using pavement transition taper standards.

All designs shall be based on the Horizontal Curve Design Criteria.

Horizontal Curve Design Criteria

Design Criteria	Major Street[1]		
	Low Speed Collector	Collector/ Arterial	Arterial
Min. Design Speed (mph)	30	35	40
Min. Center Line Radius[2] (ft)	335	510	SEE[4]
Min. Horizontal Sight Distance (ft)	200	250	325
Min. Reverse Curve Tangent (ft)	0	200	200
Min. Approach Tangent at Intersections[3]	100	200	300

1 These criteria are to be used without super-elevation.

2 Radii shown are based on the street having a crown section with a pavement cross-slope of 2% on each side of the crown. For minimum radii required for other cross-slopes or where super-elevation is provided and approved, see Table 3-13 in "A Policy on Geometric Design of Highways and Streets," AASHTO, 2018 Edition or most current edition.

3 Where a curved road approaches an intersection, these tangent sections must be provided on the approach to the intersection to provide for adequate sight distance for traffic control devices at the intersection.

4 The maximum super-elevation rate allowed is e=6%. Where super-elevation is used, runoff lengths shall conform to Table 3-9 in "A Policy on Geometric Design of Highways and Streets," AASHTO, 2018 Edition or most current edition.

29.28.050 Alignment - Vertical Alignment - Grades

Grades, curve length and vertical sight distance shall be designed to ensure proper drainage, sight distance and safety for vehicles and pedestrians. Grades of streets shall not be less than 0.5%. The grade of a street may be reduced only when matching existing streets or property. Maximum street grades shall be 8%. For algebraic differences of 0.5% or less, grade breaks shall be required for adequate drainage.

Design Controls for Vertical Curves

Design Speed MPH	Stopping Sight Distance (feet)	Crest "K" Values	Sag "K" Values
20	115	7	17
25	155	12	26
30	200	19	37
35	250	29	49
40	305	44	64
45	360	61	79
50	425	84	96
55	495	114	115
60	570	151	136

From Table 5-3, AASHTO A Policy on Geometric Design of Highways and Streets, 2018
1 All minimum stopping sight distances for vertical curves with crests must be shown on the construction plans. Sight distances are based on design speeds.

29.28.060 Clearance of Structures

A minimum of 17.5 feet shall be provided for all overhead sign structures. The clearance shall be measured from the crown of the street to the lowest portion of the structure. A minimum vertical clearance of 16.5 feet for all other structures shall be provided on all arterial streets and designated truck routes. A minimum clearance of 14.5 feet may be allowed on collector streets per CDOT 2018 Roadway Design Guide.

29.28.070 Stopping Sight Distance

Stopping sight distance is defined as the length of roadway ahead visible to the driver. The minimum stopping sight distance available on a roadway must be sufficiently long to enable a vehicle traveling at or near the roadway design speed to stop before reaching a stationary object in its path or react to a traffic control device such as a stop sign.

The appropriate stopping sight distance shall be provided. The distances shown assume vehicles traveling on wet pavement on flat grades. Factors that take in to account the effect of grade on stopping sight distance shall be used in determining appropriate stopping sight distance where the grades are 3% or higher.

Minimum Stopping Sight Distance

Design Speed (MPH)	Stopping Sight Distance (Ft.)
20	115
25	155
30	200
35	250
40	305
45	360
50	425
55	495
60	570

Based on Table 5-3, AASHTO A Policy on Geometric Design of Streets and Highways, 2018

Effect of Grade on Stopping Sight Distance

Design Speed (MPH)	Downgrades			Upgrades		
	3%	6%	9%	3%	6%	9%
20	116	120	126	109	107	104
25	158	165	173	147	143	140
30	205	215	227	200	184	179
35	257	271	287	237	229	222
40	315	333	354	289	278	269
45	378	400	427	344	331	320
50	446	474	507	405	388	375
55	520	553	593	469	450	433
60	598	638	686	538	515	495

From Exhibit 3-2, AASHTO A Policy on Geometric Design for Highways and Streets, 2018

29.28.080 Cross Section

(a) Cross Slopes

The typical cross slope is 2% crown to provide for adequate drainage to the pavement edge. The maximum cross slope on the tangent sections shall not exceed 4%. The minimum cross slope shall be 1%.

(b) Super-elevation

Super-elevation shall be designed in accordance with the Horizontal Curve Design Criteria.

(c) Clear Zones

All roadways shall meet clear zone requirements as set forth in the current edition of the AASHTO Roadside Design Guide. Where under-improved streets are constructed (for example, a half-street construction), the minimum shoulder width shall be provided.

(d) Roadside Barrier and Bridge Rails

Roadside barriers shall be required in accordance with warrants, design criteria and standards for roadside barriers and bridge rails as defined in the current edition of the AASHTO Roadside Design Guide.

29.28.090 Tapers and Transitions- Road Width Transition Tapers

When constructing a roadway that will connect with an existing roadway of a different width, a transition taper is required. These ratios are not to be used in the design of exclusive turn lanes.

Minimum Road Width Transition Tapers

Design Speed (MPH)	Transition Run/Offset (Ft/Ft)
30 or less	15 / 1
35	20 / 1
40	25 / 1
45	45 / 1
50	50 / 1
55	55 / 1
60	60 / 1

Table based on Section 3B-8, MUTCD.

29.28.100 Bicycle Treatments

Bicycle facilities are required as shown on the Pedestrian and Bicycle Plan and the street sections included in the Appendix. Provisions for bicycle facilities and crossings shall be in accordance with the AASHTO Guide for Development of Bicycle Facilities. Refer to Chapter 28.48 for design guidance on bicycle facility types, and minimum adherence standards. Refer to the Pedestrian and Bicycle Plan for additional guidance on designing bikeway facilities and bikeway crossings.

29.28.110 Intersections

Generally, there are two types of intersections: unsignalized and signalized. Each of these may have several different configurations and levels of traffic control. A roundabout is a form of an unsignalized intersection and is specifically discussed in Section 29.28.220. All intersections shall conform to the guidelines set forth in AASHTO and the MUTCD. For streets with bicycle facilities, refer to Chapter 29.48 for additional guidance on bicycle intersection treatments as well as the street sections located within the Appendix.

29.28.120 Unsignalized Intersections

There are three acceptable levels of traffic control at unsignalized intersections: yield controlled, two-way stop controlled and all-way stop controlled. The appropriate use of each of these is discussed in the following sections.

(a) Yield Controlled Intersections

Yield controlled intersections will not generally be allowed, except at roundabouts.

(b) Two-way Stop Controlled Intersections

Stop signs shall be used in accordance with the MUTCD.

(c) All-way Stop Controlled Intersections

An all-way or "multi-way" stop installation shall be used only where the criteria of the MUTCD are met.

29.28.130 Signalized Intersections

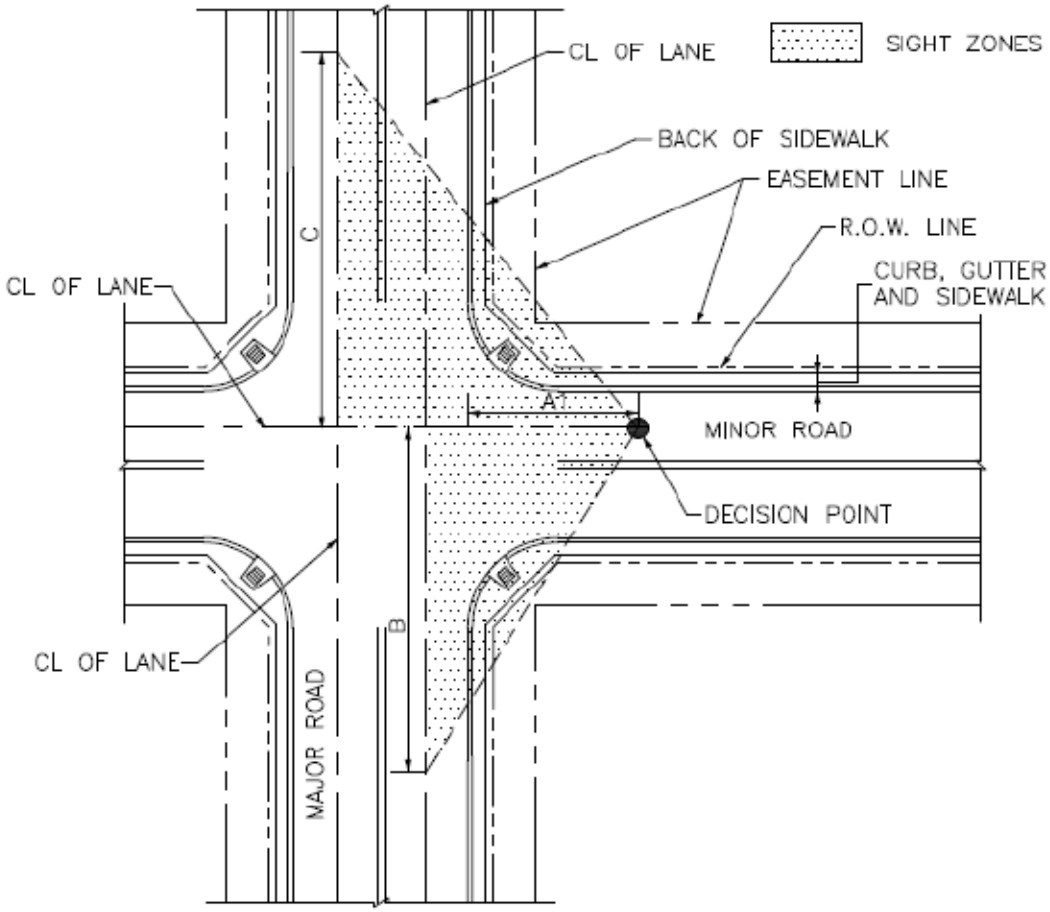
A signalized intersection shall only be installed after a careful analysis and engineering study of the roadway and traffic conditions at the intersection and on the corridor. When a signal is proposed on a corridor where signals are coordinated, the TIS (see Chapter 29.08) shall analyze the impacts to the progression of traffic on the corridor and on surrounding land uses. This analysis shall include the progression bandwidth, efficiency and level of service determinations, signal timing and phasing including pedestrian movements, and an analysis of the storage queue lengths for exclusive turn lanes. Signal installations shall meet the spacing criteria in Section 29.28.200. Traffic signal warrants and design criteria are thoroughly discussed in the MUTCD, Part IV.

29.28.140 Sight Distance

Street intersections and private access to public streets shall be planned and located to provide as much sight distance as possible. At a minimum, there must be sufficient sight distance for the driver on the minor street or driveway to cross or turn onto the intersecting street. Minimum sight distance values are provided for passenger cars turning left or right from a minor street. When grades are steeper than 3.0%, adjustment factors must be applied.

The operating speed on each approach is assumed to be, in order of desirability, a) the 85th percentile speed, b) the speed limit if based on an engineering study, or c) in the case of a new facility, 80 percent of the design speed.

Minimum Sight Distance for Left and Right Turns onto Major Street by Passenger Cars at Stop-Controlled Intersections



APPROACH SPEED	B	C
15 MPH	145 FT	170 FT
20 MPH	195 FT	225 FT
25 MPH	240 FT	280 FT
30 MPH	290 FT	335 FT
35 MPH	335 FT	390 FT
40 MPH	385 FT	445 FT
45 MPH	430 FT	500 FT
50 MPH	480 FT	555 FT

*BASED ON AASHTO FIGURE 9—15

NOTES:

SIGHT ZONE SHOULD BE EVALUATED FOR ALL APPROACHES.

A1 IS 18' MEASURED FROM THE MAJOR ROAD LIP OF GUTTER. IN CONSTRAINED SCENARIOS, A1 MAY BE REDUCED TO A MINIMUM OF 14.5' WITH CITY APPROVAL.

DISTANCE B MAY BE UTILIZED WITH CITY APPROVAL, WHEN THE INTERSECTION CONTROL ONLY ALLOWS RIGHT TURNS OUT FROM THE MINOR LEG.

Factors for the Effect of Grade on Sight Distance

Approach Grade (%)	Design Speed (MPH)									
	15	20	25	30	35	40	45	50	55	60
-6	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.2	1.2
-5	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
-4	1.0	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.1
-3 to +3	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
+4	1.0	1.0	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9
+5	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
+6	1.0	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9

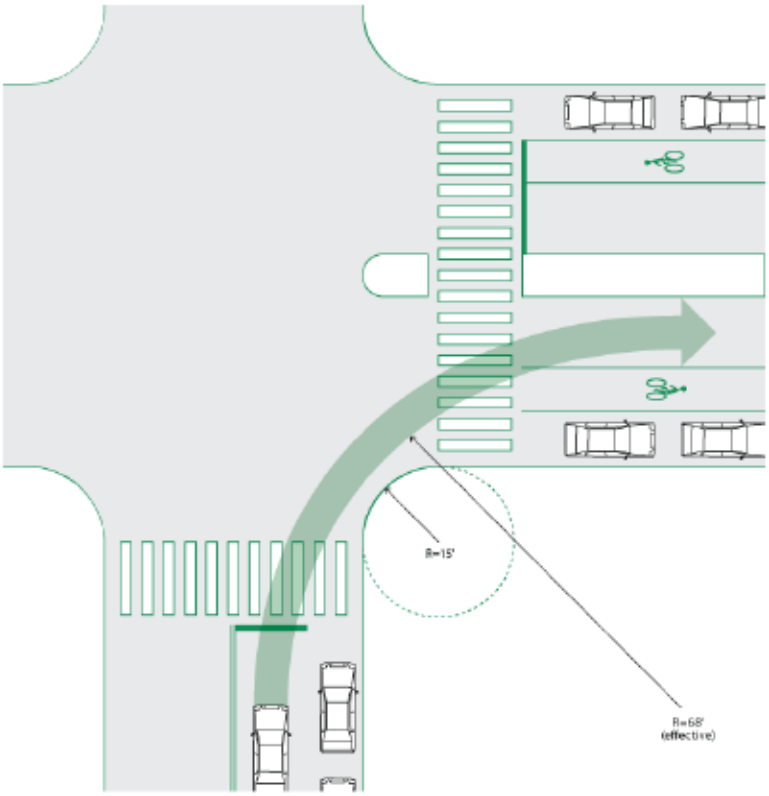
Based on Table 9-5, AASHTO A Policy on Geometric Design for Highways and Streets, 2018.

29.28.150 Sight Zones

The location of sight zones at intersections are identified in GJMC 29.28.140 and sight zones along streets are identified in the Street Sections (see appendix). Design requirements within the sight zone for major collector and arterial streets are the same as for local and minor collector streets. Refer to GJMC 29.20.180.

29.28.160 Intersection Radii

Minimum intersection effective radii must be maintained at public street intersections and a 15 foot minimum flowline radius is required to allow for proper drainage in situations where flowline radii is less than the effective radii. The "effective" radius is different than the flowline radius in that effective radius accounts for on-street parking or bike lanes which can cause the effective radius for a turning vehicle to be much larger than the flowline radius. An effective turn radius that is too large can encourage drivers to maintain a high speed while turning, which can compromise the comfort and safety of pedestrians crossing in the crosswalk. The NACTO Urban Street Design Guide recommends design corner radii to limit turning speeds to 15 mph to support a comfortable pedestrian environment. Thus, when a bike lane or parking lane is present on one or both of the intersecting streets, either a bulb-out (see 29.28.165) should be provided to maintain the desired effective radii or the flowline radius should be designed to be less than the minimum intersection effective radius in order to encourage slower turning vehicle speeds.



Example of "Effective" Turn Radius (source: NACTO Urban Street Design Guide)

Minimum Intersection Effective Radii

Through Street[2]	Intersecting Street				
	Arterial	Collector	Local Residential	Local Commercial	Local Industrial[1]
Arterial	35'	30'	30'	30'	30'
Collector	30'	30'	25'	30'	30'

1 Radii at intersections with industrial streets shall be individually designed based on the turning requirements for the type of truck that will most commonly use the street.

2 At signalized intersections where right turn channelization islands are provided or high truck and bus volumes may use the access, a larger flowline radius may be required.

3 When bike lanes are present consider a reduced flowline radii to match the effective flowline of the intersection, with a minimum required flowline radius of 15 feet.

29.28.165 Bulb-Outs

If on-street parking is present, steps should be taken to prevent vehicles from parking too close to the intersection. Bulb-outs should be used to reduce the intersection width and prevent parking in the sight zone. This will result in shorter crossing distances for

pedestrians, increased sight distance, and increased visibility of pedestrians especially for turning vehicles, which will increase pedestrian safety and comfort at intersections.

29.28.170 Lane Requirements

Lane design through an intersection shall be consistent with the lane design of the streets forming the intersection.

(a) Lane Widths

Lane widths shall be consistent with the cross-sections as shown in the City Standard Street Details.

(b) Exclusive Turn Lanes.

(1) The purpose of an exclusive turn lane is to expedite the movement of through traffic, increase intersection capacity, permit the controlled movement of turning traffic, and promote the safety of all traffic. The provision of left-turn lanes is essential from both capacity and safety standpoints where left turns would otherwise share the use of a through lane. Right-turn lanes remove the speed differences in the main travel lanes, reducing the frequency and severity of rear-end collisions.

(2) Separate right turn lanes shall be required in accordance with the right turn warrant chart. Separate left turn lanes shall be required at all new signal locations and at unsignalized locations in accordance with the left turn warrant chart.

Warrants for Right Turn Lanes
Two Lane Roadways
Number of Peak Hour Turning Vehicles

DDHV[1] (vph)	≤ 35 MPH	40 MPH	45 MPH	50 MPH	55 MPH
200				73	35
300			120	41	24
400	200	200	50	30	19
500	150	125	35	25	16
600	75	50	25	20	14
800	50	30	15	15	11
1000	25	25	15	11	9
1200	20	20	15	9	8

1 DDHV – Directional Design Hourly Volume; volume of vehicles in the design hour using the through lane adjacent to which the right turn lane is to be constructed.

Warrants for Right Turn Lanes
Four Lane Roadways
Number of Peak Hour Turning Vehicles

DDHV[1] (vph)	≤ 35 MPH	40 MPH	45 MPH	50 MPH	55 MPH
300					75
400			145	75	40
500			95	57	32
600	170	160	65	42	26
800	80	70	37	28	19
1200	50	25	20	18	14
1600	20	15	14	13	10
2000	15	10	9	9	8

1 DDHV – Directional Design Hourly Volume; volume of vehicles in the design hour using the through lane adjacent to which the right turn lane is to be constructed.

Charts developed based on studies conducted by Kansas Department of Transportation and University of Nebraska

Warrants for Left Turn Lanes
Number of Peak Hour Turning Vehicles

DDHV	30-35 MPH	40 + MPH
100	30	14
200	15	12
300 +	12	12

DDHV – Directional Design Hourly Volume; volume of vehicles in the design hour using the through lane adjacent to which the right turn lane is to be constructed.

(3) Construction of turn lanes on state highways shall be determined in accordance with the State Highway Access Code.

(4) Dual left turn lanes at signalized intersections shall be considered when the peak hour left turn volume exceeds 300 vehicles/hour. An analysis of the signal timing is required to measure the effects of the protected movement on the rest of the intersection movements. Intersection geometry shall allow for the operation of dual lefts. Permissive dual left turns are prohibited.

(c) Left and Right Turn Lane Design

(1) The components of a left turn lane consist of a taper and the full width lane for storage as shown in the turn lane elements and design criteria. Right turn lanes shall be 11' in width (not including the gutter pan) and two-way left turn lanes shall be 12' in width.

Minimum Left-Turn Tapers for Redirecting Through Lanes

Design Speed (MPH)	Tapers
25	10:1
30	15:1
35	20:1
40	30:1
45	45:1
50	50:1
55	55:1
60	60:1

Based on Table 4-9 CDOT Access Code

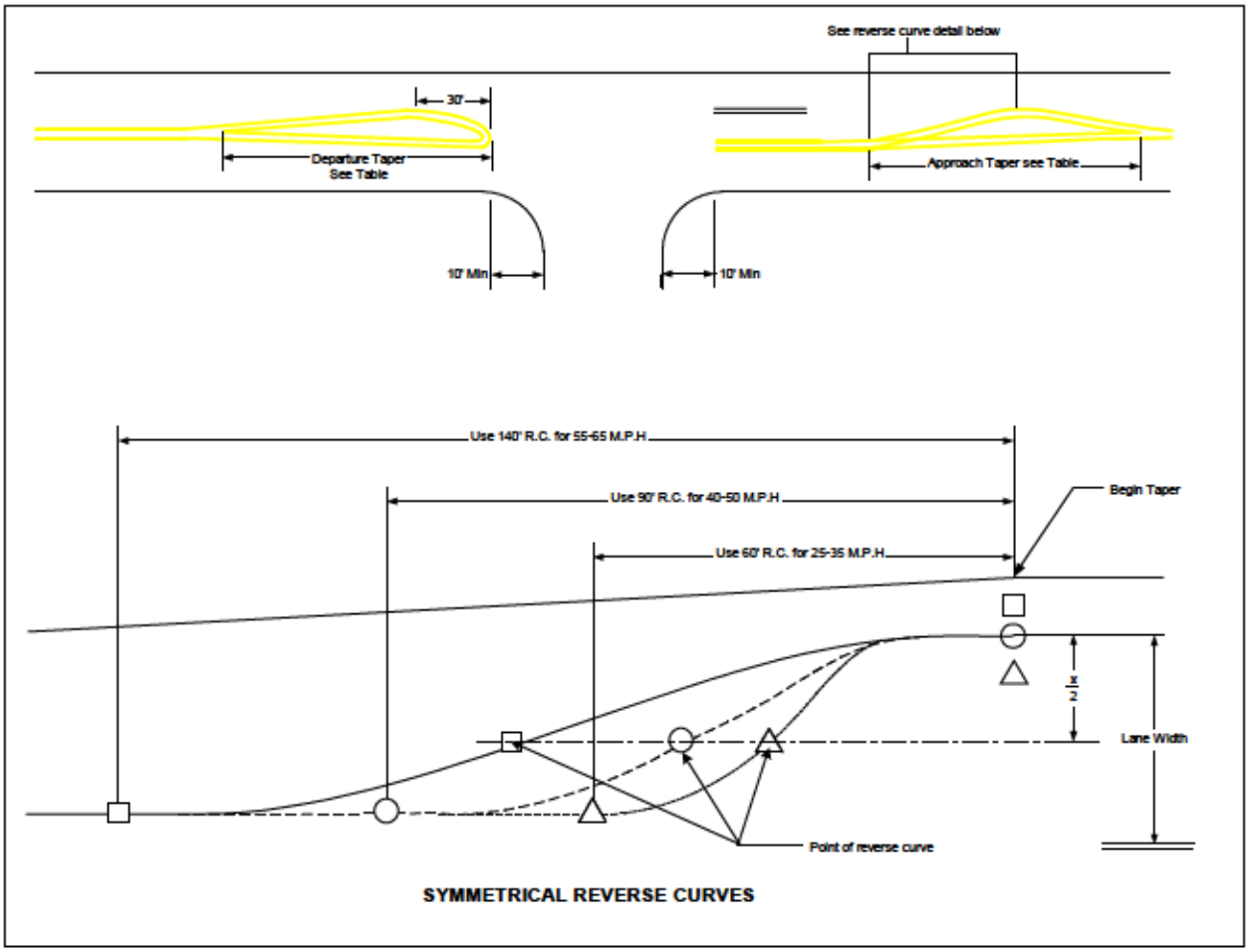
(2) Use the same ratio for both approach and departure tapers.

(3) Bay tapers shall be symmetrical reverse curves in accordance with the following:

i. Use 60' Reverse Curve for 25-35 MPH

ii. Use 90' Reverse Curve for 40-50 MPH

iii. Use 140' Reverse Curve for 55-65 MPH



SYMMETRICAL REVERSE CURVES

(4) Storage lengths for turn lanes at signalized intersections shall be determined based on a signal timing analysis that predicts the 90% queue length required for the turn lane. At unsignalized intersections, the turn lane storage will be determined in accordance with the storage length table. Tapers for right turn lanes shall be designed in accordance with the right-turn lane taper table. Use of the reverse curve is encouraged as part of the taper length to allow vehicles to decelerate in the full lane width. If used, the difference in length between the required taper and the reverse curve shall be added to the required storage length of the turn lane.

Minimum Storage Lengths for Unsignalized Turn Lanes

Turning VPH	≤60	100	200	300
Required Storage Length	50	100	175	250

Based on Table 9-7 CDOT Design Guide

Minimum Right-Turn Tapers

Design Speed (MPH)	Tapers
25	7.5:1
30	8:1
35	10:1
40	12:1
45	13.5:1
50	15:1
55	18.5:1
60	25:1

Excerpted from Table 4-6, CDOT Access Code

(5) Standards for State Highway right turn and left turn speed change lanes are found in the State Highway Access Code.

29.28.180 Angles

Proposed public streets must intersect at 90° angles or as close to 90° as topography permits (no less than 80°). Intersections on sharp horizontal curves shall be prohibited based on sight distance and viewing angle for the driver.

29.28.190 Grades at Intersections

See GJMC 29.20.150 for design requirements for grades at intersections.

29.28.200 Spacing and Offsets of Intersections

(a) Principal Arterials

Signalized intersections shall be spaced at ½ mile intervals. Unsignalized intersections must be T-intersections spaced at least 600 feet apart, measured centerline to centerline. Unsignalized four legged intersections may be allowed on arterial streets provided that the design of the intersection precludes left turns onto and through movements across the arterial. If the overlap of left turn storage requirements for two T-intersections exceeds 600 feet, the minimum spacing must be increased to provide adequate left turn storage in both directions.

(b) Minor Arterials and Major Collectors

Signalized intersections shall be spaced no closer than 1/4 mile intervals. Unsignalized four-legged intersections must be spaced at least 300 feet apart. When T-intersections are used, the centerlines of streets not in alignment shall be offset a minimum of 150 feet and be 150 feet from the nearest four-legged intersection. If the left turn storage requirements for adjacent intersections overlap, the minimum spacing must be increased to provide adequate left turn storage in both directions. For spacing and offset requirements of driveways see GJMC 29.16.030.

29.28.210 Pedestrian Treatments

Accommodations for pedestrians must be designed into all intersections. Pedestrian accommodations include, but are not limited to sidewalks, crosswalks, pedestrian refuge islands, and accommodations for disabled pedestrians. Sidewalks are an integral part of urban streets and shall be included in the intersection design. Refer to the Bicycle and Pedestrian plan or city staff recommendations for detailed improvements at identified intersections. The Grand Junction Standard Contract Documents for Capital Improvements Construction shall be followed in designing and constructing pedestrian facilities. The intersection design shall conform to the standards set forth in the Americans with Disabilities Act. More information on the requirements can be found at http://www.access-board.gov/. Design of pedestrian facilities should also adhere to the latest guidance according to the U.S. Access Board's Public Right-of-Way Accessibility Guidelines (PROWAG). Where sidewalks are provided, accessible ramps must also be provided. Utility boxes, drainage inlets, signs, and other fixed objects shall not be located within the path defined by ramp. The ramp shall align with the sidewalk and must be located entirely within the marked crosswalk area.

(a) Crosswalks

Crosswalks shall be marked at signalized intersections and designed as part of the markings for the traffic signal. All crosswalk markings must conform to MUTCD standards. Crosswalks at un-signalized intersections or mid-block locations will only be considered when an engineering study is conducted in accordance with Institute of Traffic Engineers guidelines and indicates crosswalks would increase pedestrian safety. Refer to the current edition of the Grand Junction Pedestrian Crossing Treatment Installation Guidelines for guidance on applicability of pedestrian crossing treatments in different contexts, including at uncontrolled crossings. Refer to CDOT's Pedestrian Crossing Installation Guide for uncontrolled pedestrian crossings on state highways.

(b) Pedestrian Refuge Islands

Pedestrian refuge islands may be constructed where mid-block crosswalks are proposed. Islands should be at least 6' wide and 6' length in advance and departing of crosswalk. All Islands must conform to the minimum standards established in the MUTCD, and must meet the design criteria for curbing and medians.

29.28.220 Roundabouts

(a) Design Criteria

A roundabout brings together conflicting traffic streams, allows the streams to safely merge and traverse the roundabout, and exit in the desired directions. The geometric elements of the roundabout provide guidance to drivers approaching, entering, and traveling through a roundabout.

Good roundabout design places a high priority on speed reduction and speed consistency. Low vehicle speed provides safety benefits including reduced numbers and severity of crashes; more time for entering drivers to judge, adjust speed for and enter a gap in circulating traffic; and safer merging. Roundabout intersections typically operate with lower vehicle delays than other intersection control types.

A capacity analysis of any proposed roundabout shall be conducted in accordance with Highway Capacity methods. The analysis shall include consideration for the largest motorized vehicle likely to use the intersection.

Roundabouts shall be designed in conformance with the guidelines set forth in the NCHRP 1043 Guide for Roundabouts. All roundabout design is unique and the City will require review of the preliminary geometry prior to final design.

(b) Signing, Striping, and Pavement Markings

All signing, striping, and pavement markings shall follow the MUTCD standards.

(c) Lighting

Adequate lighting is essential for drivers to perceive the general layout and operation of the intersection in time to make the appropriate maneuvers. A lighting plan will be required as part of the construction drawings for roundabouts.

(d) Landscaping

Landscaping in the central island, the splitter islands and along the approaches is a benefit to both public safety and community enhancement. Landscaping shall follow these general principles:

(1) Make the central island more conspicuous;

(2) Improve the aesthetics of the area while complementing surrounding streetscaping as much as possible;

(3) Avoid obscuring the form of the roundabout or the signing to the driver;

(4) Maintain adequate sight distances;

(5) Clearly indicate to the driver that they cannot pass straight through the intersection;

(6) Discourage pedestrian movements through the center of the roundabout.

29.28.230 Landscaping – General Requirements

All new developments must provide landscaping that meets the requirements of the City's Zoning and Development Code. Any landscaping in the sight distance triangles at intersections shall meet the sight distance requirements in the Sight Distance detail.

29.32 PAVEMENTS & TRUCK ROUTES

29.32.010 Design Methods and Procedures

The following pavement design methods and procedures shall be followed to create a consistent pavement thickness design throughout the urban area.

This chapter references the Truck Route map developed for the urban area of the City and County (see Grand Junction GIS Transportation Map). The truck route map must be consulted prior to beginning pavement design to assure that the design will accommodate anticipated truck loading.

29.32.010 Pavement Types

Pavement types which may be used for construction of City and County streets include Hot Mix Asphalt (HMA) and Portland Cement Concrete (PCC) pavements. The City and/or County shall approve in advance the type of pavement.

29.32.020 Design Input Variables

Parameters that must be evaluated in order to design an adequate pavement structure include subgrade soil properties, surface and sub-surface drainage, materials properties, environmental factors and traffic loading over the analysis period.

The minimum traffic analysis period to be used for the design of pavements for City streets is 30 years. Traffic growth rates vary depending upon the street classification, zoning location and other variables. Growth rates for most major streets are available from the Mesa County Regional Transportation Planning Organization, phone (970) 244-1830.

Traffic distribution by vehicle type shall be determined from, actual traffic counts and projections based on land uses and future build-out of area serviced by the road. Classification of vehicles derived from traffic counts are available for most major streets from the City of Grand Junction, Transportation Engineering Division, phone (970) 256-4110.

All other pavement design parameters including 18 kip equivalency factors, lane distribution factors, Resilient Modulus (M_R) conversion equations, drainage coefficients, reliability factors and serviceability indices shall be determined in accordance with the

Guideline for the Design and Use of Asphalt Pavements for Colorado Roadways published by the Colorado Asphalt Pavement Association.

29.32.040 Pavement Design Procedures

(a) Flexible Pavement Design Procedure

Flexible pavement design includes asphalt concrete (AC) surfaces and surface treatments (ST). Flexible pavements shall be designed in accordance with the principles and procedures illustrated in the AASHTO Guide for Design of Pavement Structures (current edition). The computer software for the AASHTO guide is AASHTO Ware are DARWin in 3.1 Pavement Design and Analysis System. All use of flexible pavement should have a design life of at least 30 years. Perpetual pavements may be used where appropriate. Perpetual pavement design should follow the recommendations of CDOT M-E Pavement Design Manual 2021, 6.3.2.

(b) Rigid Pavement Design Procedure

Rigid pavement design includes plain jointed (JCP), jointed reinforced (JRCP) and continuously reinforced (CRCO) concrete pavements. Rigid pavements shall be designed in accordance with the principles and procedures illustrated in the AASHTO Guide for Design of Pavement Structures (latest edition). Approved software for design of rigid pavement includes AASHTOWare DARWin 3.1 and WinPAS developed by the American Concrete Pavement Association. All use of rigid payment should have a design life of at least 30 years.

29.32.050 Truck Routes

Primary and secondary trucks routes are shown on the Truck Route layer of the Grand Junction GIS Transportation Map, additional information on truck routes can be found here.

29.36 STREET LIGHTING, UTILITIES AND MAILBOXES

29.36.010 Requirements

This chapter outlines the requirements for street lighting, including whether lighting is required, installation, maintenance responsibilities, and acceptable poles and luminaries. Utilities are discussed for their placement in the rights-of-way.

29.36.015 Telecommunication Facilities

Small cell telecommunication facilities shall be designed and implemented in accordance with the Grand Junction Small Cell Infrastructure Standards.

29.36.020 Street Lighting

Street lighting shall be installed on all new public streets at the expense of the developer. Streetlights shall be designed, furnished and installed by the utility company responsible for supplying electrical power to the development or area. The location of all streetlights shall be shown on the traffic plan or street plan, or other design drawings as required by the City or County. All street lighting must conform to city ordinances on Dark Sky requirements.

29.36.030 Luminance Requirements

Street lighting shall provide average illuminance in accordance with Table 29.36-1. A lighting plan is required for all street designs with the exception of local residential streets.

Table 29.36-1 Average Maintained Illuminance (Foot Candles) on Public Streets

Street Classification	Area Classification		
	Commercial	Intermediate	Residential
Arterial	1.7	1.3	0.9
Collector	1.2	0.9	0.6
Local	0.9	0.7	*

* On local residential streets, a standard light shall be located at each street intersection, at or near the throat of each cul-de-sac, and at a maximum spacing of 250 feet measured along the centerline of the roadway. Additional lights may be required on horizontal curves and at other locations.

29.36.040 Acceptable Poles and Luminaires

The standard streetlights are shown in Table 29.36-2.

Table 29.36-2 Standard Street Lights

Street Light Style	Used on Street Classification	Wattage	Pole Color
GE Salem Luminaire Full-Cutoff	Local Residential, Residential Collector	N/A	Black
Cobra Head Full-Cutoff – Flat Lens	Collectors, Arterials, Commercial	250-400	Black
Cobra Head Full-Cutoff – Flat Lens	Arterials (for existing overhead power), State Highways	100-400	Black, Silver, Galvanized or existing wood pole

Height and wattage shall be determined by Utility Company in accordance with current IES standards. Where these standards conflict with existing lighting, design consideration will be given to consistency in the area. Supply chain or other circumstances may require substitutions which must be approved by the City.

29.36.050 Pedestrian and Bikeway Lighting

When required, lighting for detached public pedestrian and bicycle pathways and trails shall be designed, furnished and installed by the utility company responsible for supplying electrical power to the development or area. The lighting standard shall be the cutoff luminaire style that meets the illuminance requirements. Commercial grade solar lighting may be an option when A/C power is cost prohibitive.

Lighting for pedestrian walkways and bikeways should be considered in the following scenarios:

- Stairs and access ramps
- Pedestrian underpasses
- Conflict points along pathways
- Other locations depending on the context of the situation

Lighting levels can be set based on the level of pedestrian activity in the area as indicated in Table 29.36-3.

Table 29.36-3 Pedestrian and Bicycle Pathways and Trails Illuminance Standards

Conflict Type	Average Horizontal Illuminance (fc)	Average Vertical Illuminance	Horizontal Uniformity (avg:min)
Average illuminance with anticipated pedestrian activity (typically > 10 pedestrians per hour)	0.5	0.2	4
Average illuminance with minimal pedestrian activity (typically < 10 pedestrians per hour)	0.2	0.1	10

Based on Section 2.2.8 of the CDOT Light Design Guidelines.

Refer to section 2.2.8 of the CDOT Light Design Guidelines for additional guidance and best practices on lighting applications for pedestrian walkways and bikeways.

Pedestrian lighting is not considered in street light illuminance calculations. Attached sidewalk lighting is often provided by adjacent street lighting. On streets where there is a sidewalk only on one side, lighting must be provided on that side of the street. The need for pedestrian lighting should be considered as part of the lighting process.

Pedestrian lighting is not normally required in residential subdivisions. The primary exception is along pedestrian pathways, typically located mid-block or at cul-de-sacs that provide pedestrian connectivity to adjacent streets. On these pathways pedestrian-scale bollard lighting may be required to enhance safety and visibility at night. Street lights are recommended at each end where a pathway meets the street.

Bollard lighting is only required in the following locations along these pathways:

- Locations where the pathway is greater than 100 feet in length from where the pathway meets a street. This assumes a street light is present at at least one end.
- Locations where there is a bend or horizontal curvature in the pathway.
- Locations where there is insufficient adjacent street lighting where the pathway meets the street.

When required along pedestrian pathways, bollard lighting should provide an average illuminance consistent with the standards set in Table 29.36-3 for minimal pedestrian activity. Commercial grade solar powered bollard lights are considered acceptable so long as they are demonstrated to reliably meet the illuminance standards.

Pedestrian lighting that is installed for decorative purposes or is along pathways (connecting cul-de-sacs or adjacent streets) that are not along a designated Active

Transportation Corridor (see the Active Transportation Corridor layer on the Grand Junction GIS Transportation Map) shall be the responsibility of the homeowner's association or private developers for installation, cost of utilities, and maintenance.

29.36.060 Breakaway Structures and Lateral Clearances

All fixed objects such as utility, street light poles, fire hydrants, telephone junction boxes, installed in the right-of-way shall be of the breakaway type meeting AASHTO construction specifications regardless of roadway classification, with the exception of locations with high pedestrian activity. The breakaway type of design may not be appropriate in contexts with high pedestrian activity. In locations where required, if breakaway type construction cannot be provided, a minimum of 10 feet horizontal clearance shall be provided between the flowline of the street (or the edge of the paved traveled way) and any new or relocated non-breakaway structure in excess of 4 inches in height. For local streets, a 5-foot lateral clearance is recommended. If sufficient right-of-way or easement is not available for the 10-foot clear zone, all installations must be placed "as near as practical" to the edge of the public right-of-way. This policy is applicable to all local and collector roadways whose posted speed limit is in excess of 30 miles per hour and is intended to provide minimum standards for the purpose of protecting the public health, safety, and welfare. Dynamic performance for breakaway objects shall be evaluated in accordance with current AASHTO specifications. Arterial and major collector classifications should evaluate clear zone requirements per current AASHTO clear zone standards.

29.36.070 Utilities

All utilities shall be placed in the roadway section as set forth in the City of Grand Junction Standard Contract Documents for Capital Improvements Construction.

29.36.080 Mailboxes - Location

(a) Mailboxes may be located within public rights-of-way so as not to obstruct pedestrian or vehicular traffic.

(b) In no case shall a mailbox obstruct a sidewalk, the traveled way of a roadway, the road shoulder, or impede maintenance activities associated with the facility. Mailboxes shall not be permitted within sidewalks, paths, or roadside ditches.

(c) On roads without a curb, the mailbox face shall be located a minimum of eight feet from the traveled way and adequate shoulder areas shall be provided for mail pickup and delivery.

(d) Streets with a curb and detached sidewalk: the mailbox face shall be located a minimum of 2 foot behind the curb face. Mailboxes must not pose an obstruction to the site zone. The mailbox should have a rear-facing door to facilitate mail removal without stepping into the street. Streets with attached sidewalk: the mailbox face shall be located a minimum of 2 foot behind back of walk.

(e) Group, gang mailboxes, or neighborhood box units shall not be placed in the area designated for sight distance or sight zone. Neighborhood mailboxes shall be considered a commercial location and must maintain the required driveway setback from intersections. Neighborhood mailboxes shall be shown on the utility composite and road plans. Group mailboxes should be placed a minimum of 2ft behind the sidewalk. Group mailboxes shall be illuminated by a streetlight.

29.36.090 Mailbox Construction Standards

Mailboxes erected on public right-of-way shall be of light sheet metal or plastic construction conforming to the requirements of the U.S. Postal Service. Construction of supports and details shall be in accordance with the current CDOT standards.

29.36.100 Mailbox Support Standards

(a) A single 4-inch x 4-inch square wooden post embedded no more than 36 inches into the ground; a single 4½ inch diameter wooden post embedded no more than 36 inches into the ground; a single metal post with a strength no greater than a 2-inch standard strength steel pipe (2 3/8" O. D.) and embedded no more than 24 inches into the ground will be acceptable as a mailbox support.

(b) A metal post shall not be fitted with an anchor plate, but it should have an anti-twist device that extends no more than 10 inches below the ground surface.

(c) Supports shall not be set in concrete unless the support design has been shown to be safe by crash tests when so installed.

(d) The post-to-box attachment details should be of sufficient strength to prevent the box from separating from the post top if a vehicle strikes the installation.

(e) No more than two mailboxes may be mounted on a support structure unless the support structure and mailbox arrangement have been shown to be safe by crash testing, or meet the requirements set forth in the above AASHTO guidelines.

(f) Mailbox support designs that differ from the AASHTO guidelines are subject to the exception process outlined in Chapter 14.

(g) Lightweight newspaper boxes may be mounted below the mailbox on the side of the mailbox support. Newspaper delivery boxes shall be of light sheet metal or plastic construction of minimum dimensions suitable for holding a newspaper.

29.20 LOCAL & MINOR COLLECTOR STREETS, LANDSCAPING & TRAFFIC CALMING

29.20.010 Street Standards

Geometric street standards have been developed to provide livability for residents, safety for both vehicular and pedestrian traffic and efficient movement. This chapter sets the minimum standards for geometric design of local and minor collector streets that provide access to residential, commercial, and industrial land uses. These streets deserve special discussion because they are the most common streets built for development. Local streets are defined as streets whose primary function is to serve the abutting land use. Design criteria for both horizontal and vertical alignments are established in this chapter. Design criteria for major collector and higher classification streets are discussed in Chapter 29.28.

29.20.020 Local and Minor Collector Streets

Streets shall conform with the adopted Street Plan Functional Classification Map, Figure 3 in the Grand Junction Circulation Plan. Minimally, the plan identifies locations where collector street connections are desired and identifies general alignments for local streets. Street layouts shall continue streets in adjoining subdivisions or their anticipated locations when adjoining property is not yet developed to provide interconnectivity.

29.20.030 Block and Lot Dimensions

Refer to the Zoning and Development Code for block and lot dimension requirements.

29.20.040 Right of Way, Street Lane Widths, and Street Lengths

The required right-of-way width for a street is stated in the Street Sections. Additional widths may be required for needed through lanes, turn lanes, speed change lanes, and where it is necessary to accommodate slopes, irrigation crossings, drainage structures, and timing of adjacent development.

29.20.050 Cul-de-Sacs and Dead End Streets

No cul-de-sac shall be more than 750 feet long, measured from the center of the intersection to the center of the turnaround.

No more than 30 single family/duplex units shall be located on a cul-de-sac street. All cul-de-sacs shall have a turnaround at the terminus point. For single or two-family residential developments that exceed 30 units, a separate and approved fire apparatus access road will be required. If it is a multi-family residential development, the number of units can exceed 30 units and the fire code will govern.

Surface drainage of a cul-de-sac shall be conveyed toward the intersecting street, if possible, and if not possible a drainage easement shall be provided leading out of the cul-de-sac.

Fire Department Access standards contain additional details to assist developers and designers in meeting the requirements of the fire department (Fire department Access B.2-5) When two fire apparatus access roads are required, they shall be placed a distance apart equal to not less than one half of the length of the maximum overall diagonal dimension of the lot or area to be served, measured in a straight line between accesses.

Unless the street meets all of the requirements for a cul-de-sac, no dead end streets shall be allowed except in cases where such streets are designed to connect with future streets on adjacent land. In that case, if any lots in the subdivision are dependent upon the dead end street for access, the plat shall include a temporary turnaround easement at the terminus of the street.

A single access street system shall be allowed for a maximum 100 dwelling units. Before the 101st unit can be platted, a secondary access is required to be constructed or financially secured. This secondary access must be platted as public right-of-way and constructed to public street standards to the property line of the subdivision. A temporary turnaround shall be constructed if the stub street access is longer than 150 feet.

Pedestrian pathways or trails may be required off the end of cul-de-sacs to adjacent streets or cul-de-sacs to provide direct pedestrian and bicycle connectivity. See the Zoning and Development Code for pathway and trail connection requirements.

29.20.060 Alignments

(a) Horizontal Alignment

Designs must conform to the pattern of thoroughfares designated in the Street Plan Functional Classification Map in the Grand Junction Circulation Plan. Proposed streets align with existing or platted streets with which they are to connect.

Local streets (if not ending in a cul-de-sac) shall extend to the property lines of the project. A temporary turn around area capable of supporting a fire truck (HS-20 loading) shall be required at the end of the street improvement if a cul-de-sac is not provided and the street is longer than 150' from the flowline of the intersecting street. Proposed streets with widths different from existing streets to which they are being connected must be transitioned using the pavement transition taper standards.

(b) Curve Radii

(1) All curve designs shall be based on the Horizontal Curve Design Criteria.

Horizontal Curve Design Criteria

Design Criteria	Local[1]	
	Hillside[2]/ Residential	Industrial/ Commercial
Design Speed (mph)	20	25
Center[3] Line Radius (ft)	110	200
Horiz. Sight Dist. (ft)	150	200
Reverse Curve Tangent (ft)	0	0
Approach[4] Tangent at Intersections	50	75

1 These criteria are to be used without super-elevation.

2Hillside is defined as having grades of 10% or greater, as defined in section 21.06.010(f) of the City Zoning and Development code.

3 Radii shown are based on the street having a crown section with a pavement cross-slope of 2% on each side of the crown.

4 Where a curved road approaches an intersection, these tangent sections must be provided on the approach to the intersection to provide for adequate sight distance for traffic control devices at the intersection. The distance shall be measured from the flowline of the through street.

(2) Intersections shall meet the minimum effective turn radii at public street intersections (which accounts for on-street bike lanes or parking if applicable) and must meet a minimum curb return flowline radius of 15 feet.

Minimum Effective Turn Radii at Public Street Intersections

Through Street[2]	Intersecting Street				
	Arterial	Collector	Local Residential	Local Commercial	Local Industrial[1]
Local Residential	30'	25'	20'		
Local Commercial	30'	30'	20'	30'	30'
Local Industrial		30'		30'	30'

1 Radii at intersections with industrial streets shall be designed on a case by case basis considering the turning requirements for the type of truck that will most commonly use the street.

2 At signalized intersections where right turn channelization islands are provided or high truck and bus volumes may use the access, a larger flowline radius may be required.

3 When bike lanes or parking are present consider a reduced flowline radii to match the effective flowline of the intersection, with a minimum flowline of 15'.

(c) Bulb-Outs

If on-street parking is present on minor collectors and local commercial streets, steps should be taken to prevent vehicles from parking too close to the intersection. Bulb-outs should be used to reduce the intersection width and prevent parking in the sight zone. This will result in shorter crossing distances for pedestrians, increased sight distance, and increased visibility of pedestrians especially for turning vehicles, which will increase pedestrian safety and comfort at intersections. Bulb outs are not required on local residential or industrial streets but can be used as a traffic calming device.

(d) Tangent Distance Between Curve

There is no minimum tangent distance between curves for residential or commercial street design.

(e) Superelevation

Superelevation is not allowed on residential street curves.

29.20.070 Vertical Alignment - Grades

Design grades and vertical sight distance address drainage and/or safety concerns for vehicles and pedestrians. Grades of streets shall not be less than 0.5%, nor more than 8%. In hilly terrain (defined as having grades of 10% or greater, as defined in section 21.07.020 of the City Zoning and Development code), the maximum grade for local residential streets is 12% for a maximum distance of 500 feet. To help keep the grade of gutters at a minimum of 0.5% a maximum allowable grade break of 1% is allowable in

sags and on crests. See section 29.20.150 for requirements for grades at intersections. See GJMC 29.28.050 for design control requirements for vertical curves.

29.20.080 Cross Section

(a) Street Cross Slopes

The typical cross slope is 2% crown to provide for adequate drainage to the pavement edge. The minimum cross slope is 1% and the maximum is 4%. At the discretion of the City Engineer, the cross lope may deviate based on demonstrated physical constraints. Typical sections are shown in the Grand Junction Standard Contract Documents for Capital Improvements Construction.

(b) Roadside Barrier and Bridge Rails

Roadside barriers shall be required in accordance with warrants, design criteria and standards for roadside barriers and bridge rails as defined in the most recent version of the AASHTO Roadside Design Guide.

29.20.090 Stopping Sight Distance

Stopping sight distance is defined as the length of roadway ahead visible to the driver. The minimum stopping sight distance available on a roadway must be sufficiently long to enable a vehicle traveling at or near the roadway design speed to stop before reaching a stationary object in its path or react to a traffic control device such as a stop sign.

The appropriate stopping sight distance (see GJMC 29.28.070) shall be provided. The distances shown assume vehicles traveling on wet pavement on flat grades. Factors that take in to account the effect of grade on stopping sight distance shall be used in determining appropriate stopping sight distance where the grades are 3% or higher.

29.20.100 Bicycle Treatments

Bicycle facilities shall be provided in accordance with the adopted Pedestrian and Bicycle Plan. Provisions for bicycle facilities shall be in accordance with the current version of the AASHTO Guide for Development of Bicycle Facilities.

The standard cross-section of off-street multi-use trails is included. Refer to Chapter 29.48 for design guidance on bicycle facility types, and minimum adherence standards. Refer to the NACTO Urban Bikeway Design Guide and the FHWA Separated Bike Lane

Planning and Design Guide for additional guidance on designing bikeway facilities identified in the Pedestrian and Bicycle Plan.

29.20.110 Intersections

There are two general types of intersections: unsignalized and signalized. Each of these shall have several different configurations and levels of traffic control. A roundabout is a form of an unsignalized intersection and is specifically discussed in GJMC 29.28.220 All intersection design shall conform to the guidelines set forth in AASHTO and the MUTCD.

29.20.120 Unsignalized Intersections

There are two appropriate levels of traffic control at unsignalized intersections: two-way stop controlled and all-way stop controlled. The appropriate use of each of these is discussed in the following sections.

(a) Two-way Stop Controlled Intersections

(1) Two-way stop controlled intersections shall be installed in new subdivisions.

(2) STOP signs shall be installed in accordance with the MUTCD.

(3) At intersections of two different types of roadways, a STOP sign shall be used on the minor street to stop the lesser flow of traffic. STOP signs will generally be used at all intersections that do not meet the all-way stop control or traffic signal warrants.

(b) All-way Stop Controlled Intersections

An all-way or "multi-way" stop installation shall be used only as warranted in Part II of the MUTCD.

`29.20.130 Signalized Intersections

Signals will not normally be considered for residential streets or commercial streets. Where signals may be warranted, the criteria in GJMC 29.28.130 shall be followed, and documented in a Transportation Impact Study (see Chapter 29.08).

29.20.140 Angles

Public streets shall intersect at 90° angles or as close to 90° as topography permits, in any event no less than 80°. Intersections on horizontal curves shall be avoided.

When an intersection is on a curve the center line of the intersection must be radial to the curve.

29.20.150 Grades At Intersections

Intersections shall be on grades as flat as practical. At unsignalized intersections, the maximum allowable grade in the intersections is 4% and extends a minimum of 50 feet in each direction from the outside edge of the traveled way of the intersecting street. At signalized intersections, the maximum grade is 2% within the intersection and extends 200 feet in each direction from the centerline of intersecting roadway. Grades above 4% will only be allowed on local and collector streets in areas with steep topography or other unusual circumstances that prevent a flatter grade, and must be documented as a design exception (see Chapter 29.64).

When intersecting with State Highways, refer to Section 4 of the State Highway Access Code.

29.20.160 Spacing and Offsets

(a) Commercial Streets

Four legged intersections shall be spaced at least 300 feet apart from centerline to centerline. Where T-intersections are used, the centerlines of streets not in alignment shall be offset a minimum of 150 feet and be 150 feet from the nearest four-legged intersection. If the left turn storage requirements for adjacent intersections overlap, the minimum spacing must be increased to provide adequate left turn storage in both directions. If exclusive turn lanes are required, the design shall conform to the criteria in GJMC 28.28.170.

(b) Local Residential Streets

Four legged intersections shall be spaced at least 300 feet apart from centerline to centerline. Where T-intersections are used, the centerlines of streets not in alignment shall be offset a minimum of 150 feet.

29.20.170 Intersection Sight Distance

Street intersections and private access to public streets shall be planned and located to provide as much sight distance as possible. At a minimum, there must be sufficient sight distance for the driver on the minor street or driveway to cross or turn onto the intersecting street. Minimum sight distance values are provided (see GJMC 29.28.140) for passenger cars turning left or right from a minor street. When grades are steeper than 3.0%, adjustment factors must be applied.

The operating speed on each approach is assumed to be, in order of desirability, a) the 85th percentile speed, b) the posted speed if based on an engineering study, or c) in the case of a new facility, 80 percent of the design speed.

29.20.180 Sight Zones

The location of sight zones at intersections are identified in GJMC 29.28.140 and sight zones along streets are identified in the Street Sections (see appendix). Within the sight zone there shall be no sight obscuring sign, wall, fence, berming, or other object higher than 30 inches, or in the case of trees, no foliage lower than 8 feet (trees of any diameter may be planted as long as no foliage is lower then 8 feet). Vertical measurement shall be made from the flowline of the adjacent gutter or, if no gutter exists, from the edge of the nearest traveled way. Objects that may be located in the sight zones are items such as hydrants, utility poles, and traffic control devices. These shall be located to minimize visual obstruction.

29.20.190 Pedestrian Treatments

In order to provide pedestrian safety, comfort, and access, accommodations for pedestrians shall be designed into all intersections and in accordance with the Pedestrian and Bicycle Plan. This includes sidewalks, crosswalks, pedestrian refuge islands and accessible ramps. The design shall conform to the standards set forth by the Americans with Disabilities Act and meet the details specified in the Grand Junction Standard Contract Documents for Capital Improvements Construction.

29.20.200 Landscaping – Site Distance at Intersections

Any landscaping in the sight distance triangles at intersections shall be low growing, and shall meet the sight distance requirements in Section 29.20.180.

29.20.210 Traffic Calming

According to the Institute of Traffic Engineers (ITE), "Traffic calming is the combination of mainly physical measures that reduce the negative effects of motor vehicle use, alter driver behavior and improve conditions for non-motorized street users." This differs from standard traffic control devices such as stop signs, which are regulatory. Traffic calming strategies are engineered to be self-enforcing physical measures.

This section provides guidance for appropriate applications of traffic calming on the existing street system, as well as the application of traffic calming measures during the planning and design stages of new sub-divisions. Refer to ITE's Traffic Calming Measures for additional guidance on design and considerations of each traffic calming tool.

29.20.220 Methods to Divert Traffic from Residential Streets

Residents frequently complain that their residential street is being used by high speed and/or cut through traffic. One treatment of the traffic is the use of closures, diverters, and one-way treatments. Multiple treatments can be implemented on one street as part of a formal "Slow Streets Program" along with supporting signage such as "Local Traffic Only."

(a) Street Closure

Streets may be fully or partially closed from one end to give drivers no choice but to travel another route, with vehicle access provided from the end that is not closed. A street closure is the most drastic form of traffic calming and shall be carefully considered before implementation. Street closures can lead to increased traffic on nearby streets as drivers are re-routed to other routes. Closures should be made passable by pedestrians and bicyclists.



Permanent Partial Closure

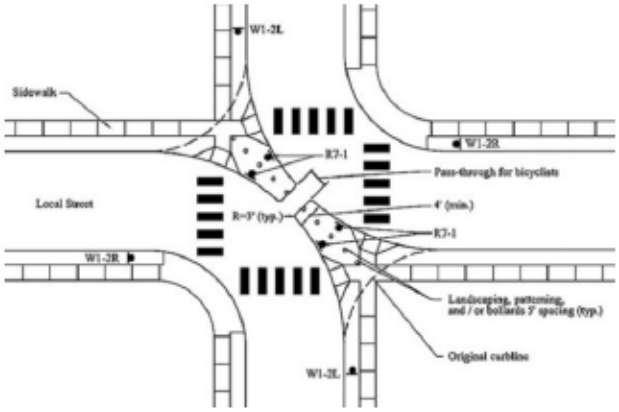


Retrofit Partial Closure

(b) Diagonal Street Diverters

A diagonal street diverter can also be considered a partial street closure. With a diverter, traffic traveling in one direction is not given access to a street. As with street closures, implementation of diverters may shift traffic to another street where access is not regulated. Street diverters should provide cut throughs for pedestrians and bicyclists.





Source (drawing): Delaware Department of Transportation

(c) One-Way Streets

One-way streets may be effective in decreasing the number of vehicles traveling on a given roadway. Traffic patterns shall be assessed to determine the effects of a one-way street on a given circulation pattern. Although traffic volumes are generally decreased by one-way treatments, speeds can often increase as drivers are channelized through the street.

29.20.230 Methods to Slow Traffic on Residential Streets

Where speed is the recognized problem, the following methods can be effective in slowing existing traffic on residential and collector streets. These treatments are appropriate on streets where the block length is at least 600 feet. For blocks less than 600 feet traffic circles at the intersections are the preferred traffic calming tool.

(a) Chokers

Research has shown that traffic moves slower on narrow streets. Chokers reduce the width of a street by narrowing the road at a 'choke point'. Depending on the road segment length, one or several chokers can be used.



Permanent Choker
(source: City of Ann Arbor, Michigan)



Retrofit Choker
(source: City of Denver, Colorado)

(b) Medians

A median can be installed on a street where width tends to encourage speed. Medians narrow the lanes, reducing the comfort of the driver while driving at higher speeds. Median treatments are particularly effective with landscaping.



Permanent Median
(source: James Barrera, Harrocks New Mexico)



Retrofit Median
(source: City of Denver, Colorado)

(c) Chicanes

A chicane is essentially half of a choker. A chicane is placed on one side of the road to narrow a lane of traffic. A chicane can be used singly but is usually placed as a series on both sides of the road.



Permanent Chicane
(source: City of Denver, Colorado)



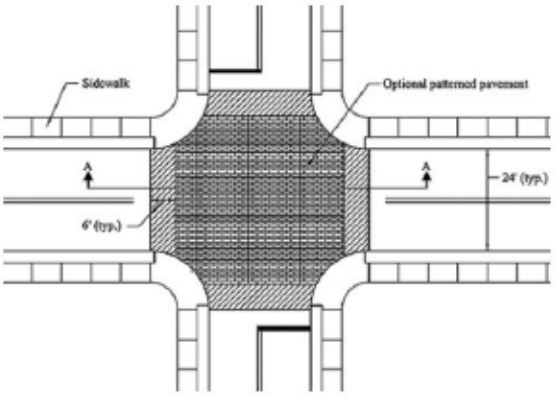
Retrofit Chicane

29.20.240 Methods to Slow Traffic at Intersections

(a) Raised Intersections

Raised intersections are flat raised areas covering entire intersections, with ramps on all approaches and often with brick or other textured materials on the flat section.



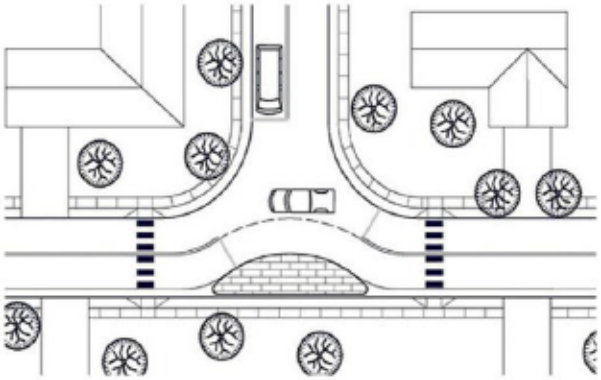


Source: (photo) Chuck Huffine, Phoenix AZ; (drawing) Delaware Department of Transportation

(b) Realigned Intersections

Realigned intersections are changes in alignment that convert T-intersections with straight approaches into curving streets meeting at right angles – a straight shot along the top of the T becomes a turning movement.





Source: Delaware Department of Transportation

(c) Traffic Circles

Traffic circles are set in the center of a three- way (driveways excluded) or four-way intersection to slow traffic coming from each direction. A traffic circle can be effective in creating a neighborhood gateway by providing a unique feature that can be creatively landscaped. This includes mini traffic circles which can be applied as a retrofit to existing STOP controlled intersections.



Example of a mini traffic circle

(d) Bulb-Out/Corner Extension

A bulb-out or corner extension is the horizontal extension of the sidewalk and curb at an intersection, typically in place of on-street parking, resulting in a narrower roadway. Bulb-outs are most feasible on streets with on-street parking and are effective at narrowing the crossing distance for pedestrians, increasing visibility of pedestrians, slowing turning vehicles, and preventing drivers from parking too close to an intersection and blocking sight lines and/or the crosswalk.



Permanent Bulb-Out



Retrofit Bulb-Out
(source: City of Denver, Colorado)

(e) Other Methods

Other methods may be considered (such as hardened center lines) as approved by the jurisdiction.

29.20.250 Traffic Calming in New Developments

Long, wide streets with limited parking will generally increase speeds. As new developments occur, traffic calming can be planned as a feature of the neighborhood to keep vehicle travel speed low for maximum livability and safety of all street users. In large developments and developments that connect to existing residential streets, designs to control speeds and volumes are required. Design features such as curvilinear streets, T-intersections and entry treatments can reduce the need for traffic calming devices such as speed humps and chokers. Generally, horizontal calming measures will provide greater efficiency and livability in new developments.

The design speed of residential streets shall be 20 MPH. The design of local streets shall include positive traffic calming measures and devices. They are required when a straight street exceeds 600 feet in length. Horizontal curves used for traffic calming must have a length of curve consistent with the Horizontal Design Criteria Table in 29.20.060(b)(1). Such measures and devices shall be sufficient to minimize the ability of the average motorist to exceed 20 MPH. Narrow streets may not need specific measures.

29.44 TRAFFIC SIGNALS AND CONSTRUCTION ZONES

29.44.010 Installation/Relocation of Traffic Signals

New traffic signal installations and relocations of existing signal equipment may be required in the developer's public improvement agreement. New signals will be installed only when warranted as specified in the MUTCD and when the new signal will not have a detrimental effect on the traffic flow. The need for a traffic signal will be addressed in the Transportation Impact Studies (see Chapter 29.08) and be designed in accordance with the criteria in GJMC 29.28.130.

The installation, modification or relocation of a traffic signal must follow the specifications defined in the City of Grand Junction Traffic Signal Specifications document.

29.44.020 Signal Design Plans

Signal design plans shall be submitted as part of the development plans. The design of the traffic signal shall follow the ITE *Manual of Traffic Signal Design* and the MUTCD standards. The signal design shall follow the Traffic Signal Specifications of the City.

Signal design plans shall contain all necessary information. Typical traffic signal installation and design details are included in the City of Grand Junction Traffic Signal Specification.

New signals or improvements to existing signals shall be required to install conduit for fiber optic cable and all necessary fiber optic equipment to connect to adjacent signals on streets as shown on the Signal Communications Plan.

29.44.030 Traffic Control Plans for Construction Zones

All maintenance of traffic plans for construction areas shall be submitted to and approved as part of the permitting process for work in the public right of way. All plans shall conform to the MUTCD and be prepared by a certified traffic worksite supervisor. On State Highways, the Colorado Department of Transportation shall approve work area traffic control signing and detour plans.

29.48 TRANSIT, BICYCLE, AND PEDESTRIAN FACILITIES

29.48.010 Planning and Implementation

Transit, bicycle, and pedestrian facilities are an integral part of the transportation system.

This chapter establishes how to plan and implement these facilities. Transit, bicycle and pedestrian accommodations shall be addressed in transportation impact studies as discussed in Chapter 29.08. Additionally, the provision of transit, bicycle, or pedestrian facilities or easements for such facilities may be required as part of the development review process in order to facilitate multimodal circulation and access through or adjacent to the development consistent with the Mesa County Transit Design Standards and Guidelines, existing or planned transit routes, and the Pedestrian and Bicycle Plan. Section 29.16.230 provides requirements for inter-parcel circulation of walkways and bikeways to facilitate multimodal circulation.

29.48.020 Transit Facilities

All transit facilities shall conform to the latest version of the Mesa County RTPO Transit Design Standards and Guidelines. As part of the development review process, the city may require the developer to accommodate transit. Transit facilities could include provision of infrastructure for bus stop amenities including concrete pads, sign posts, and easements in order to allow for the installation of benches, shelters, bike and micro-mobility parking, and other similar amenities. If a bus pullout is needed to accommodate transit, the city may require the developer to provide the pullout and/or related easements, or additional right-of-way.

29.48.030 Planning and Design Standards for Bicycles

Refer to the current version of the AASHTO Guide for the Development of Bicycle Facilities, as well as the NACTO Urban Bikeway Design Guide, and FHWA Separated Bike Lane Planning and Design Guide to address planning and design of bike facilities. NACTO also publishes two additional guides on designing low stress bike facilities: Designing for All Ages and Abilities, and Don't Give Up At The Intersection, which provides guidance on low-stress intersection design, and may be applicable when implementing bike facilities in Grand Junction..

The Grand Junction area has adopted a Pedestrian and Bicycle Plan. The plan shows the future bicycle network in Grand Junction by facility type, including off-street trails and on-street bikeways. The Plan gives guidance on design for bike facility types given the street context in order to eventually achieve a well-connected low-stress bicycle network throughout Grand Junction. All development shall comply with the current version of the Plan.

29.48.040 Facility Type

(a) The Pedestrian and Bicycle Plan identifies six bicycle facility types. They are:

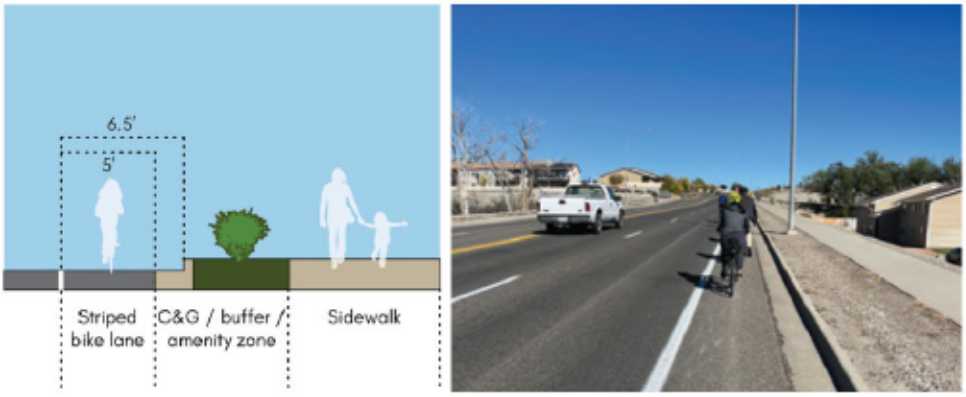
(1) **Bicycle Boulevard.** A street which is officially designated and marked [by signage and/or sharrow markings in the pavement] as a bicycle route, but which is open to motor vehicle travel and upon which no bicycle lane is designated. A bicycle boulevard may include other traffic calming features to mitigate the speed and volume of motor vehicle traffic on the street to create a more comfortable environment for bicyclists, such as curb extensions, mini roundabouts, speed humps, and traffic diverters. Generally, streets designated as bike boulevards should be designed for 15 to 20 mph, and the average daily traffic volume should not exceed 1,000 vehicles per day.



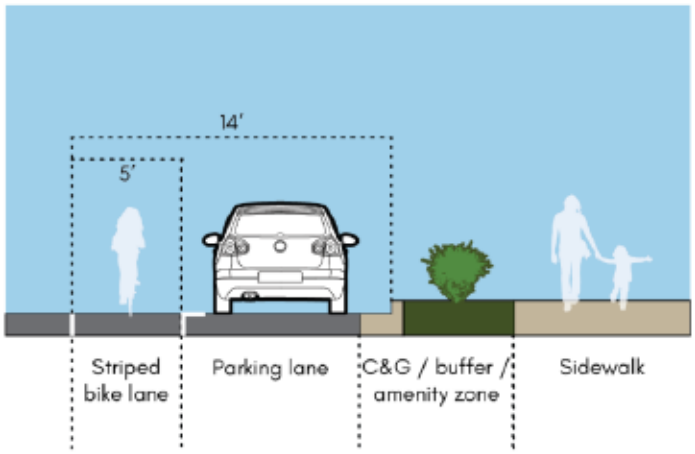
Mini roundabout on a Bicycle Boulevard

(2) **Bike Lane.** A portion of street, which has been designated (by pavement markings and signage) for use by bicyclists. The bike lane is typically 5 feet wide, measured from the lip of gutter pan when adjacent to the curb and is 6.5 feet wide when measured from the face of the curb. When adjacent to a parking lane (and on the outside of the parking lane) the outside stripe of the

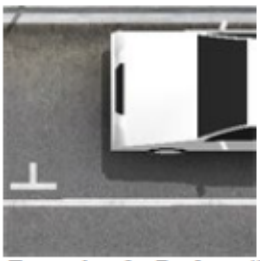
bike lane is typically 14 feet from the face of the curb (and a minimum of 12.5 feet from the lip of the gutter pan). A buffer between the parking lane and the bike lane may also be implemented when there is a heightened "door zone" concern either through the use of a separate solid lane at least 18 inches from the bike lane or parking "Ts" to delineate parking spaces.



Bike lane adjacent to a curb



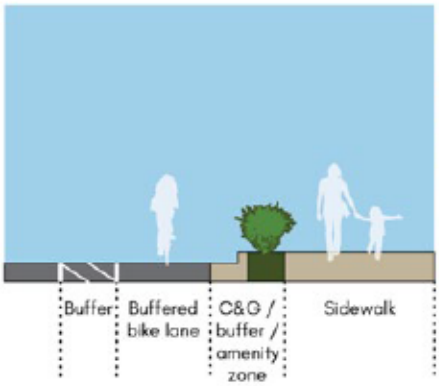
Bike lane adjacent to a parking lane



Example of a Parking "T" adjacent to a bike lane (source: NACTO)

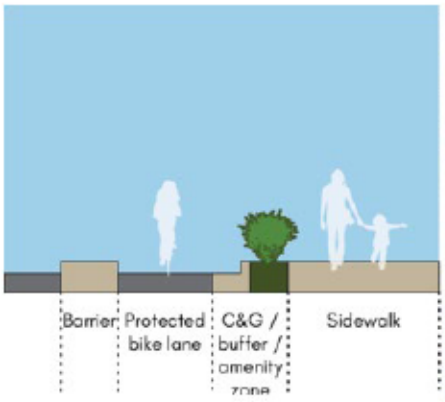
(3) **Buffered Bike Lane.** A portion of street, which has been designated (pavement markings and signage) for use by bicyclists with a painted buffer

between a general purpose travel lane and the bike lane. The buffer width is typically 3 feet.





(4) **Protected Bike Lane.** A portion of street, which has been designated (by paint stripe, pavement markings, and signage) for use by bicyclists with a physical buffer between the general purpose travel lanes and the bike lane. The physical buffer may be delineator posts, planters, rigid bollards, a parking strip (parked cars), or a concrete barrier. The lane is typically 6.5 feet wide from the curb and the buffer is typically 3 feet.

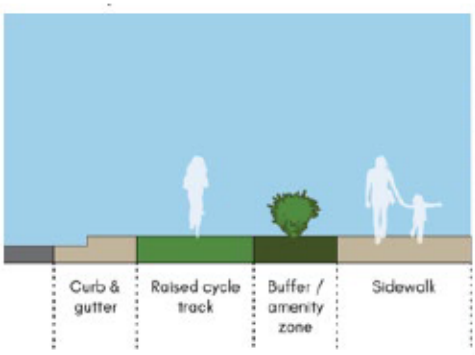




(5) **Multi-use Trail.** A separate two-way trail from which motor vehicles are prohibited and which is for the shared use of bicycles and pedestrians. The trail is typically 10 feet wide but may be 12' wide to meet anticipated demand and to mitigate conflicts between bicyclists and pedestrians. The width can be greater than 12 feet where bicycle and pedestrian demand warrants or conflicts between pedestrians and bicyclists are more frequent, for example, the Riverfront Trail.



(6) **Raised Cycle Track.** A separate trail or path from which motor vehicles are prohibited, and raised from the general purpose travel lanes, and which is for the exclusive use of bicycles and other allowable micro-mobility devices (such as electric scooters). The trail is typically 6.5 feet wide or wider.





(b) The design standards for bike lanes and multiuse trails are contained in the AASHTO manual and additional design guidance for these facilities are contained in the NACTO Urban Bikeway Design Guide and FHWA Separated Bike Lane Planning and Design Guide provide hot link. Typical widths and locations of bicycle facilities on the street are also provided in the street sections in Chapters 29.20 and 29.28. The list below are the minimum bicycle facility design standards to be provided:

(1) Uniformity in on-street facility design, signage, and pavement markings for bicyclist and motorist safety.

(2) Absolute minimum widths are 4 feet on an open shoulder and 5 feet against a curb or guardrail or next to a parking lane. Bike lanes must provide at a minimum 4 feet of width from lip of gutter when adjacent to the curb. When adjacent to a parking lane the outside painted line of the bike lane must be at

least 12 feet from the edge of the curb. Minimum widths should not be the default, but should only be applied in environments with constrained right-of-way. On most street segments, typical widths will be provided.

(3) Cross railroad tracks perpendicular to direction of bike travel with appropriate treatment to ensure smooth and safe crossings.

(4) On-street bicycle facilities shall provide bicycle-safe curb inlet grates.

(5) Avoid diagonal on-street parking on streets with a striped bike lane (unless the bike lane is between the parking lane and the curb).

(6) Implement bicycle detection at all traffic signal approaches with an existing or planned on-street bicycle facility at an actuated signal.

(7) Carry the bike lane through all intersections to the extent that is feasible.

29.48.045 Bicycle Intersection Treatments

Refer to the AASHTO Guide for the Development of Bicycle Facilities, as well as the NACTO Urban Bikeway Design Guide, and Don't Give Up At The Intersection for guidance on designing bicycle facilities through intersections. Effective treatments may include bike boxes, intersection crossing markings, two-stage turn queue boxes, median refuge islands, or other paint, signage, or vertical elements. Active transportation corridors and bike routes will likely require context sensitive treatments.

(a) Trail Crossings. Where multiuse trails intersect driveways or side-street STOP controlled minor streets, trails should bend away so that they are set back from the major street. The total setback from the edge of the travel lane (or bike lane if present) to the edge of the trail should be 15 to 25 feet (one vehicle length).

29.48.050 Pedestrian Facilities

Pedestrian facilities are required as a part of the street cross-section, as detailed in the Grand Junction Standard Contract Documents for Capital Improvements Construction and street cross section in Chapters 29.20 and 29.28. Additional guidance on pedestrian design is included in the Pedestrian and Bicycle Plan and reflected in the typical street cross sections. Detached walkways that are constructed must conform to these details as well.

Environmental factors that contribute to the walking experience and therefore to the perceived level of service include:

(a) Comfort factors that include weather protection, climate control, transit shelters, and other pedestrian amenities.

(b) Convenience factors such as walking distances, walkway directness, grades, sidewalk ramps, directional signing, directory maps and other features that make pedestrian travel easy and uncomplicated.

(c) Safety that is provided by separation of pedestrians from vehicular traffic, or traffic control devices that can provide for time separation of pedestrian and vehicular traffic.

(d) Security features include lighting, open lines of sight, and the degree and type of street activity.

(e) Economy aspects related to user-costs associated with travel delays and inconvenience, and to the rental value and retail development as influenced by the pedestrian environment.

The quality of the pedestrian environment should be evaluated in three broad areas:

(a) Walking along the street – includes continuity, capacity, and comfort.

(b) Crossing the street – includes safety, sufficient space, delay, and route deviation.

(c) Some place to walk to – in terms of travel time on foot, destinations, and how much of an area can be reached within a reasonable time or distance.

The Pedestrian and Bicycle Plan includes pedestrian design recommendations for sidewalk and buffer widths in different street contexts to provide sufficient space and separation from traffic in order to achieve a high level of pedestrian comfort given the speed and volume of traffic. These recommendations are reflected in the typical street sections included in Chapters 29.20 and 29.28.

29.48.060 Pedestrian Intersection Treatments

All pedestrian crossings shall comply with the Grand Junction Standard Contract Documents for Capital Improvements Construction and be designed in accordance with the Americans with Disabilities Act, including accessible ramps, accessible push buttons when applicable, detectable surfaces, and other universal design features. Refer to the current edition of the Grand Junction Pedestrian Crossing Treatment Installation Guidelines for guidance on applicability of pedestrian crossing treatments in different contexts, including at uncontrolled crossings. Refer to CDOT's Pedestrian Crossing Installation Guide for uncontrolled pedestrian crossings on state highways.

Potential pedestrian treatments at uncontrolled crossings may include:

(a) Advance Warning Signing and Striping

See Chapter 2C of the MUTCD for guidance on advance warning pedestrian crossing signs and Chapter 3B for yield line pavement markings.



(b) High Visibility Marked Crosswalks

According to FHWA high-visibility crosswalks use patterns such as bar pairs, continental, or ladder that are visible from farther distances to drivers and pedestrians. Additionally, consider using inlay or thermoplastic tape instead of paint for highly reflective markings.

(c) Raised Crossings

A raised mid-block crossing or raised intersection treatment may be installed as a treatment to slow vehicle traffic and function as an extension of the sidewalk to allow a pedestrian to cross the street at a constant grade. According to FHWA raised crossings are typically a candidate on 2-lane or 3-lane roads with speed limits of 30 mph or less and AADTs below 9,000.

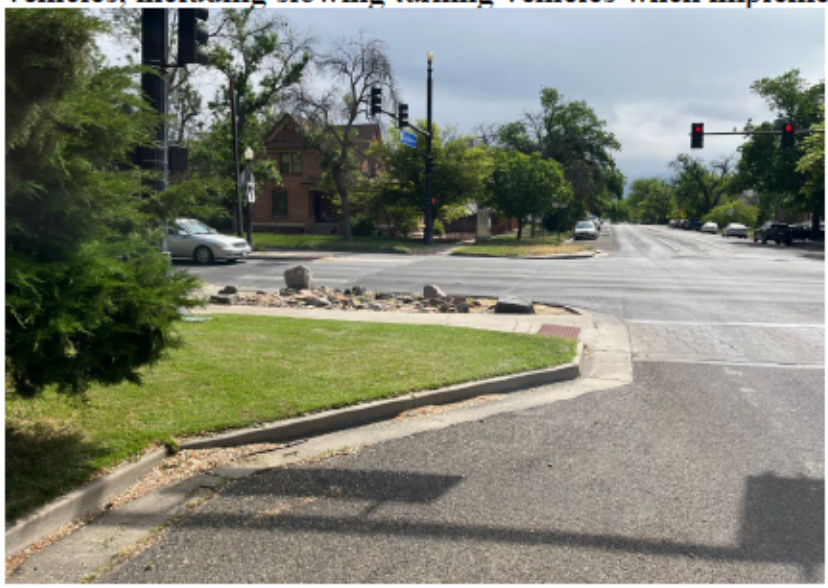
(d) Pedestrian Refuge Medians

A pedestrian refuge median is a location in the middle of a pedestrian crossing where a pedestrian can take refuge, thereby separating their crossing into two steps and must include some type of raised median. Additional design guidance can be found in the Grand Junction Pedestrian Crossing Treatment Installation Guidelines.



(e) Bulb-Outs

A bulb-out (or corner extension) is a roadway edge treatment where a curb line is bulged out toward the middle of the roadway to narrow the width of the street. Bulb-outs are often used at the location of a pedestrian crosswalk to minimize the distance and time that a crossing pedestrian must be in the roadway and are typically implemented on streets with on-street parking. Bulb-outs also increase visibility of pedestrians waiting to cross and are an effective means to slow vehicles, including slowing turning vehicles when implemented at intersections.



(f) Rapid Rectangular Flashing Beacons (RRFB)

RRFBs are small rectangular yellow flashing lights that are deployed with pedestrian crossing warning signs. They are typically actuated by a pedestrian push button and flash for a predetermined amount of time, to allow a pedestrian to

cross the roadway, before going dark. RRFBs are warning devices and do not themselves create a legal requirement for a vehicle to stop when they are flashing. Guidance on the appropriate context for RRFBs are provided in the Grand Junction Pedestrian Crossing Treatment Installation Guidelines.



(g) Pedestrian Hybrid Beacons (also known as HAWK beacons)

A pedestrian hybrid beacon is used to both warn and control traffic at a pedestrian crossing. It is actuated by a pedestrian push button and uses a combination of circular yellow and red traffic signal displays to first warn motorists of a pedestrian that is about to cross the street, then require the motorist to stop for the pedestrian crossing, and then release the motorist to proceed once the pedestrian has cleared the crossing. The Beacon is a hybrid between a pedestrian traffic signal and a stop sign.



(h) Traffic Signals

Depending on factors defined in the Grand Junction Pedestrian Crossing Treatment Installation Guidelines, such as vehicle traffic volume, vehicle speed, and the number of lanes, or other contextual factors (such as pedestrian volume, crash history, or adjacent land use), it may be appropriate to signalize a pedestrian crossing.

29.56 ALLEY STANDARDS

29.56.010 Alley Construction

Alleys are a useful alternative for accessing properties, especially in the Central Business District (CBD). The construction of new alleys shall follow the design standards defined in the standard detail for alleys located in the Appendix. Any variation from the specifications defined in this drawing must go through the design exception process.

29.64 DESIGN EXCEPTIONS

29.64.010 Design Exceptions

This manual establishes standards for the construction of transportation and infrastructure improvements in the City and within the Urban Development Boundary. There may be certain circumstances where those standards do not adequately meet the public's needs. The public needs, as defined by these standards, may conflict with constraints on the property or a new or innovative development proposal.

This chapter describes an exception process. It may be that an exception is a one-time event or it may be that the Manual will be revised to incorporate the exception.

The flowchart depicts the design exception process.

The burden in the development process shall be on the applicant to demonstrate that the proposed exception, if granted, will not result in a dangerous condition as determined by the City or County. No exception shall be allowed if the resulting design is dangerous or otherwise fails to meet the fundamental needs of the community. The fundamental needs of the community shall be determined by the City or County, but primarily are the provision of safe, efficient and effective transportation.

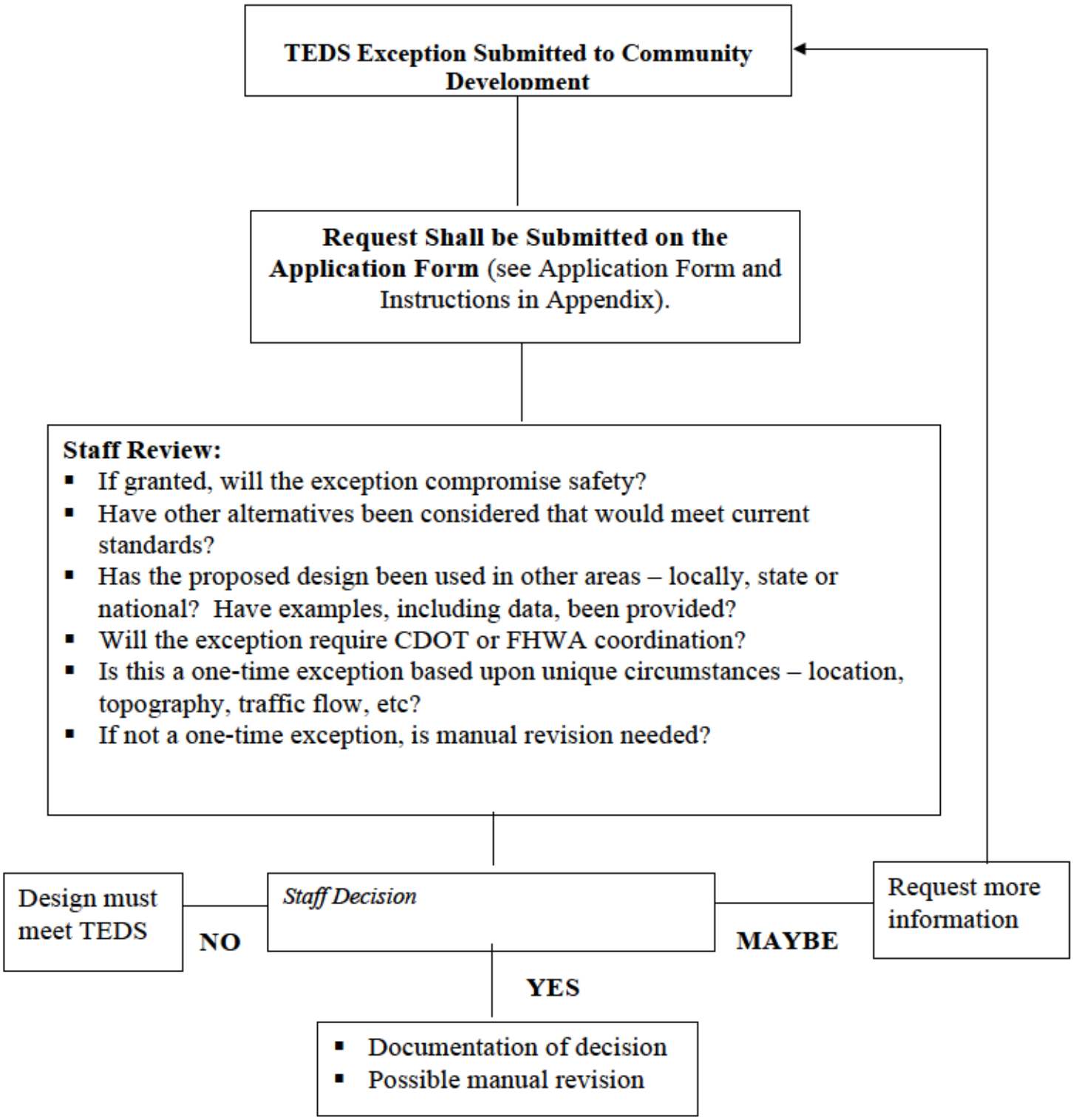
Any exceptions to the TEDS manual should be clearly proposed as early as possible in the project development and review process. Exceptions to TEDS should be identified no later than preliminary plan submittal.

If a design exception is to be a permanent modification to the TEDS Manual, it will be the responsibility of the City and County staff to update TEDS and disseminate the change to CDOT, other municipal or county departments and the development community.

When geometric standards or other design criteria are not specifically addressed in the City or County standards, then the latest editions of the following standards and criteria shall govern the design.

- Colorado State Highway Access Code
- CDOT Roadway Design Manual
- Institute of Transportation Engineers (ITE) Traffic Engineering Handbook
- American Association of State Highway and Transportation Officials (AASHTO) A Policy on Geometric Design of Highways and Streets

Design Exception Process



29.68 ALTERNATE RESIDENTIAL STREET STANDARDS

29.68.010 Intent of Provisions

The intent of this chapter is to provide flexibility in the creation, approval and use of public street infrastructure that varies from the cross-sectional standards provided in Chapter 29.20, and to accommodate such proposals under administrative approval procedures. This resulting alternate street standard may be used to create neighborhood character, enhance visual appeal, and to accommodate unique topographical or site features. Further, implementation of these standards should result in "a better solution," allowing alterations to the standard street section that produce benefit to the community.

29.68.020 Performance Criteria

All public streets considered for alternate cross-sections shall meet certain minimum performance-based standards and meet all intent for function of a public right-of-way. Each proposal must be framed within the specific context of the use.

(a) Horizontal Geometry

(1) The horizontal geometry of street, pathway, and trail layouts must meet TEDS requirements elsewhere herein. The design must accommodate large vehicles such as fire trucks, trash trucks and semi-trucks at an appropriate level of service.

(2) A minimum pavement width of 20 feet, from flow line of gutter to flow line of gutter, is required for all streets. Pathway and trail widths or pedestrian walkways shall meet minimum widths as required in the Standard Contract Documents for Capital Improvements Construction by pathway and trail classification.

(3) Horizontal curb radii must be 15 feet minimum for chicanes, parking bulb-outs and other similar features to maintain proper drainage (see GJMC 29.28.160).

(4) Intersection geometry is as required elsewhere herein.

(b) Vertical Geometry

The vertical geometry of street, pathway, and trail layouts must meet TEDS requirements elsewhere herein and ADA requirements.

(c) Sight Distance

The design must achieve all sight distance requirements listed elsewhere in TEDS.

(d) Connectivity

(1) Minimum connectivity requirements remain unchanged, including pedestrian and bicycle connectivity. Provision of access to adjacent parcels is required. Additional inter- or intra-parcel connectivity may be necessary where reduced street width is considered.

(2) Example: One case where narrow streets and the concept of "queuing" are frequently and successfully used is in older downtown neighborhoods across the country. The streets typically have a grid layout, short block length, and possibly an alley, all providing a high-degree of connectivity, thus allowing a narrow street with fairly high density and high use of on-street parking to function satisfactorily.

(e) Parking

(1) Adequate parking must be provided both on- and off-street. Zoning and development code minimums are required on-site. The on-street parking range is required at 0.5 to 1.5 on-street parking spaces per dwelling unit (see the Local Street Section Notes in Chapter 29.20). Higher density development will demand on-street parking in the upper end of that range.

(2) Clustering of on-street parking in pods is encouraged where full on-street parking is not provided. The provision of on-street parking shall consider availability of parking for long vehicles or vehicles with trailers.

(3) Adequate parking outside of the travel lane must be provided. On the other hand, excessive availability of parking contributes to higher speeds due to width of travel lane available as well as to increased construction and maintenance costs.

(f) Pedestrian Facilities

(1) The design must provide adequate pedestrian facilities equal to or better than existing adopted street sections. Detached walk and additional walk width are encouraged.

(2) Sidewalk is required to create continuous pedestrian walkways parallel with the public roadway. Generally, if lots front both sides of the street, sidewalk will be required on both sides of the street.

(g) Drainage

(1) Curb and gutter is generally considered necessary. However, in limited instances, other options may be considered. Examples include an inverted crown as typically used in concrete alley applications and areas where attached curb and gutter may not be practical due to certain soil conditions. In these cases, adequate drainage facilities must be provided per the Stormwater Management Manual (GJMC Title 28). Alternate drainage facilities must not require additional maintenance effort above conventional facilities.

(2) Surface drainage at bulb-outs and chicanes is preferred along a continuous gutter without drain troughs or otherwise inaccessible sections of gutter.

(3) Narrower street sections will not carry the same amount of water as the standard street sections. Analysis of the street stormwater carrying capacity by use of the SWMM nomographs will not be permitted.

(h) Surfacing and Construction Requirements

Hard surfacing (Portland cement concrete or asphalt pavement) is required and shall meet the structural design requirements contained in Chapter 29.32 GJMC. Gravel surfacing is not allowed. Construction requirements are contained in the Grand Junction Standard Contract Documents for Capital Improvements Construction.

(i) Right-of-Way and Multi-Purpose Easements

(1) Right-of-way and infrastructure dimension and configuration must provide adequate room for all necessary public facilities including, but not limited to, storm drainage; water lines and meters; sanitary sewer lines; electrical, natural gas, cable, telephone supply lines, service lines, pedestals and appurtenances; traffic control signage; irrigation supply and drainage; cut or fill slopes; and other public utility lines and appurtenances.

(2) The standard 14-foot multi-purpose easement may be reduced in width if adequate space is shown to exist within the right-of-way. The standard multi-purpose easement width on streets with a buffer between the sidewalk and the curb is 10-feet.

(3) Right-of-way configuration must provide adequate access to public utilities. Fencing of easement areas is discouraged as it reduces access to utilities and improvements.

(j) Private Streets, Shared Drives and Alleys.

(1) Nothing in this section shall expressly prohibit the use of private streets and shared drives, as allowed elsewhere herein, to be used in conjunction with alternate standard streets.

(2) The use of alleys is likewise permitted and may be used in conjunction with alternate standard streets to achieve utility service delivery, alternate access to off-street parking or enhance connectivity.

(k) Traffic Calming

Traffic calming requirements are the same as required elsewhere herein. Elements of narrowed streets may be considered part of the traffic calming system.

(l) Other Right-of-Way Elements

All elements of the function of the right-of-way must be considered in the design process.

(1) **Mail Receptacles.** Streets shall include design elements necessary to meet USPS requirements for access to mail receptacles. Mail receptacles will not be permitted within sight distance triangles at intersections or located such that they interfere with the safe and normal function of the street. Parking shall be provided adjacent to the mail receptacle.

(2) **Urban Trails.** Where urban trails, primary school walk routes, bike lanes, or other non-motorized transportation routes are indicated on adopted City, school district, or other plans, these elements must be incorporated into the design. The design must meet all requirements of City, State and federal standards, including ADA.

29.68.030 Application

The process for an alternative street request is similar to the Design Exception Process depicted on the flowchart in Chapter 29.64. The applicant shall submit a written report requesting alteration of the standard as a part of a pre-application conference, preliminary plan or other application process. The applicant is encouraged to make this application as early in the process as feasible. The report and plan shall contain the following:

(a) A specific request for alteration of the standard, detailing elements of the standard that are altered and the proposed alternative.

(b) A narrative explaining the reasons for requesting the alteration and proposed benefits.

(c) A narrative, individually addressing each criterion in the performance criteria above.

(d) A site plan showing limits and extents of proposed alterations.

(e) A site plan indicating proposed density, approximate lot size and frontage, access locations, street network, and other pertinent elements. Approximate horizontal and vertical geometry may be required, dependent on topography or other site constraints.

(f) A parking plan demonstrating on-street and off-street parking to demonstrate conformance with parking standards listed above.

(g) A fire site plan demonstrating that a fire truck can negotiate the development with the proposed on-street parking from both directions.

29.68.040 Approval

The Director or his/her assigned representative(s) shall make a final determination of adequate conformance to these criteria and have the authority to approve or reject each proposed alternative. Staff or agency members may provide comment or modification to the proposal. The Director may consult with or delegate review and approval authority to City Staff, outside review agencies, or outside consultants.

Where the proposed alternate may affect utility placement, approval of the Utility Coordinating Committee is required prior to the consideration by the Director or his designee.

Deviation from the standard street cross-sections may continue to be accomplished through a variance or a planned development procedure as permitted in the zoning and development code.

TRANSPORTATION ENGINEERING DESIGN STANDARDS (TEDS)

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Pedestrian & Bicycle Analysis Worksheet

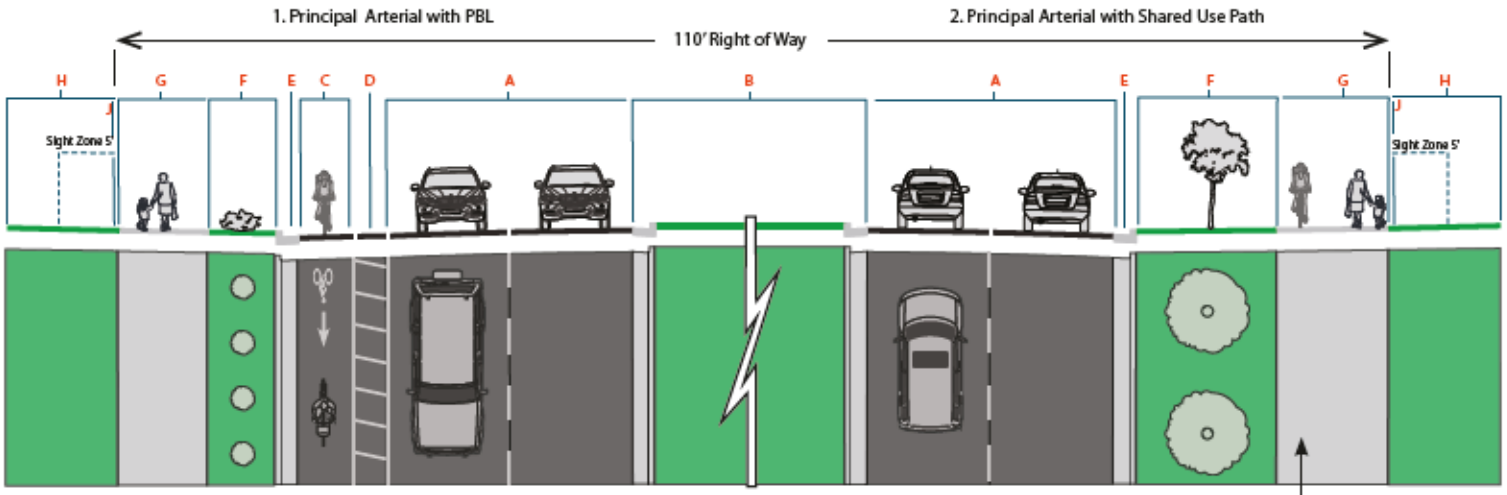
TEDS Exception Request Application

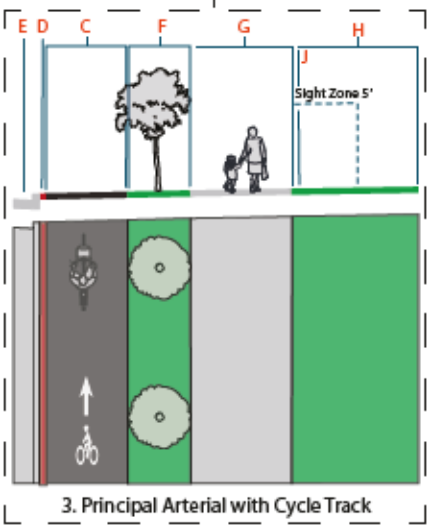
TEDS Exception Request Application Instructions

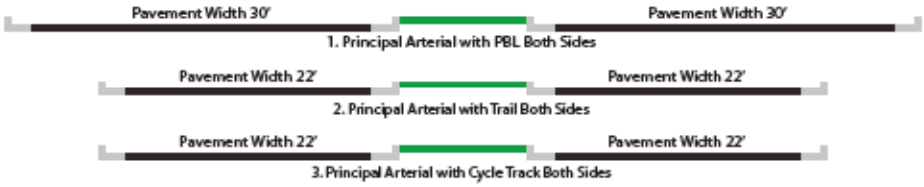
Transportation Impact Study Base Assumptions

PROPOSED

Principal Arterial







Principal Arterial ROW 110'										
	A	B	C		D	E	F	G	H	J
Type	Travel Lanes	Median/ Turn Lane	Bike Lane (On Street)	Bike Lane (Off Street)	Bike Buffer	Curb and Gutter	Sidewalk Buffer*	Sidewalk/ Trail	Multi-Purpose Easement	Frontage
1. Principal Arterial with PBL	11	17	5		3	2	6	8	10	.5
2. Principal Arterial with Shared Use Path	11	17			0	2	12	10	10	.5
3. Principal Arterial with Cycle Track	11	17		6.5	.5	2	7	8	10	.5

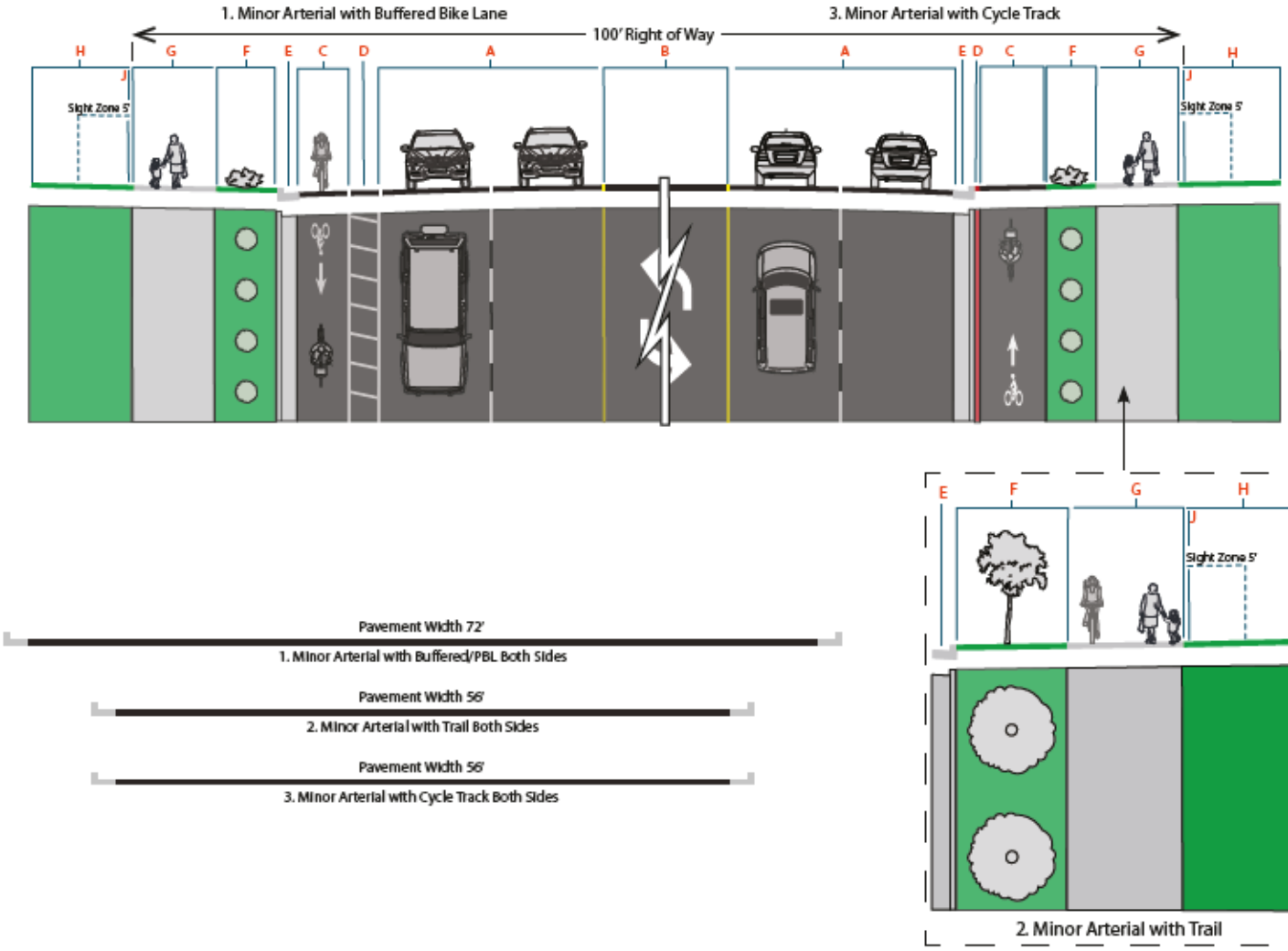
*The Sidewalk Buffer allows space for landscaping, street furniture (benches, bike, racks), and utility polls

Principal Arterial

Notes

- See Grand Junction Urbanized Area Functional Classification Map for principal arterial street designation.
- Vertical curbs, gutters and sidewalks are required on both sides of all arterial streets.
- Attached sidewalks may be approved where existing development precludes construction of detached sidewalks.
- All arterial streets shall be surfaced with Hot Bituminous Pavement (HBP) or Portland Cement Concrete (PCC).
- Additional right-of-way width will be required for construction of dedicated right-turn lanes. See chapters of the City's Transportation Engineering Design Standards for Speed Change Lane Dimensions.
- See details of Multi-purpose Easement Adjacent to Right-of-Way in the standard contract documents.
- For Sight Zone requirements refer to 29.28.150 of the TEDS Manual.
- Vertical elements required in the buffer zone between the travel lane and bike lane to satisfy the condition of a protected bike lane (PBL) when speed is => 40 mph. Buffered bike lane (without vertical elements) may be acceptable when <40 mph.
- Vertical separators would only be used between intersections.
- The standard design for a street with a trail includes a 10' trail on both sides of the street. In situations where there are ROW constraints, higher bicycle demand on one side, or differing land uses on one side, an 8' sidewalk can be provided on one side with a 12' or 14' trail on the other side.
- The standard design for a street with buffered bike lanes or a cycle track includes a one-way bikeway on both sides of the street. In some contexts where land use or other constraints dictate a two-way bikeway on one side of the street can be implemented. Refer to the NACTO Urban Bikeway Design Guide and the FHWA Separated Bike Lane Planning and Design Guide for special design considerations, particularly at driveways and intersections, when designing two-way protected bikeways.
- A trail is considered multi-use for wheeled traffic and pedestrians.
- The minimum sidewalk buffer width is 7 feet for planting trees.

Minor Arterial



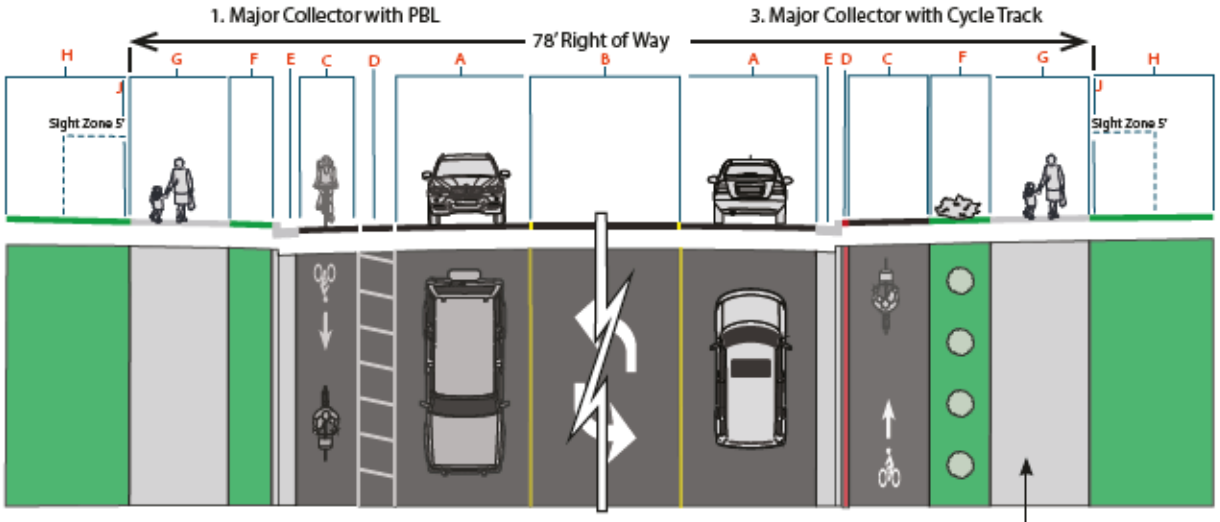
Minor Arterial ROW 100'											
		A	B	C		D	E	F	G	H	J
Type	# of Travel Lanes	Travel Lanes	Median/ Turn Lane	Bike Lane (On Street)	Bike Lane (Off Street)	Bike Buffer	Curb and Gutter	Sidewalk Buffer	Sidewalk/ Trail	Multi-Purpose Easement	Frontage
1. Minor Arterial with Buffered Bike Lane/ PBL	4	11	12	5		3	2	3.5	8	10	.5
2. Minor Arterial with Trail	4	11	12			0	2	9.5	10	10	.5
3. Minor Arterial with Cycle Track	4	11	12		6.5	.5	2	4.5	8	10	.5

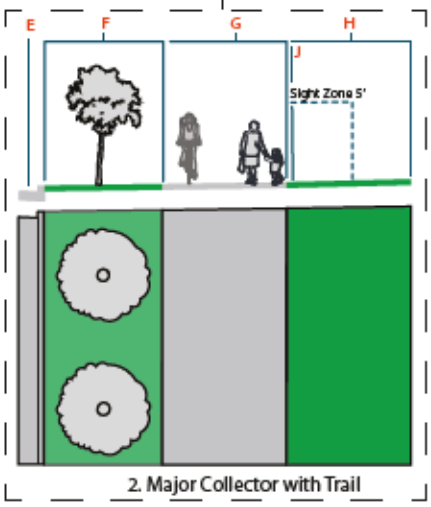
Minor Arterial

Notes

- See Grand Junction Urbanized Area Functional Classification Map for minor arterial street designation.
- Vertical curbs, gutters and sidewalks are required on both sides of all arterial streets.
- All arterial streets shall be surfaced with Hot Bituminous Pavement (HBP) or Portland Cement Concrete (PCC).
- Additional right-of-way width will be required for construction of dedicated right-turn lanes. See chapters of the City's Transportation Engineering Design Standards for Speed Change Lane Dimensions.
- See details of Multi-purpose Easement Adjacent to Right-of-Way in the standard contract documents.
- For Sight Zone requirements refer to 29.28.150 of the TEDS Manual.
- Vertical separators can be added to a buffered bike lane where additional cyclist protection is deemed necessary to achieve Level of Traffic Stress standards.
- Vertical elements required in the buffer zone between the travel lane and bike lane to satisfy the condition of a protected bike lane (PBL) when speed is => 40 mph. Buffered bike lane (without vertical elements) may be acceptable when <40 mph.
- Vertical separators would only be used between intersections.
- The standard design for a street with a trail includes a 10' trail on both sides of the street. In situations where there are ROW constraints, higher bicycle demand on one side, or differing land uses on one side, an 8' sidewalk can be provided on one side with a 12' or 14' trail on the other side.
- The standard design for a street with buffered bike lanes or a cycle track includes a one-way bikeway on both sides of the street. In some contexts where land use or other constraints dictate a two-way bikeway on one side of the street can be implemented. Refer to the NACTO Urban Bikeway Design Guide and the FHWA Separated Bike Lane Planning and Design Guide for special design considerations, particularly at driveways and intersections, when designing two-way protected bikeways.
- When necessary, the two way left tun lane can be a raised median.
- The minimum sidewalk buffer width is 7 feet for planting trees.
- A trail is considered multi-use for wheeled traffic and pedestrians.

Major Collector 78' ROW ≥35 MPH





2. Major Collector with Trail

Pavement Width 50'

1. Major Collector with Buffered Bike Lane/PBL Both Sides

Pavement Width 34'

2. Major Collector with Trail

Pavement Width 34'

3. Major Collector with Cycle Track Both Sides

Major Collector ROW 78' ≥35MPH

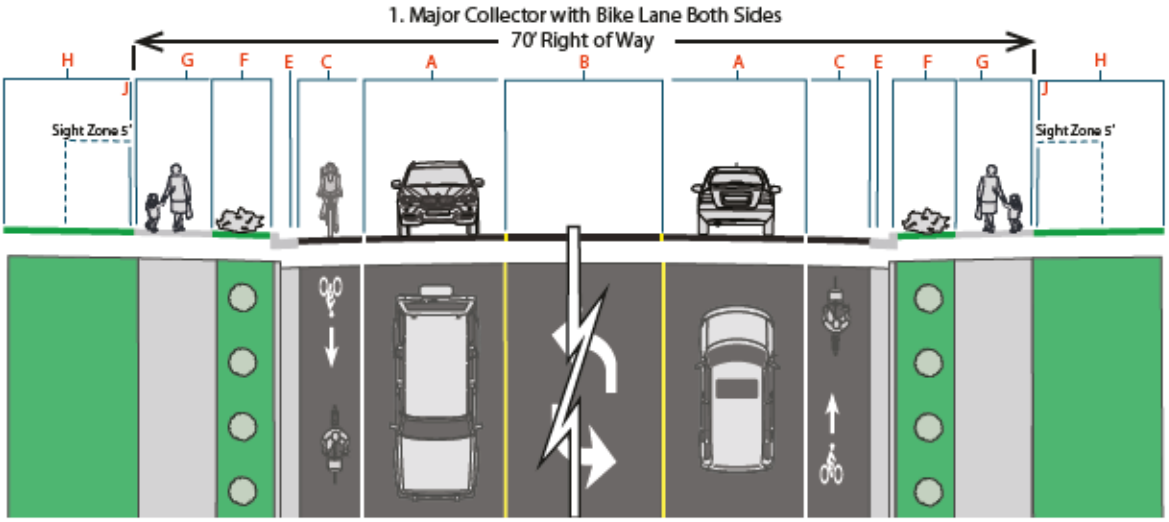
	A	B	C		D	E	F	G	H	J
Type	Travel Lanes	Median/ Turn Lane	Bike Lane (On Street)	Bike Lane (Off Street)	Bike Buffer	Curb and Gutter	Sidewalk Buffer	Sidewalk/ Trail	Multi-Purpose Easement	Frontage
1. Major Collector with Buffered Bike Lane/ PBL	11	12	5		3	2	3.5	8	10	.5
2. Major Collector with Trail	11	12	0		0	2	9.5	10	10	.5
3. Major Collector with Cycle Track	11	12		6.5	.5	2	4.5	8	10	.5

Major Collector 78’ ROW ≥35 MPH

Notes

- See Grand Junction Urbanized Area Functional Classification Map for collector street designation.
- Vertical curbs, gutters and sidewalks are required on both sides of all collector streets.
- Attached sidewalks may be approved where existing development precludes construction of detached sidewalks.
- All collector streets shall be surfaced with Hot Bituminous Pavement (HBP) or Portland Cement Concrete (PCC).
- Additional right-of-way width will be required for construction of dedicated right-turn lanes. See chapters of the City’s Transportation Engineering Design Standards for Speed Change Lane Dimensions.
- See details of Multi-purpose Easement Adjacent to Right-of-Way in the standard contract documents.
- For Sight Zone requirements refer to 29.28.150 of the TEDS Manual.
- Vertical separators can be added to a buffered bike lane where additional cyclist protection is deemed necessary to achieve Level of Traffic Stress standards.
- Vertical elements required in the buffer zone between the travel lane and bike lane to satisfy the condition of a protected bike lane (PBL) when speed is => 40 mph. Buffered bike lane (without vertical elements) may be acceptable when <40 mph.
- Vertical separators would only be used between intersections.
- The standard design for a street with a trail includes a 10’ trail on both sides of the street. In situations where there are ROW constraints, higher bicycle demand on one side, or differing land uses on one side, an 8’ sidewalk can be provided on one side with a 12’ or 14’ trail on the other side.
- The standard design for a street with buffered bike lanes or a cycle track includes a one-way bikeway on both sides of the street. In some contexts where land use or other constraints dictate a two-way bikeway on one side of the street can be implemented. Refer to the NACTO Urban Bikeway Design Guide and the FHWA Separated Bike Lane Planning and Design Guide for special design considerations, particularly at driveways and intersections, when designing two-way protected bikeways.
- In segments of the street where there is lower left turn demand (at low volume intersections, low volume driveways, or where there are no driveways) the center turn lane can be removed and replaced with a painted buffer between the bike lane and the travel lane to provide additional comfort to bicyclists and/or the pavement width can be narrowed and the buffer between the sidewalk and curb widened.
- The minimum sidewalk buffer width is 7 feet for planting trees.
- A trail is considered multi-use for wheeled traffic and pedestrians.

Low Speed Major Collector 70’ ROW < 35MPH



Major Collector ROW 70’ < 35 MPH											
		A	B	C		D	E	F	G	H	J
Type	Criteria	Travel Lanes	Median/ Turn Lane	Bike Lane (On Street)	Bike Lane (Off Street)	Bike Buffer	Curb and Gutter	Sidewalk Buffer	Sidewalk	Multi-Purpose Easement	Frontage
1. Major Collector with Bike Lane Both Sides	<35 MPH	11	12	5		0	2	5	6	10	.5

Pavement Width 44’

1. Major Collector with Bike Lane Both Sides

Low Speed Major Collector 70’ ROW < 35MPH

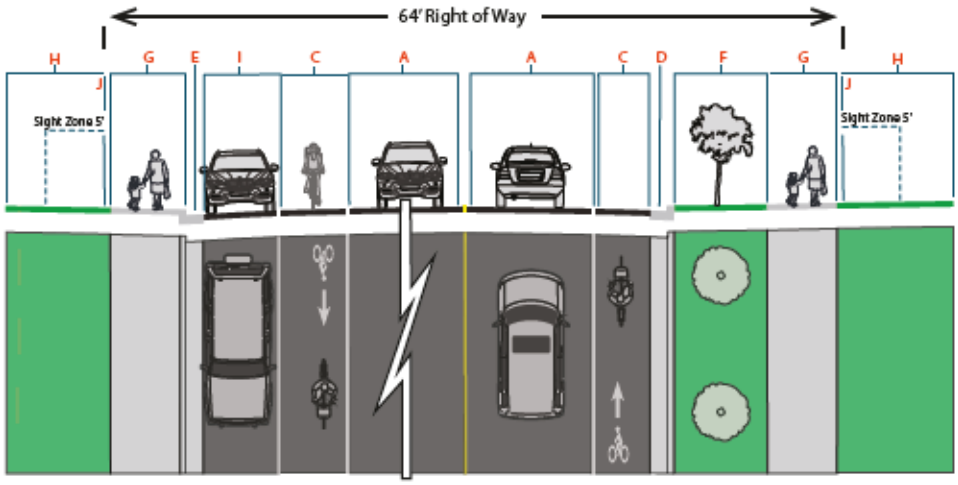
Notes

- See Grand Junction Urbanized Area Functional Classification Map for collector street designation.
- Vertical curbs, gutters and sidewalks are required on both sides of all collector streets.
- Attached sidewalks may be approved where existing development precludes construction of detached sidewalks.
- All collector streets shall be surfaced with Hot Bituminous Pavement (HBP) or Portland Cement Concrete (PCC).
- Additional right-of-way width will be required for construction of dedicated right-turn lanes. See chapters of the City’s Transportation Engineering Design Standards for Speed Change Lane Dimensions.
- See details of Multi-purpose Easement Adjacent to Right-of-Way in the standard contract documents.
- For Sight Zone requirements refer to 29.28.150 of the TEDS Manual.
- In segments of the street where there is lower left turn demand (at low volume intersections, low volume driveways, or where there are no driveways) the center turn lane can be removed and replaced with a painted buffer between the bike lane and the travel lane to provide additional comfort to bicyclists and/or the pavement width can be narrowed and the buffer between the sidewalk and curb widened.
- If the Major Collector street corridor has a posted speed of 35 mph or higher within a mile of a particular location design may need to meet the standards of the Major Collector 78’ ROW.
- The minimum sidewalk buffer width is 7 feet for planting trees.

Minor Collector

1. Minor Collector with Bike Lane and Parking and Attached Sidewalk

2. Minor Collector with Bike Lane and No Parking and Detached Sidewalk



Minor Collector ROW 64'												
		A	B	C		D	E	F	G	H	I	J
Type	Criteria	Travel Lanes	Median/ Turn Lane	Bike Lane (On Street)	Bike Lane (Off Street)	Bike Buffer	Curb and Gutter	Sidewalk Buffer	Sidewalk	Multi-Purpose Easement	Parking	Frontage
1. Minor Collector with Bike Lane with Parking and Attached Sidewalk	≤30 MPH	11	0	5		0	2	0	6	14	7.5	.5
2. Minor Collector with Bike Lane No Parking and Detached Sidewalk	≤30 MPH	11	0	5		0	2	7.5	6	10	0	.5

Pavement Width 47'

1. Minor Collector with Bike Lane and Parking on Both Sides

Pavement Width 32'

2. Minor Collector with Bike Lane Both Sides (No Parking)

Minor Collector

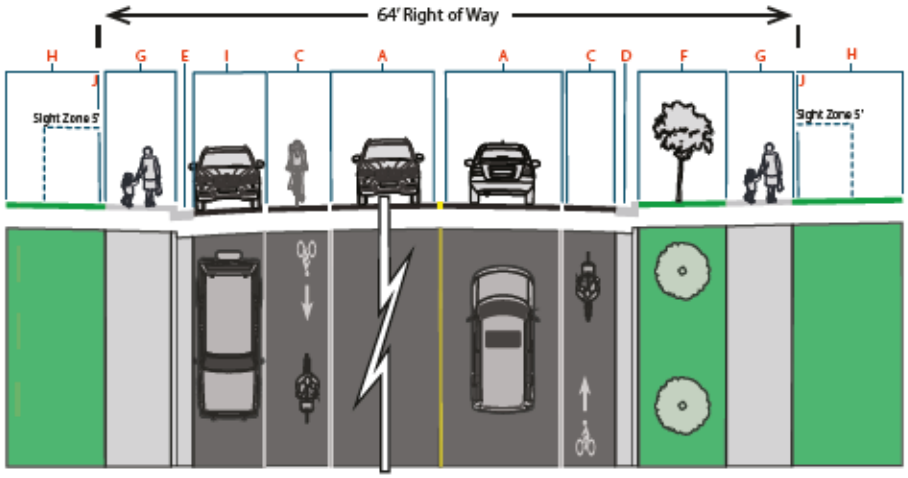
Notes

- If the street classification changes, efforts should be made maintain the facility type for the entire length of the corridor.
- See Grand Junction Urbanized Area Functional Classification Map for collector street designation.
- All collector streets shall be surfaced with Hot Bituminous Pavement (HBP) or Portland Cement Concrete (PCC).
- Additional right-of-way width will be required for construction of dedicated right-turn lanes. See chapters of the City's Transportation Engineering Design Standards for Speed Change Lane Dimensions.
- When a bike lane is adjacent to a parking lane, separation may be provided between the bike lane striping and parking boundary by marking the parking spaces to mitigate conflicts by bikers with the "door zone" of parked cars.
- See details of Multi-purpose Easement Adjacent to Right-of-Way in the standard contract documents.
- On Street parking may be prohibited as required to provide left turn lanes at intersections.
- For Sight Zone requirements refer to 29.28.150 of the TEDS Manual.

Local Commercial

1. Local Commercial with Bike Lane and Parking and Detached Sidewalk

2. Local Commercial with Bike Lane and No Parking and Attached Sidewalk



Local Commercial ROW 64'											
	A	B	C		D	E	F	G	H	I	J
Type	Travel Lanes	Median/ Turn Lane	Bike Lane (On Street)	Bike Lane (Off Street)	Bike Buffer	Curb and Gutter	Sidewalk Buffer	Sidewalk	Multi-Purpose Easement	Parking	Frontage
1. Local Commercial with Bike Lane with Parking and Attached Sidewalk	11	See note	5		0	2	0	6	14	7	.5
2. Local Commercial with Bike Lane No Parking and Detached Sidewalk	11	See note	5		0	2	8	6	10	0	.5

Pavement Width 47'

1. Local Commercial with Bike Lane and Parking on Both Sides

Pavement Width 32'

2. Local Commercial with Bike Lane Both Sides (No Parking)

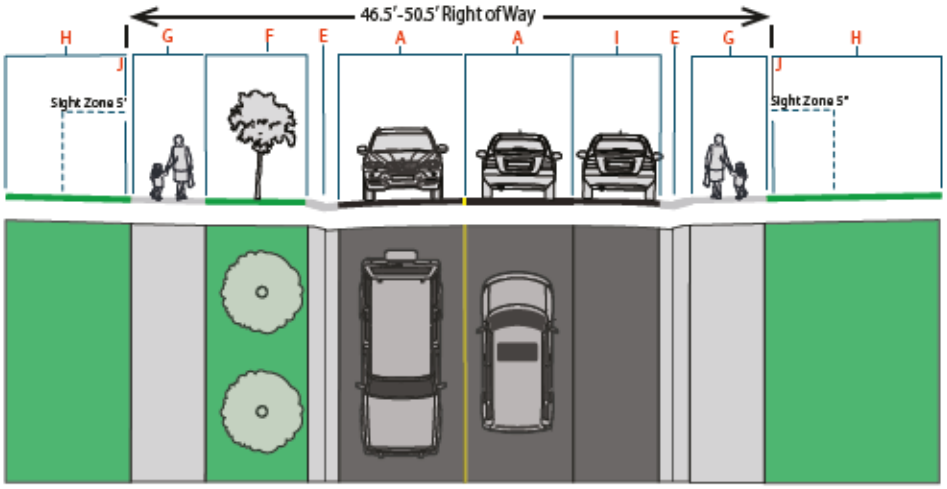
Local Commercial

Notes

- See Grand Junction Urbanized Area Functional Classification Map for collector street designation
- All collector streets shall be surfaced with Hot Bituminous Pavement (HBP) or Portland Cement Concrete (PCC. All pavement shall be designed in accordance with the AASHTO Guide for Design of Pavement Structures.
- Additional right-of-way width will be required for construction of dedicated right-turn lanes. See chapters of the City's Transportation Engineering Design Standards for Speed Change Lane Dimensions.
- See details of Multi-purpose Easement Adjacent to Right-of-Way in the standard contract documents.
- (On Street) parking may be prohibited as required to provide left turn lanes at intersections.
- For Sight Zone requirements refer to 29.28.150 of the TEDS Manual.
- Parking may be prohibited on streets with high traffic volumes, or based on other contextual factors.
- If turn lanes are warranted, they will be 11 feet in width for right turn lanes (exclusive of the gutter pan) and 12 feet for left turn lanes.

Residential and Industrial Local Street

4. Residential with Parking One Side Attached Sidewalk



Residential Street ROW 38'- 63'										
			A	E	F	G	H	I	J	
Type	Criteria	# of Travel Lanes	Travel Lanes	Drive Over Curb and Gutter	Sidewalk Buffer	Sidewalk	Multi-Purpose Easement	Parking	Frontage	ROW
1. Residential No Parking Attached Sidewalk	<1000 ADT, ≤ 20 MPH	2	10	2.5	0	6	14	0	.5	38
2. Residential with Parking One Side Attached Sidewalk	<1000 ADT, ≤ 20 MPH	2	8.5	2.5	0	6	14	7	.5	42
3. Residential Attached Sidewalk	<1000 ADT, ≤ 20 MPH	2	7	2.5	0	6	14	7	.5	46
4. Residential Attached Sidewalk 1 Side Detached Sidewalk 1 Side	<1000 ADT, ≤ 20 MPH	2	8	3	4-8 One Side	6	10 and 14	7 One Side	.5	45.5-49.5
5. Residential Detached Sidewalk	<1000 ADT, ≤ 20 MPH	2	7	3	4-8	6	10	7	.5	55-63
Local Industrial ROW 53'										
6. Local Industrial Attached Sidewalk		2	12	Vertical Curb 2	0	6	10	7	.5	55

ROW Width 38', Pavement Width 20'
1. Residential No Parking

ROW Width 42', Pavement Width 24'
2. Residential Parking On One Side

ROW Width 46', Pavement Width 28'
3. Residential Attached Sidewalk

ROW Width 45.5-49.5', Pavement Width 23'
4. Residential Attached Sidewalk 1 Side Detached Sidewalk 1 Side

ROW Width 55'-63', Pavement Width 28'
5. Residential Detached Sidewalk

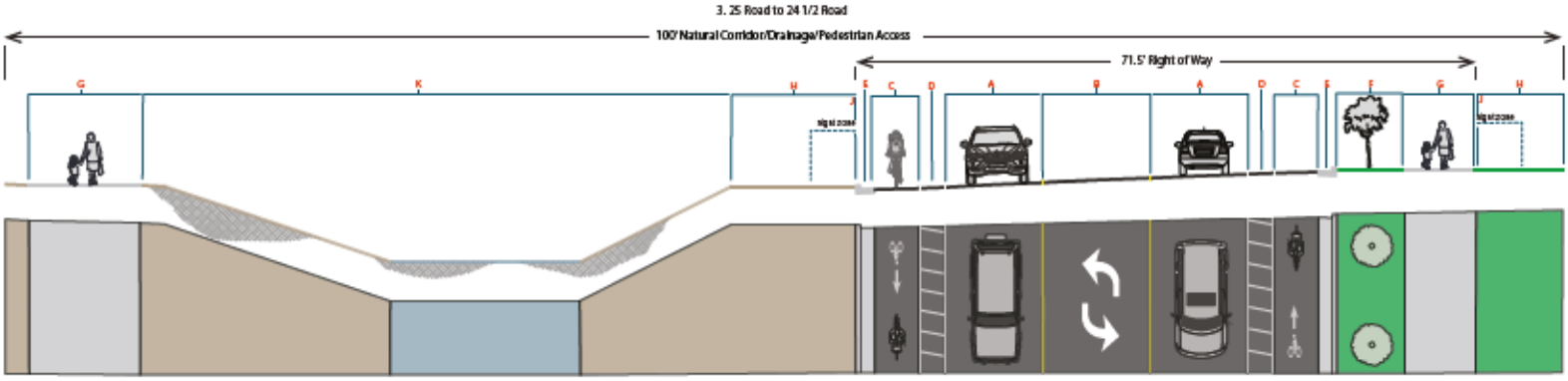
ROW Width 55', Pavement Width 38'
6. Local Industrial Street

Residential and Industrial Local Street

Notes

- A sidewalk can be provided on only one side of the street only if a sidewalk or path is located behind the houses/businesses on the side of the street without a sidewalk.
- If an attached sidewalk is included on a side of the street with no on-street parking the street must be designed for speeds of 20 mph or less and have less than 1,000 average vehicles per day.
- When parking is restricted, an off-lot parking plan (showing on-street and parking pods) is required. When density is R-4, 0.5 off lot parking spaces are required per unit, R-5 requires 1.0 space per unit, and R-8 requires 1.5 spaces per unit.
- When asphalt width is narrower than 28', a fire site plan is required demonstrating designated GJFD design apparatus can maneuver the site with on-street parking.
- Drive over curb, gutter and sidewalk shall be installed only on urban residential streets with less than 1,000 A.D.T.
- Vertical curb and gutter can be used instead of drive over, but driveway cuts must be built with the subdivision and efforts should be made to maintain grade at sidewalks.
- Street sections can be changed to include detached sidewalks using the buffer in street section 5. Right of way width will change accordingly.
- The minimum sidewalk buffer width is 7 feet for planting trees.
- An Exception Request can be considered for sidewalks under 6 ft. width within a constrained environment and/or where low volume of 10 peak hour (vehicular) trips or less can be shown and no through access is provided or planned.
- Where driveways cross detached sidewalks, sidewalks shall be 6" thick concrete for residential and 8" thick concrete for industrial.

G Road



G Road ROW 71.5' - 80'										
	A	B	C	D	E	F	G	H	J	K
Type	Travel Lanes	Median/ Turn Lane	Bike Lane	Bike Buffer	Curb and Gutter	Sidewalk Buffer	Sidewalk	Muli-Purpose Easement	Frontage	Stream Channel/ Drainage
1. 23 1/2 to Highway 50	11	12	5	3	2	7 minimum	8	10	5	0
2. 24 1/2 Road to 24 Road	11	12	5	3	2	7 minimum non channel side	8 on road side12 on the other side of stream channel	14	5	20' stream channel with 4:1 slop on none road way side and 3:1 on roadway side
3. 25 Road to 24 1/2 Road	11	12	5	3	2	7 minimum non channel side	8 on road side12 on the other side of stream channel	14	5	20' stream channel with 4:1 slop on none road way side and 3:1 on roadway side
4. 25 1/2 Road to 25 Road	11	12	5	3	2	7 minimum non channel side	8 on road side12 on the other side of stream channel	14	5	20' stream channel with 4:1 slop on none road way side and 3:1 on roadway side
5. Horizon Drive to 25 1/2 Road	11	12	5	3	2	7 minimum	8	10	5	0

Draft

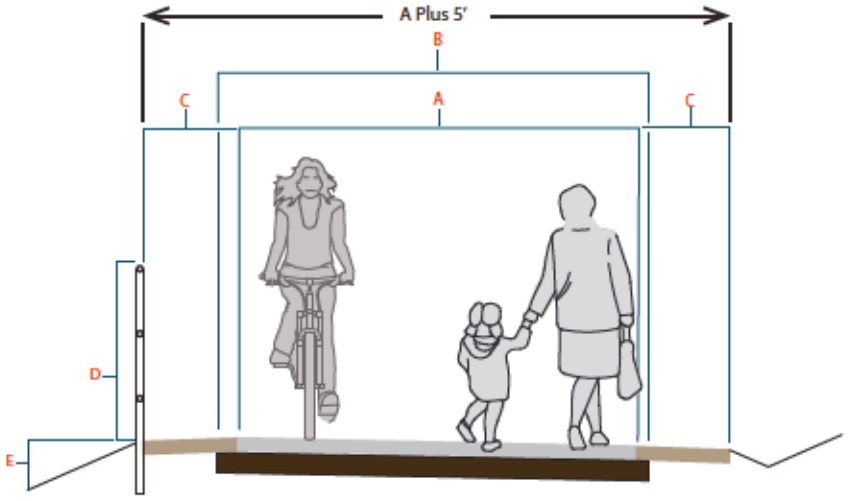


G Road

Notes

- See Grand Junction Urbanized Area Functional Classification Map for collector street designation
- Vertical curbs, gutters and sidewalks are required on both sides of all collector streets
- Attached sidewalks may be approved where existing development precludes construction of detached sidewalks
- All collector streets shall be surfaced with Hot Bituminous Pavement (HBP) or Portland Cement Concrete (PCC. All pavement shall be designed in accordance with the AASHTO Guide for Design of Pavement Structures
- Additional right-of-way width will be required for construction of dedicated right-turn lanes. See chapters of the City's Transportation Engineering Design Standards for Speed Change Lane Dimensions. See page St-12 for Detail of Multi-purpose Easement Adjacent to Right-of-Way.
- In Sight Zone no trees, shrubs, fences, structures, or other obstructions shall be over 30" in height (measured at the near edge of roadway). See notes page ST-14 for exceptions.
- From 23 1/2 road to Highway 50 the dit along the north side will need to be piped.
- 24 road to 23 1/2 road is existing. Only requirement is to install meandering sidewalks, along the north side of 24 road to 23 3/4 road mimicking the sidewalk to the west.
- At approximately 24 1/4 road Leach Creek moves south, then detached sidewalk is required oon the south side of G road.
- 25 1/2 to 25 has developable ground in place of the channel.
- ROW variability in G road segments come variable vegetated buffer space.

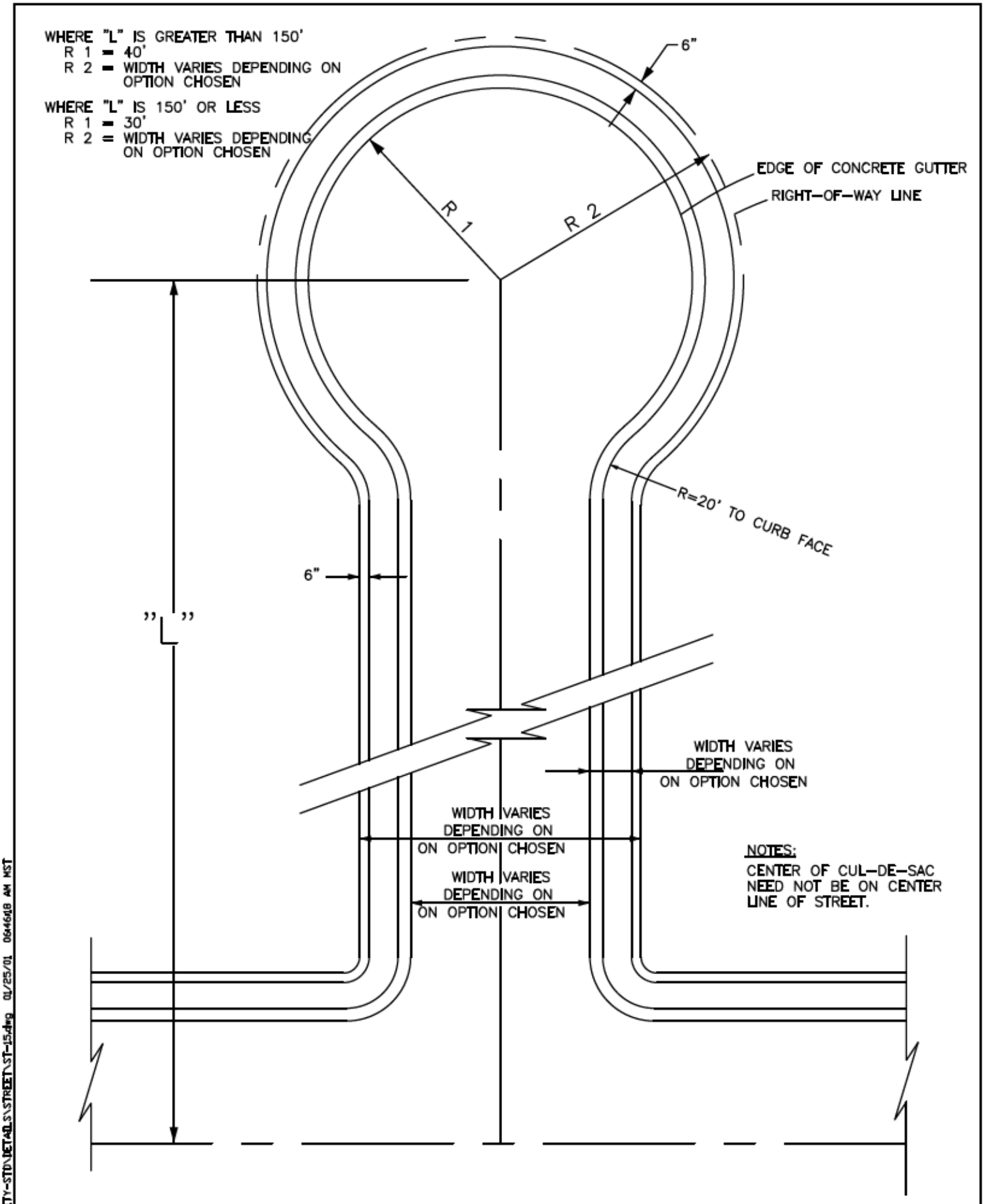
Trail/Pathway



Trail/Pathway					
		A	B	C	D
Type	**Ownership**	**Path**	**Subgrade**	**Shoulder**	**Railing**
Trail	Right of Way, Tract, or Public Easement	10	Width of Trail + 12"	2.5 Base Course or Landscaping	42" High
Pathway	HOA Tract with Public Easement	6	7	2.5 Base Course or Landscaping	42" High

Notes

- Off street paths shall be designed in accordance with the AASHTO "Guide for the Development of Bicycle Facilities" current edition.
- A minimum width of 8' may be allowed were physical constraints preclude the standard width.
- Trail/pathway has a maximum slope of 2%.
- Shoulder has a max slope of 6:1.
- Where slopes exceed 3:1 and E>2' a railing is required.
- Drainage should be designed for 2 year storm.
- If the trail/pathway is along an Active Transportation Corridor or is near a high volume destination like a school or hospital, a 12 foot width may be required to meet demand and mitigate conflicts between bicyclists and pedestrians..
- Refer to Zoning and Development Code for fencing requirements.
- Trails/pathway shall be a minimum of 4" of concrete on 6" of class 6 base course on 6" of reconditioned subgrade.



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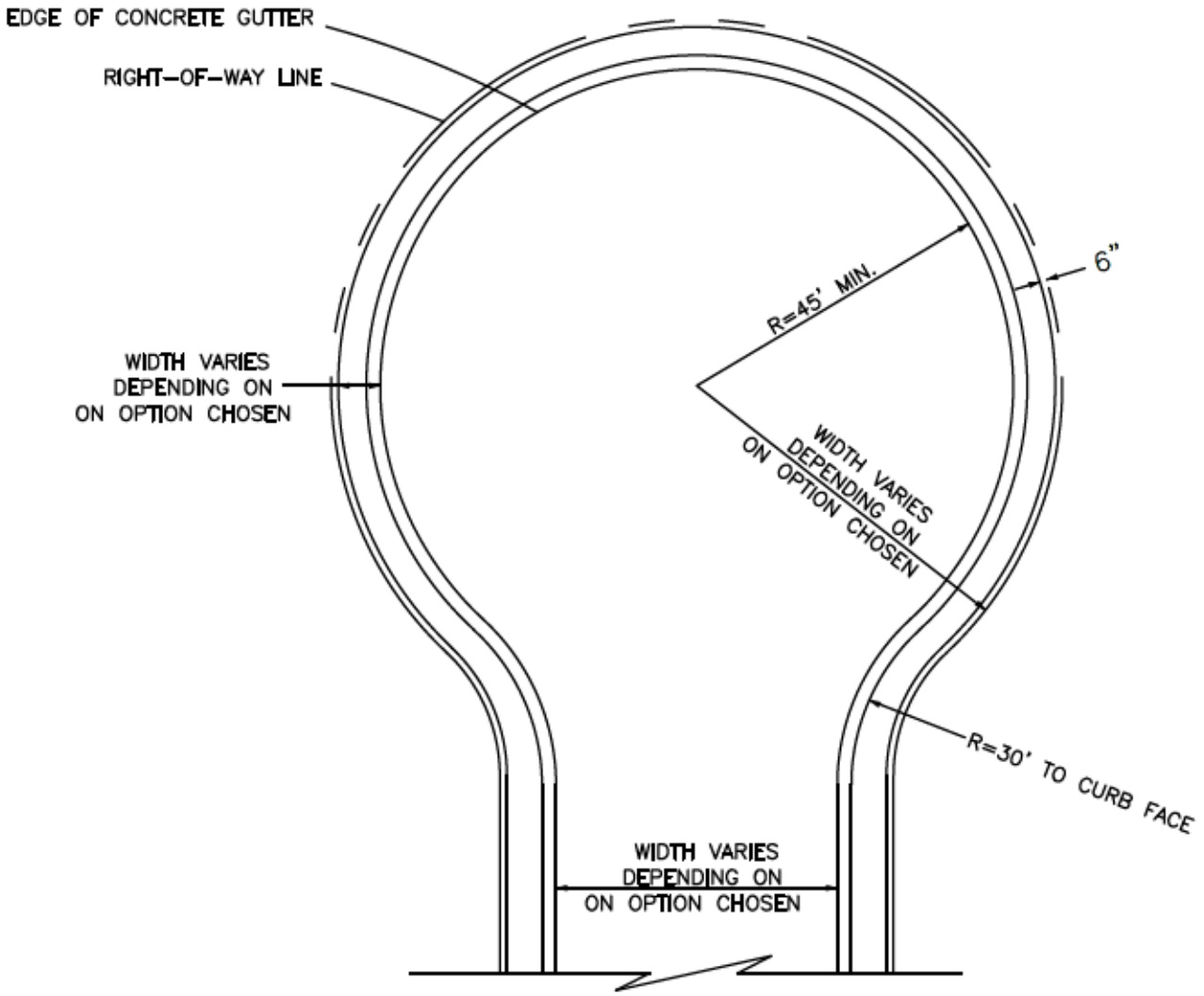
CUL-DE-SAC TURN AROUND - RESIDENTIAL COURT

NOTES:
CENTER OF CUL-DE-SAC NEED NOT BE ON CENTER LINE OF STREET.



CUL-DE-SAC TURN AROUND - MIN. DIMENSIONS - COMMERCIAL/INDUSTRIAL COURT

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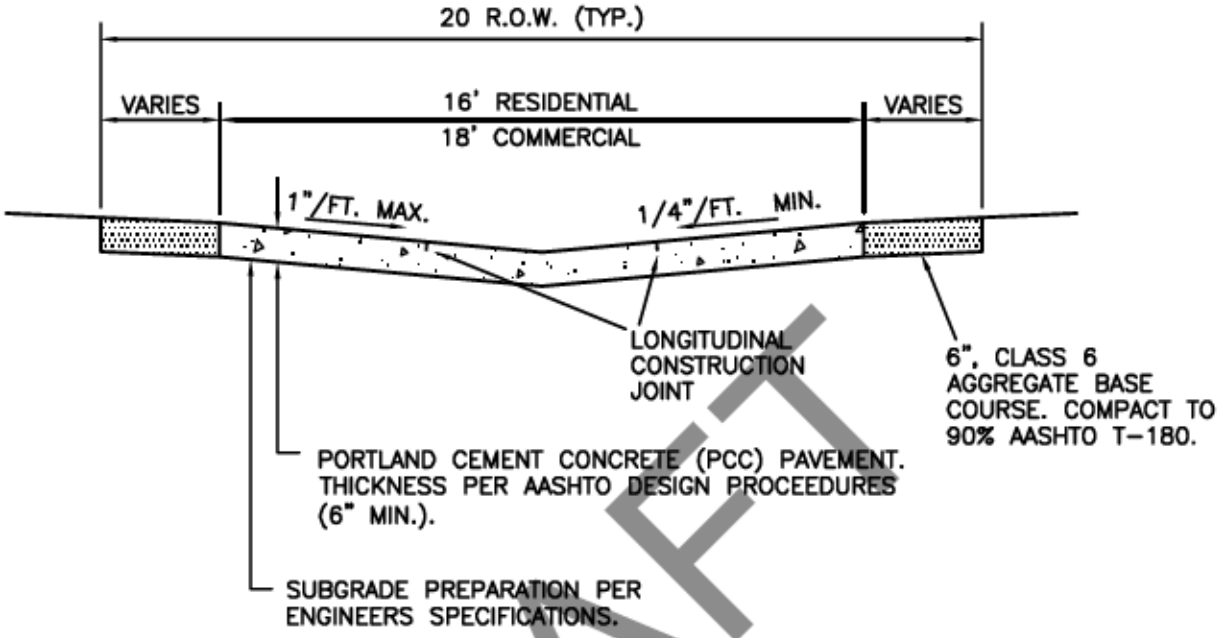

DRAFT

1. SAW CUT LONGITUDINAL CONTRACTION JOINTS SPACED AT 1/3 PAVEMENT WIDTH. (SEE DETAIL ON PAGE C-29)
2. SAW CUT TRANSVERSE CONTRACTION JOINTS AT 10' SPACING (SEE DETAIL ON PAGE C-29)
3. SEE PAGE C-06 FOR EXPANSION JOINT SPACING.
4. ALL EXPANSION AND CONTRACTION JOINTS SHALL BE SEALED IN ACCORDANCE WITH DETAILS ON PAGE C-28.
5. PCC PAVEMENT SHALL BE DESIGNED IN ACCORDANCE WITH THE AASHTO GUIDE FOR DESIGN OF PAVEMENT STRUCTURES.

ALLEY

DEPARTMENT OF PUBLIC WORKS AND UTILITIES ENGINEERING AND TECHNICAL SERVICES DIVISIONS CITY OF GRAND JUNCTION, COLORADO	STANDARD STREET DETAIL	APPROVED: DN REV: JAN. 2001 DRAWN: DPW	PAGE ST-10

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PEDESTRIAN & BICYCLE ANALYSIS WORKSHEET

IMPACTED PEDESTRIAN & BICYCLE FACILITIES

Question	Yes/No	If answered YES, please describe.	Identify mitigations (where applicable)
Does the proposed land use change existing pedestrian or bicycle facilities?			
Is the land use on or adjacent to a proposed bicycle facility identified in the Pedestrian & Bicycle Plan?			
Does the project conflict with a proposed bicycle facility identified in the Pedestrian & Bicycle Plan?			
Is the site within an existing or proposed shared micromobility zone? If so, does the site plan include dedicated space for storage of shared bicycles and scooters?			
Is the project within an overlay zone? If so does it comply with pedestrian and bicycle elements of the overlay zone?			

DATE:
TRANSPORTATION ENGINEER:

APPLICATION

Transportation Engineering Design Standards (TEDS) Exception Request

City File No.: TED-_____ (To be filled in by City Staff)

Project: _____

Site Address: _____

Applicant: _____

Representative: _____

Date: _____

Parent Project:

Project Name: _____

City File No.: _____

1. *Referenced chapter in TEDS and a brief description of the request(s)*

Request #1 -

Request #2 -

Request #3 -

2. Site Description

REQUEST #1 -

A. Description:

B. Exception Considerations

1. How will the exception affect safety?

2. Have other alternatives been considered that would meet the standard?

3. Has the proposed design been used in other areas?

4. Will the exception require CDOT or FHWA coordination?

5. Is this a one-time exception or a request to change the TEDS manual?

REQUEST #2 -

A. Description:

B. Exception Considerations

1. How will the exception affect safety?

2. Have other alternatives been considered that would meet the standard?

3. Has the proposed design been used in other areas?

4. Will the exception require CDOT or FHWA coordination?

5. Is this a one-time exception or a request to change the TEDS manual?

REQUEST #3 -

A. Description:

B. Exception Considerations

1. How will the exception affect safety?

2. Have other alternatives been considered that would meet the standard?

3. Has the proposed design been used in other areas?

4. Will the exception require CDOT or FHWA coordination?

5. Is this a one-time exception or a request to change the TEDS manual?

APPLICATION INSTRUCTIONS

Transportation Engineering Design Standards (TEDS) Exception Request

Submit the application and associated drawings, in electronic format, using the following instructions.

City File No.: _____ (To be filled in by City Staff)

Project: _____ Fill in all lines in this section unless otherwise noted

Site Address: _____

Applicant: _____

Representative: _____

Date: _____

Parent Project:

Project Name: _____

City File No.: _____

1. *Referenced chapter in TEDS and a brief description of the request(s)*

Cite the section of TEDS for which the exception is being sought and briefly state what the request is. Examples are shown below:

Request #1 - Chapter 29.12.040 - Allow backing into the right of way

Request #2 - Chapter 29.20.060(b)- Reduce the centerline radius of a street

Request #3 - Chapter -.

2. Site Description

Describe the site in detail as necessary to explain the project and the TEDS exception request(s). Include a description of surrounding properties and access points when necessary. There should be plenty of detail in this section. Better to include too much than not enough.

Include pictures and drawings as necessary. NOTE: aerial pictures from the City's GIS system, including contours, can be copied and pasted into the document. www.gjcity.org

For each TEDS exception request, please complete A and B below

REQUEST #1

A. Description

Describe the request in detail using the applicable section(s) of the TEDS. Why should this request be granted? What does it do for the project? Describe problems created by not granting the TEDS exception; Why can't the TEDS requirement be met? Describe benefits created by granting the TEDS exception.

B. Exception Considerations

1. How will the exception affect safety?
   Do you believe the exception will compromise safety? If not, explain why and be specific.

2. Have other alternatives been considered that would meet the standard?
   Show as many alternatives as possible including those that meet TEDS. This is critical. Think out of the box. The committee will ask questions like "Can they buy an adjoining parcel and design it to meet TEDS requirements?"

   Include pictures and drawings.
   Any applications submitted without examples will be returned. Only in rare instances are there requests that don't have alternatives.

3. Has the proposed design been used in other areas?
   Describe how this request has been used in other areas; here or in other locales. Be sure to describe the advantages or disadvantages seen in these areas. Pictures and drawings would be helpful.

4. Will the exception require CDOT or FHWA coordination?
   "No" or "Yes" and a description of what the agency will be looking for.

5. Is this a one-time exception or a request to change the TEDS manual?
   Explain if this is a one-time exception or if you think the TEDS manual should be modified to allow this request permanently.

REQUEST #2 –**Provide complete information for each request as shown for REQUEST #1 above.**

TRANSPORTATION IMPACT STUDY
BASE ASSUMPTIONS

Project Information				
Project Name				
Project Location				
TIS Assumptions				
Study Area Boundaries	North:		South:	
	East:		West:	
Study Years				
Future Traffic Growth Rate				
Study Intersections	1.All Access Drives		2.	
	3.		4.	
	5.		6.	
	7.		8.	
Time Period For Study	AM PM Sat Noon			
Trip Generation Rates				
Trip Adjustment Factors	Pass by:		Captive Market:	
Overall Trip Distribution	North	South	East	West
Mode Split Assumptions				
Committed Roadway Improvements				
Other Traffic Studies				
Areas Requiring Special Study				

DATE:
TRANSPORTATION ENGINEER:

TEDS Manual Update

Summary of Major Changes

August 24, 2023

This document provides a summary of the major changes that were made to the Grand Junction Transportation Engineering Design Standards (TEDS) Manul as part of the 2023 Update.

Summary of Major Changes to TEDS Manual Chapters:

- Reflect current design guidance from CDOT, AASHTO, ITE, NACTO, and other state and national sources.
- Update the standard street cross sections primarily to:
    - Incorporate low stress bicycle and pedestrian facilities in alignment with the Pedestrian and Bicycle Plan,
    - To reflect current city design practices, and
    - To be consistent with the current Fire Department Access standards.
- Include new requirements for transportation Impact Studies (TIS) to:
    - Document bicycle and pedestrian impacts (does not need to be completed by a transportation engineer), and
    - Require a Traffic Assessment for mid-size developments (generating 10 to 99 peak hour trips) in alignment with current CDOT practice to assess need for turn lanes, sight distance, and pedestrian and bicycle impacts.
- Add requirements for inter-parcel connectivity between developments to:
    - Mitigate traffic impacts on streets,
    - Improve mobility and access for people walking and biking to and through developments, and
    - To provide access to transit by providing more direct connections between developments and transit stops on the adjacent street network.
- Reduced driveway width requirement on commercial/industrial and major streets
- Made driveway spacing and offset requirements simpler and consistent with intersection spacing requirements.
- Updated block length requirement to reference Zoning and Development Code.
- Reduced the design speed of local streets from 25 mph to 20 mph to be consistent with current practice and updated design speed of other streets to be consistent with update street section and current practice.
- Updated traffic calming requirements on local streets to support slower design speeds and provided new example graphics.
- Removed the Fire Department Access Document and only reference it in TEDS. TEDS Exceptions are only allowed for alternative streets.

- Modified "effective" turn radii requirements to account for streets with bike lanes and on-street parking to encourage slower design turning speeds to mitigate intersection conflicts with pedestrians and bicyclists.
- Added illuminance requirements for bike and pedestrian facilities.
- Updated signing and striping requirements and signal design to match current city practice.
- Updated pedestrian and bicycle design standards to match the vision and guidance in the Pedestrian & Bicycle Plan and to reflect current national best practices.
- Added design guidance on pedestrian and bicycle crossings.
- Chapters removed or with new external references:
    - 29.24 Fire Department Access: modified to refer to the *Grand Junction Fire Department Access* standards and the locally adopted fire code
    - 29.44 Traffic Signals and Construction Zones: Article II Traffic Signal Specifications was updated and removed from TEDS and now includes a reference to the Traffic Signal Specifications as an external City document.
    - 29.52 Transit Design Standards and Guidelines: This chapter of TEDS was removed and Chapter 29.48 now includes a reference to the Mesa County *Transit Design Standards and Guidelines*.
    - 29.60 Private Streets, Shared Driveways, and Loop Lane: This chapter was removed from TEDS as it is addressed in the Zoning and Development Code.
    - The previously developed document titled Grand Junction *Pedestrian Crossing Treatment Installation Guidelines* is now referenced in TEDS as a tool when considering pedestrian crossing treatments in different contexts, and will be made available online.

Summary of Major Changes to the Standard Street Sections:

- Lane widths were updated to 11' on arterial and collector streets.
- Sidewalk widths were updated to 6' on local and collector streets with posted speeds <35 mph, and to 8' on arterial and collector streets with posted speed >35 mph.
    - An Exception Request can be considered for sidewalks under 6' ft within a constrained environment or with very low volumes of vehicle traffic.
- Detached sidewalks are standard on all arterial and major collector streets and options for detached sidewalks are included on local and minor collector street standards.
- Low-stress bicycle facilities are included on all arterial and major collector street standards consistent with the Pedestrian and Bicycle Plan.
- Narrower street cross-section options (with and without parking on one or both sides as well as sections with attached or detached sidewalks) are included for local residential streets that meet requirements in the Fire Department Access standards.
    - Requirements for off-street parking and a fire site plan are included for narrow streets standards in alignment with the Fire Department Access standards.
- The Multipurpose Easement was updated to 10' on street sections with a detached sidewalk, which is consistent with existing practice on major arterial streets (14' width was preserved on streets sections with attached sidewalks).

- The Rural streets section was removed.
- All streets are required to have a sidewalk on both sides of the street unless there is a public walkway on the other side of houses/businesses.
- A 5' sight zone has been added behind the walk to the local street sections.
- Right-of-Way width was increased on the following street sections to accommodate pedestrian and bicycle infrastructure:
    - Major Arterial – remains at 110'
    - Minor Arterial – increases from 80' to 100'
    - Major Collector – increases from 60' to 78' or 70' depending on posted speed
    - Minor Collector/Commercial – increases from 52' to 64'
    - Industrial – increases from 48' to 55'
    - Local Residential Street – standard with attached sidewalk increases from 44' to 46' (other options are provided that vary in ROW width from 38' to 63').
- G Road section was updated to include bicycle and pedestrian infrastructure with minimal changes to Right-of-Way
- Shared-Use Path name was changed to a Trail and a Pathway section was added that is includes a 6' path for connections at the end of cul-de-sacs that are not a part of the Active Transportation Corridors.
- Notes were added to street sections where the sidewalk buffer (between the sidewalk and curb) may be less than 7' that the minimum sidewalk buffer width is 7 feet for planting trees.
- The following note was added to street sections with trails: "A trail is considered multi-use for wheeled traffic and pedestrians."

TEDS Manual Update

Informational Sheet

August 24, 2023

1. What is the TEDS Manual?

The TEDS (Transportation and Engineering Design Standards) Manual establishes requirements and provides guidance to the city and developers on how streets and multimodal transportation infrastructure are to be designed within Grand Junction. It includes guidance and requirements for preparing transportation impact study (TIS), street design standards, access control, traffic signal design, street lighting, pavement, and pedestrian, bicycle, and transit facility design standards.

2. Why is the TEDS Manual Being Updated?

The TEDS Manual has not had a major update for almost 20 years ago. Some aspects of the Manual are out of date and not reflective of current community values or current design practices being applied within the city.

The TEDS Manual was updated to incorporate the following general improvements:

- Reflect current community values for multimodal transportation (including for pedestrians, bicyclists, and transit users).
- Incorporate current state and national design standards.
- Improve the usability of the manual.
- Support implementation of the vision established in the recently adopted Pedestrian & Bicycle Plan.

3. What is the Process for Updating the TEDS Manual?

The project team kicked-off in late summer of 2022 and is finalizing updates to TEDS in late summer 2023. The project was guided by a Technical Advisory Committee (TAC), which has met six times over the course of the project at key milestones. The TAC is made up of representatives of different city departments, CDOT, Mesa County, the RTPO, neighboring jurisdictions, private developers, and transportation engineering consultants in the Valley that regularly use the TEDS Manual.

The process for updating the TEDS Manual has involved two major phases:

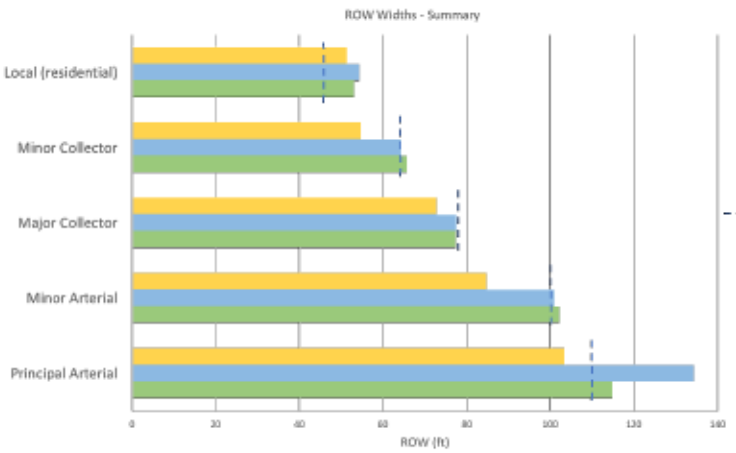
(1) **TEDS Manual Assessment:** In fall of 2022 the team conducted a thorough assessment of the existing TEDS Manual to identify all the updates that are needed to achieve the project goals mentioned above. This included guidance from the TAC, and a survey that

was sent to stakeholder agencies, departments, and the broader development and transportation engineering community in Grand Junction.

(2) **TEDS Manual Draft Updates:** Based on the outcomes of the TEDS Manual Assessment, the project team updated the TEDS Manual. The updates were made using an iterative process with city staff and the TAC and include two drafts prior to the final updates. The Second Draft was developed in May, 2023 and stakeholder comment was solicited on this draft over early summer. Following feedback from meetings with stakeholders in June and July the TEDS Manual was updated to a Final Draft in August and will be presented to City Council and Planning Commission to be adopted by ordinance in fall 2023.

Response to Public Comments received on the Draft Transportation Engineering Design Standards (TEDS) Update Manual

Comment No.	Listening Tour/Developers Roundtable/Public Comments ITEM/ISSUE/CONCERN	TEDS UPDATE PROPOSAL	CITY PROPOSED RESOLUTION/RESPONSE
1	Sidewalk specification requirement – proposed 6' versus current 4' on local streets. • Pedestrian volume is low and the public doesn't complain to builders about 4' wide sidewalks. • Require only at higher volume locations. This lowers cost in housing and city long term maintenance costs. • Perhaps only require the wider width on one side of the street. • Proposal exceeds CDOT minimum 5' sidewalk standard. • What is the additional benefit of the 6' sidewalk and is it worth the added home cost? • Continued interest in narrower sidewalk widths, even with 200' passing area. • Want more options based on volumes. Create a hierarchy of standards.	The Pedestrian and Bicycle Plan establishes that local streets should provide a 6' wide sidewalk to provide for an acceptable (LOS) level of traffic stress of 2 or less on all local streets and low speed collector streets.	• Level of acceptable traffic stress was key in the Pedestrian and Bicycle Plan (PBP) study. This was determined through public engagement and industry standards. • It is difficult for two people side by side, a pedestrian to pass a wheelchair or baby stroller, etc. on a 4' sidewalk. • Sidewalk encroachments such as landscaping and side mirrors on vehicles often reduce the effective area of the sidewalk width. • In addition, the PBP proposes 6' based on NACTO to meet the LOS 2 criterium. • The TEDS update proposes multiple street options that provide the ability for narrower streets. • Constructing different Sidewalk widths will be troublesome during construction. • Pedestrian volume will remain low as long as the facilities are substandard (a width where citizens choose to not use them due to the level of stress). • The expected minimum standard is 6', however a developer can request an exception and narrow to 5' sidewalks in a constrained environment if justified. • A note has been added to the residential street section saying an exception request can be considered for sidewalks under 6' width within a constrained environment and/or where low volume of 10 peak hour vehicular trips or less can be shown and no through access is provided or planned.
2	Issue: Right-of-Way size regulations and parameters. • Want further review and benchmark comparable cities. • Concern this reduces available land contributing to sprawl and decreases density.	Most street sections will see a wider roadway. However, for local streets, many options are available. • Local Street (currently 44') – options vary between 38' to 63' in total ROW width.	• City researched peer cities. Proposed Sections are now benchmarked to peer Cities, see graph below:

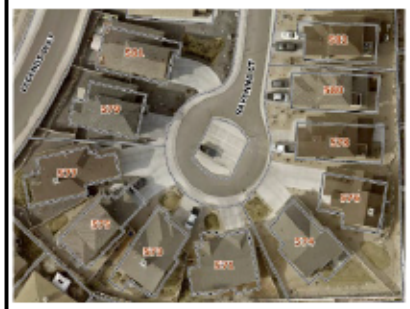
Comment No.	Listening Tour/Developers Roundtable/Public Comments ITEM/ISSUE/CONCERN	TEDS UPDATE PROPOSAL	CITY PROPOSED RESOLUTION/RESPONSE
	• How do we know which ROW to give on Maj. Collector? Speed criteria +/- 35MPH • Current Impact Fee structure does not reflect these sections.	• Minor Collector (currently 52')/ Local Commercial (currently 52') – change to 64' ROW width. • Industrial Street (currently 48') – change to 55'. • Collector (currently 60') – change to 70'-78' ROW width. • Minor Arterial (currently 80') – change to 100' ROW width. • Principal Arterial (currently 110') – no change, continues to be 110' ROW width.	 • At General Meeting staff will determine Major vs Minor Street section for proposed development. • The current impact fee structure does not reflect these sections, however the City will study impact fees in 2024. • Flexibility of zoning code requirements will minimize the reduction of any density limitations for new development.
3	Concern with what is required for Minimum Access to new development and what those standards will be. • Can paths be used for fire access. • Concern about ownership of these paths. • Will fencing be restricted along path corridors?	Requirement for a 6' path between subdivisions when existing or proposed street connections are greater than 750' apart. Path connections may occur off the end of cul-de-sacs.	• The path will be called "pathway" and has been reduced in width from 10' to 6', and the easement width has been reduced from 15' to 11'. • Fencing along pathways will be regulated by the Zoning and Development Code. • Pathways will be constructed in tracts owned by the HOA. This is already established practice. • The new 11' easement width will accommodate the ability to replace concrete in the future, a concern raised by the Technical Advisory Committee. • The Block length and pedestrian block length are being removed from TEDS and will become part of the ZDC.

Comment No.	Listening Tour/Developers Roundtable/Public Comments ITEM/ISSUE/CONCERN	TEDS UPDATE PROPOSAL	CITY PROPOSED RESOLUTION/RESPONSE
4	Traffic Study Requirements • Knowing the information upfront is most helpful – add as an agenda item on General Mtg. • Clearly identify what level of effort is required on each question so the checklist does not become subject to interpretation. • Incorporate ped/bike analysis only and clarify that the pedestrian/bike evaluation does not need to be completed by a traffic engineer.	New traffic assessment for between 10 and 100 peak hour trips.	• The assessment is for peak hour trips which is a minimum of 10 houses. • The language has been changed from "shall" to "may require" the assessment. Approach is not to require a study if it won't tell anything new. • The proposed checklists have been revised for clarification. • Staff will identify what is required and the level of effort with the applicant at the general meeting. • The pedestrian/bike evaluation does not need to be performed by a traffic engineer.
5	Pathway illumination Standards • Handle like normal streetlights. • What are the spacing requirements between lights? Need a standard. • In practice, this likely creates an inconsistent variety of lighting types. • HOA's are often unreliable for maintenance, and this exceeds the role of private development. • Make solar lighting an option. • Request dedicating tract to City for city to maintain pedestrian lighting.	HOA to install and maintain bollard type lights for pathways.	• City pays for regional trail facilities. • It is not uncommon for an HOA to be responsible for lighting within their subdivisions. Note, Mesa County requires the HOA to pay for street lighting. • The installation of commercial grade Solar lights is permissible and may be a good option. • Strategically orienting streetlights to illuminate pathways or portions of pathways can help reduce costs. • Establishing a citywide standard for light spacing may actually cost more for a proposed development than creating a site-specific lighting plan for a that development.
6	Increase the current Cul-de-sac length from 750 feet to 1000 feet.	The TEDS update proposes keeping the maximum Cul-de-sac length at 750'.	This standard has been left at 750'. The developer can always request a TEDS exception. This allows context evaluation. After discussing with the development community, they are okay with keeping this as it has been.

Comment No.	Listening Tour/Developers Roundtable/Public Comments ITEM/ISSUE/CONCERN	TEDS UPDATE PROPOSAL	CITY PROPOSED RESOLUTION/RESPONSE
7	Can the number of dwelling units on a Shared Drive be expanded from 5 to 7?	Not in TEDS, include in Zoning and Development Code Update.	The number of dwelling units accessing a shared driveway is set forth in the Zoning and Development Code (ZDC). Staff is now proposing as part of the ZDC update to eliminate the number of units but keep the length of the shared drive at 150'. Parking pods may be required as part of the development of homes on a shared drive.
8	What is the expected width of Paths and Trails, 10' or 12', 8' if constrained?	Pathways and trails are pedestrian and bicycle facilities for connections between subdivisions, the end of cul-de-sacs and neighboring streets, etc. and for Active Transportation Corridors (ATC).	The pathway has been separated out from trails and therefore the TEDS Update is now establishing trails at 10', except 12' in high volume areas. The minimum width is 8' in constrained areas. The 10' width standard is needed to accommodate the multi-use of bikes, rollers and pedestrians sharing the trail. These standards apply to all ATC's. Pathways connect subdivisions to surrounding streets and in some cases from the end of a cul-de-sac, they are now proposed to be 6' in width.
9	What is the policy for upgrading existing infrastructure? TEDS does not address this. • Will new developments have to remove attached sidewalk and install detached sidewalk when developing a new a site along an existing street when the street section requires it? • Or have to expand sidewalk width of an existing sidewalk when the street section calls for it?	This is specifically addressed in the introduction of TEDS, Section 29.01.010 Forward under Applicability.	Generally recent street construction within new development would be expected to remain as it was constructed prior to the adoption of this revised TEDS. To formalize these conditions the TEDS manual has established language permitting the City to issue a deviation. TEDS Section 29.01.010 Forward under Applicability states "Infill development within the City of Grand Junction Urban Development Boundary may be constrained by existing improvements. If such a condition exists an affirmative waiver of TEDS shall be required in accordance with Chapter 29.64.010. The City and County may approve a deviation from these standards only when and if the deviation is shown to be warranted and safe."
10	Allow for the construction of streets in new development without sidewalks on local streets.	The TEDS update requires sidewalk along all local streets within new development.	• The Pedestrian and Bicycle Plan recommends a minimum of 6 feet for sidewalk infrastructure for all new local streets constructed. • Sidewalks provide accessibility and greater safety for all users. • The level of traffic stress is reduced when sidewalks are constructed at 6' widths permitting all users including pedestrians, rollers and bicycles to use them.

Comment No.	Listening Tour/Developers Roundtable/Public Comments ITEM/ISSUE/CONCERN	TEDS UPDATE PROPOSAL	CITY PROPOSED RESOLUTION/RESPONSE
11	Lighting plans for public streets, need to provide spacing criteria on all streets.	TEDS provides spacing of streetlights on local residential streets and provides standards for illuminance on other street classifications.	Variation in street widths and fixtures (over time) requires an illuminance plan. The City is currently performing a study to determine if it makes sense for the City to take over street lights from Xcel and GVP.
12	Pedestrian Bicycle Plan (PBP) didn't survey non-biking public	Not in TEDS.	• Nationally, FHWA estimates 65% of the population is underserved by existing conditions.  The pedestrian and Bicycle Plan (PBP) surveyed both biking public and non-biking public. • Of 669 Surveys, 23% of the survey respondents listed Bikes as the mode they typically take, 72% use a personal vehicle. • 95% said they would like to walk or roll or bike more often or for more types of trips than they currently do. • Biggest walking challenges identified – 1) nonexistent or insufficient sidewalks and 2) streets are uncomfortable or unsafe to walk along. • Biggest biking challenges identified include streets are uncomfortable or unsafe, there are not enough paths or trails and don't feel safe crossing major streets on bike. • For walking/rolling/biking to school 34% said they did, 51% take a personal vehicle. School bus only 9%. • Study findings: Total 347 ped (125) /bike (222) crashes between 2016 and 2020. 42 crashes led to severe injury or death. That's one crash every 5 to 6 days.

Comment No.	Listening Tour/Developers Roundtable/Public Comments ITEM/ISSUE/CONCERN	TEDS UPDATE PROPOSAL	CITY PROPOSED RESOLUTION/RESPONSE
13	Increased cost and impact on affordable/attainable housing, shouldn't a cost/benefit analysis be conducted?	TEDS doesn't address the cost/benefit of development infrastructure with the cost of housing.	• The Pedestrian and Bicycle Plan (PBP) provided the analysis of community need for safe/low stress pedestrian and bicycle facility needs in the community. Participants in the planning process provided input on what they saw as the important needed infrastructure that would permit them to utilize nonmotorized transportation, thus reducing their personal transportation costs. • Reduce the number of cars a household has to maintain can reduce transportation costs if other nonmotorized modes of travel are available, safe and doable. • Typically, a person spends approx. ¼ of personal income on Transportation. • Providing citizens with transportation options helps lower personal transportation costs which helps them in meeting their housing costs. • See discussion from local survey, (next row).
14	Traffic Calming, previous implementation of this in new development was not effective.	Required if a straight street is longer than 600'.	• Narrower street options will help limit speed without specific measures. • Bulb outs, chokers, and mini roundabouts are effective if done well. Local examples (Spanish Trail subdivision) bear this out. • Curvilinear streets can be used to help slow traffic. • Recommend densely parking on only one side of street for narrower street section to lower speeds and costs. This can be accomplished using some of the local street sections permitted.
15	Why require landscaping islands in parking pods located off alleys?	A parking lot endcap landscape island has been required.	The TEDS update proposes to remove the requirement of an endcap for parking along alleys.
16	All paths have to be concrete	All Active Transportation Corridors (ATCs), sidewalks, and pathways shall be constructed with concrete.	A development can propose paths within their own HOA open space system that are not concrete. It is only ATCs, sidewalks within the public ROW, and pathways connecting between streets and from cul-de-sacs, for public use, that are required to be concrete. Other treatment types on surfaces areas such as asphalt have not fared as well with buckling and general maintenance is a larger issue.

Comment No.	Listening Tour/Developers Roundtable/Public Comments ITEM/ISSUE/CONCERN	TEDS UPDATE PROPOSAL	CITY PROPOSED RESOLUTION/RESPONSE
17	Landscaping in cul-de-sacs/parking pods	Not in TEDS, include in Zoning and Development Code Update.	  Example 1 (The Legends) Example 2 (Summerhill) Two general sizes have occurred in the city with Example 1 (The Legends subdivision example) fitting within a standard cul-de-sac and Example 2 (Summerhill Subdivision example) needing a larger area for the parking area. Proposed to not require landscaping for Example 1 and to require landscaping for Example 2. These options will be proposed with the Zoning and Development Code Update.

Grand Junction Area
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City of Grand Junction Community Development Department,

Thank you for the opportunity to comment on the proposed TEDS revision. We greatly appreciate the extension of the original public comment period, which provided valuable time to formulate constructive feedback in support of the highest quality outcome for the public.

We commend the department's efforts to create increased flexibility in the plan, modernize standards, and implement the bike and pedestrian plan.

As representatives of the Grand Junction Area Realtors Association and Housing and Building Association of Western Colorado, we represent a coalition of over 300 design, engineering, and development professionals and over 900 real estate professionals collectively employing thousands of local citizens.

We're confident that the inclusion of technical expertise informed by this depth of experience will help guide adoption of a plan that functions as intended in fully implementing the core values identified through the planning process. It is our shared vision to facilitate the enactment of standards consistent with the spirit of those guiding principles.

After our initial review, we've prepared comments on a number of items in the current TEDS draft as practical considerations that would fortify the plan, protect against the potential for unforeseen consequences, and ultimately ensure successful implementation for the benefit of our present and future community.

We place particular emphasis on three elements of the draft TEDS plan:

- Right of Way Size Regulations, Parameters, and Variances
- Minimum Access Standards
- Traffic Study Requirements

Two additional elements also warrant consideration:

- Pathway Illumination Standards
- Sidewalk Specification Requirements

The proposed form of each of these elements reflects efforts to achieve commendable goals, but also presents concerns of technical feasibility, outcomes counter to the identified values, and negative impacts on housing affordability.

In each instance, our comments identify alternatives or the need for further clarity to address these concerns while preserving the original ambition of the goals.

Grand Junction Area REALTOR® Association
2473 Crossroads Blvd. Grand Junction CO 81506
970.243.3322

Housing and Building Association of Western Colorado
569 S. Westgate Dr, Unit 3 Grand Junction Colorado81505
970.852.5707

Grand Junction Area REALTOR® ASSOCIATION

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Public Comments

Right of Way Size Regulations, Parameters, and Variances

Concerns

- Reduces quantity of land available for the creation of housing inventory, which will increase costs, decrease density, and contribute to sprawl with traffic and commuter impacts.
- Although we appreciate the flexibility provided by the several potential variances, their use would essentially shift interior boundaries.
- Implementing this standard is impractical in scope and lacks technical feasibility. Implementation in existing, developed corridors would require substantial and costly land acquisitions, particularly for infill, and will reduce existing housing inventory.

Comment

- We would like to see further review of the right of way requirements in consideration of emerging trends, as this proposal would benefit from clarity and data benchmarked to standards, impacts, and outcomes adopted by comparable communities.

Minimum Access Standards

Concerns

- These standards need general clarification regarding the definition of minimum access and what specifications are required to meet the stated goal of connectivity.

Comment

- Additional technical clarity is required, and references to similar levels of required access in comparable jurisdictions would serve as a useful point of reference.
- For most infrastructure development, there is a tier based system to determine the size of streets, waterlines, etc. A tier based system should also be established for pathways based on the size of the development, particularly in areas where connectivity is already achieved and secondary access has been established for fire vehicles.

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Housing and Building Association of Western Colorado
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Public Comments (continued)

Traffic Study Requirements

Concerns

- The proposed requirement for traffic impact studies (TIS) of developments that generate between 10 and 99 ADUs is needlessly low, and the lower threshold of 10 peak hour trips could easily be achieved by a single home with one house multiple drivers or bicyclists, which will increase development costs and decrease affordability.

Comment

- The current traffic study requirements in the existing TEDS should be maintained, but with an addendum for estimating impacts to bicycle and pedestrian traffic. This would incorporate bike and pedestrian considerations while mitigating higher costs.

Pathway Illumination Standards

Concerns

- The draft proposes an uncommon management structure in which responsibilities are assigned to HOAs, private development, or not defined clearly.
- HOAs are unlikely to reliably manage illumination, while assigning responsibility to development in perpetuity is unusual and exceeds the role of private development.
- This structure is likely to create an inconsistent variety of lighting types and specifications.

Comment

- Apply the current system for local street lighting to pathway illumination to ensure reliability, simplicity, and consistency in type of lighting.

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970.243.3322

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Public Comments (continued)

Sidewalk Specifications

Concerns

- The proposed standard requiring sidewalks 6 feet in width and on both sides of the street will remove excessive amounts of already limited land available for the creation of housing inventory, with minimal additional utility for multimodal usage.

Comment

- The six foot sidewalk requirement should be modified to be required only at higher vehicular volumes and on only one side of the street, with an emphasis on connectivity. This will lower costs in the creation of housing and also the City's long-term maintenance costs, leading to the creation of more affordable housing stock while still accommodating multimodal usage.

Additional Feedback

The incorporation of this professional feedback will meaningfully improve the quality of the plan thanks to your gracious extension. That said, TEDS is a complex document that has not undergone a revision for many years, and the outcome would benefit from further review and refinement. We understand it may be challenging but with a plan of this magnitude, it's worth taking the extra time to get it right. We appreciate your collaboration to date, but respectfully request that you consider additional time for review.

If this additional time is granted, it will allow our professional community to provide several and more thorough contributions.. For example, we would:

- Explore how the new proposed standards complement or conflict with the latest trends in context-based development.
- Investigate experimentations and comparative models underway in front range communities that have already or previously incorporated multimodal uses and other additional values into their roadways and systems, so as for our Grand Junction to benefit from the best available data and practices as we tailor the right variables for our own community.

Additionally, we suggest that it would be mutually beneficial to convene a workshop between city staff and industry practitioners to further discuss our comments and opportunities to refine these standards.

Thank you again for offering these feedback opportunities to date. Please don't hesitate to contact our team with any questions, and we would be happy to serve as a resource throughout the remainder of the process.

We look forward to your response, and thank you for your consideration.

Submitted on behalf of the Grand Junction Area Realtors Association and Housing and Building Association of Western Colorado

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Housing and Building Association of Western Colorado
569 S. Westgate Dr, Unit 3 Grand Junction Colorado81505
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The following are comments compiled and received by the City via email from the development community and interested parties.

From Keith Ehlers on 6-29-23 via email

I've shared this with a few of you in conversation recently, but I hadn't done so in writing yet so here it is. The top two items at this stage that I'd like to see further vetting for in regards to the draft TEDs manual are:

1. Current development impact fees were influenced by the calculated cost of the existing cross sections and improvement requirements for roads, BUT if the new TEDS manual gets adopted before any responsible vetting of the additional cost implications of the expanded improvements being required is completed the TIF fees will automatically be out of alignment with every calculation that went into the 2019 nexus study and ultimately guided the impact fee implementation schedule that was approved by council and is utilized by the city manager and public works for budgetary planning. There are repeated comments about concern that the impact fees are currently only 75% of what is needed (based on the cost assessment of existing road cross sections), but the adoption of this TEDS policy would amplify the related budget shortfall. Can someone discuss this issue with me in detail please to help me understand what the thinking is and educate me on anything I may be missing?

2. If the new cross sections are consuming more right of way and requiring a detachment of sidewalks away from the vehicular activity then do we still need the same level of expensive landscape strips, buffers, and screening requirements that we currently require in our code? Perhaps there is a trade-off to be found here in which the private property owner may have to give up more land for ROW, but gets that's developable ground back through the relief of required landscape strips wherever detached walks are required since they inherently create a landscape strip between the roadway and the sidewalk. Does this question get addressed in the code update project or the TEDS project?

Thanks for your time on this.

-Keith

From Kevin Bray on 6-14-23

Rick, Trent, and Dave,

I like the idea of a drive lane that accommodates 2 way traffic. Its traffic calming and also keeps the space available for the fire trucks. I'm not sure I totally understand Fire's need for a second access. I thought we designed streets to have two firetrucks drive by each other at the same time. In that case one can be dropping a hose while the other is passing to drop the next. The 2nd access, if it was a path, would not need to be 20' width because there is not a hydrant or a home to service from that so whatever emergency vehicle would use it would then dump onto the residential road that had the proper width for the above scenario to unfold. Maybe you have a better explanation but I thought it would be a good trade-off if we are going to do a path(700' block rule) connection this should allow us to have some flexibility on longer cul-de-sacs and meeting second access requirements. In the example below, you can see that the drive lane is intended for two way traffic but I think it would/may require queuing. The presentation also brings up some good points about reducing the amount of asphalt/concrete that must be maintained.

For a good example of context-based multimodal street design I think the section of Mariposa that goes through residential neighborhood is a good example. A joint drive lane that does not have a middle stripe, allows for parking on the sides, and when pedestrians are in the street there is no psychological resistance to crossing the centerline and giving peds and bikers a wide space. I don't think that design is necessarily the best for mariposa as it serves very few residential homes and has a high design speed and more of a collector context, however, this was a practical and cost-effective approach to providing some traffic calming and mitigating uncomfortable ped/bike/car relationship. Notice the local residential Pleateau drive is 35' wide and has many private signs up and down the street "Kids at play" "please slow down". I think we have an opportunity to explore whether sidewalks in residential neighborhoods create safety or if they create a contextual assumption that people are on the side, and the drivelane is a speedway for cars. We all grew up on streets with no sidewalks or narrow sidewalks. We played football and basketball in them, we rode our bikes in them, we walk in them comfortably. Is it possible that the separation is the problem? The street I live on is full 44' with sidewalk on both sides, its over 1,000' long with more lots than are currently allowed in a dead-end cul-de-sac. There is very little traffic but the cars that come through there are usually doing mach 10. It's a design issue. We should build neighborhoods that people drive through like campgrounds.

Also, see his email with embedded photos and a powerpoint presentation.

From Kevin Bray on 7-17-23

Thanks Rick, I did hear Steve address the fire truck need in a roundtable I attended. Steve did a pretty thorough job and articulated well the need for the two lanes which I understand. I think the path would qualify as its not intended or needed to

provide the ability for two trucks to pass. I think you can come to the same conclusion or get with Steve if you need to. My comment is only to provide flexibility where it makes sense and can save the City and the consumer unnecessary costs.

From Mark Austin on 7-13-23

TEDS Plan Comments from ACG:

1. This is just a general comment, but the Ped and Bike Plan is now significantly impacting the cost for projects. The concern I have is the vast majority of "input" and involvement on this plan was provided from the bicycle community and was it really a representation of the entire community? The bicycle community just scored a huge win because they really aren't having to pay for any of these improvements. It would seem to me that before fully embracing this Bike and Ped Plan, there needs to be a cost analysis study to determine the cost to implement this plan and method that funds the construction and maintenance of the plan. The reality is the City is the agency that is ultimately going to have to pay for these improvements because the vast majority are on collector-type streets. If the community really wants to fully embrace this plan, they must also provide the funding to do it. This is really no different than what the City just did for the Rec Center. All of the planning documents and "surveys" from the community said they wanted a Rec Center. However, the City didn't move forward with this until there was a way to pay for it. Why isn't this same approach being taken for the Bike and Ped plan?

2. Section 29.08.030 – 1st Paragraph, last sentence and Paragraph 2. This should state 100 PEAK HOUR trips, not 100 trips (this would be 10 houses).

3. Section 29.12.040, part B. A maximum of 4 parking spaces without an island is unrealistic, or even 8 spaces. Why is a landscape island needed in an alley? This is not the place for a landscape island. Please look at the Catholic Outreach projects along alleys in the 200 and 300 blocks south of Ute. Also look at 951 Main Street.

4. I'm concerned all of the new street sections and various ROW widths will be difficult to determine when and how much additional ROW a site plan approval project must dedicate. For the most part, most of the existing commercial lots already have curb and gutter along them and are generally located along a street that is a collector street and above. When the site wants to develop, is the City now going to require additional ROW dedication along these streets and then require the sidewalks for instance to be detached? Maybe this isn't an

issue for the sidewalk because it's a collector street, but which ROW section for a collector street will the developer have to follow? If it's up to them, it will be the one that has to give up the least amount of ROW.

5. The TIS requirement to do for Bike and Ped analysis is silly. Most of the streets and sidewalks don't have much ped or bike traffic, so why are we trying to measure this? It isn't going to tell anyone anything and what is going to be the basis to project future bike and ped usage? All this does is cost projects another $2,000 for traffic study consultants that provides no real useful information. Every question on this checklist can be answered by the City's development engineer.

6. I can assure you the general public will use the Ped and Bike Analysis Worksheet to oppose every project that has a ped or bike facility along a collector roadway. A good example is the C-1/2 Road Gravel Pit. This project is currently pushed out by the Planning Commission because of the neighbors' complaints about inadequate bike and ped routes on C-1/2 Road. I can assure you the public will use the "stress" table maps to push their point once they understand how much this bike and ped plan drives the level of improvements required for a project approval.

7. Every project that has opposition will always raise the concerns that their roadways are too congested and can't handle the additional traffic, and the kids playing in the streets will be killed from the additional traffic generated by the proposed development. At least with a Traffic Study you can use ADT numbers to show the street has additional capacity to handle the development, but even with a Stamped Traffic Report, Planning Commission members will cave on this with enough public opposition at a hearing. Now you are going to have to say that it's ok that the kids playing in the street can't walk safely without a sidewalk and a bicycle can't travel down the road safely without having more pavement. We are setting ourselves up to get killed in public hearings, and the City will be the one getting yelled at because the streets are collectors.

8. Requiring individual lighting plans for all streets is another $1,500 burden on EVERY SINGLE PROJECT. All that needs to be done is do the lighting analysis for the various street sections and you should be able to determine a "typical" light pole spacing to provide the lighting levels needed. This is even more ridiculous because Xcel Energy is the one providing and installing the light types and I seriously doubt they check to make sure the lighting analysis light fixture details and deflectors match the equipment they install and maintain. This is just not a realistic expectation.

9. Section 29.20.030 Providing pedestrian lighting on all ped paths and trails is extremely expensive for all projects.

10. Expecting HOA's to maintain pedestrian level lighting in subdivision projects is unrealistic. They can barely handle getting irrigation water to their homeowners, now you want to have them maintain and operate pedestrian level lights for the entire public to use on their property and they are the ones that have to pay for them? This makes no sense. If the lights are provided, they need to be turned over to the City to maintain and operate, just like the lights along the street. Pedestrian and Bike trails are now considered "multi-model" and therefore they should be treated just like a public street lighting system for vehicles.

11. It would seem to me the street options need to include the low stress vs high stress design requirements from the ped and bike plan. I still don't know what that means, but from what I understand, we have to now assess the Bike and Ped plan to determine the stress level, which then drives the required sections required.

12. I was not part of the ped and bike plan, but how did the low stress vs high street analysis in the bike and ped plan get developed? This level of stress analysis is now significantly impacting the cost to develop street sections, and most of these street sections are paid for by the City through taxes. Has anyone thought about how this is really going to be paid for?

13. Section 29.20.060 (c)– Bulb outs. Just about every local street section has street parking. Does this now mean that bulb outs are now required at every intersection on local streets?

14. Section 29.20.070 (B)– Why can't this be a 2% to 2%? Requiring vertical curves at Stop Control intersections is ridiculous. Anyone driving across a typical crowned street drives up and down a 2% crown all the time without a safety issue. All the vertical curve does is create complexities in construction that aren't needed.

15. Private driveway access locations should not be restricted to a maximum 4% grade.

16. Section 29.20.210/ 29.28.250 – Traffic Calming. The City enforced this in the mid 2000 with
chokers and tabletops in subdivisions. The reality is these really didn't do anything and so over time, this "requirement" went away. Is it now back? Did we not learn anything from the last time this was required?

17. G Road Section – 70-ft ROW. Why is it acceptable for G Road to have a narrower Bike Lane but it's not acceptable for a Low-Speed Collector road, or

even a local commercial street or lower volume local streets?

18. Two Way Shared Use off Street Path – I'm not seeing where dimension E, slope information, is defined?

19. Two Way Shared Use Paths – Canyonview park has multiple 8-ft paths and is highly used in the community. These paths typically don't have 2-ft gravel shoulders, but some paths have a 3-ft soft surface path for people who don't' want to walk on hard surfaces. Several of the paths have no shoulder and transition into the adjacent grass. Why isn't this an acceptable section for everyone else?

20. What is driving the requirement that all paths have to be concrete? Again, Canyonview has several soft surface paths and in many locations, such as Redlands 360, concrete paths are not practical in open space areas.

From Ron Abeloe on 7-14-23

To: Trent Prall

Rick Doris

Thank you for the presentations of the proposed update of the TEDS along with the opportunity to provide comments from a Land Development and Housing Provider perspective.

My comments are mostly focused around the multimodal, Bike and Ped portions of the update. These portions of the update will add thousands of dollars of additional cost to each new housing unit that is produced under these proposed standards. That alone is not a reason to not propose them if the proposal eliminates a serious safety issue that is resulting in high numbers of injury or death.

It is however a reason to gather the information and statistics to support not only the new standards but also where they are warranted based on the significantly negative impact they will have on all new housing types.

Increasing new housing costs drives additional inflationary pressure on new home prices to the consumer. More troubling than this is the fact that new home price inflation is tied directly to increased prices on lower cost housing units as well. New home prices move in tandem with all other housing groups as a rule. These lower priced housing units are what the lower income level buyers and renters are using for shelter. These units are our work force housing stock.

Based on these facts it seems very important to take the time to identify where these new standards will have a safety impact large enough to warrant the significant negative impacts on housing prices, and where they will only serve to increase costs without much benefit.

In addition, adding concrete and asphalt in places where it is not necessary seems environmentally irresponsible and inefficient for future City Maintenance as well as the development itself. Considering the amount of carbon needed to produce concrete and asphalt along with the significant heat generated year after year for every additional square foot of these surfaces that are required to be installed, it seems prudent to make sure that it is truly needed.

I have heard the term quality of life or a more comfortable experience when referring to these improvements, I would ask you to keep in mind that there are few quality-of-life issues that are more important than being able to provide housing for yourself and your loved ones, and it is quite an uncomfortable experience when you can't afford to do that.

From Ron Abeloe on 7-17-23

Rick I wanted to backup our conversation on the costs associated with the TEDS update, specifically the requirement for 6 foot wide sidewalks in new residential subdivisions. I am estimating that on a 60 foot wide lot this will add approximately $2,000.00 of cost to each lot. This cost is being proposed without any compelling reason to do so. The pedestrian traffic inside of most subdivisions is so extremely low and a significant part of that traffic is single user which will receive almost no benefit from a wider walk. This cost may be warranted on high volume higher speed streets but inside of new residential subdivisions what we are currently required to provide seems more than adequate. I say this because in the 30 years I have been developing residential subdivisions of various densities along with the hundreds of homes I have built and sold I have yet to have heard a single complaint or even a comment regarding the width of the City Sidewalks inside the subdivision. As a matter of fact, the standard entry walk to the front door of our homes is 4 feet wide, and again, I have never received a comment or complaint about this standard either. Now I know that this is not a scientific study but it does lead me to believe that if a 4 foot wide sidewalk width was an issue of concern, I certainly would have heard about it by now. I would simply request that if the City truly believes that this is worth the additional burden on the home buying public that you should work with our industry to determine where this burden is truly warranted based on real data and where it is unnecessary. I would remind you that the cost of new homes is directly related to the market price of new homes and more importantly that as new home prices rise, that all other housing prices follow including rents. This is a well-documented market reaction, therefore additional cost should be very carefully and thoroughly investigated prior to any requirement that ends in that additional cost. I realize the City has no control over market forced but that in no way relieves the City from the those additional cost items that it does have direct control over

unless there is a truly compelling reason that has been proven out through thoughtful and thorough research.

Thank You for your consideration,
Ron Abeloe
Chaparral West Inc.

From Andy Gingerich on 7-14-23

I agree with the basic concept, Rick, that gov't agencies would build them on the main roadways, and developers would build them on the others. In reality that's what would happen. I just don't know if roadway classification is the best guideline. From the examples I gave, North Ave is a minor arterial, Rimrock is a major collector, 24 3/4 Rd and Market St are local roads. I suspect that North Ave is covered by the North Ave Overlay. But in the other examples it looks like it's based more on a traffic flow issue, trying to prevent traffic back up at intersections, etc. These were decisions made before my time, so I am making some assumptions.

How is it determined which roadways TCP funds will be used for vs which roadways developers will build? Maybe that's a decent guideline to determine areas where developers would and wouldn't be required to build a pullout. I'm just thinking that if a developer is building a roadway and sidewalks, and it's determined that a pullout is needed, they should build it along with everything else. In reality, bus pullouts are unlikely to be needed in local and lower classified roads in most situations.

There is a decision tree in the current Transit Design Standards and Guidelines that determines stop locations and whether or not a bus pullout is needed. I don't think this decision tree has been closely followed over the years, and should be updated to reflect more recent practices. But I think it's the right place for these standards to be located.

Grand Junction City Council

Workshop Session

Item #1.d.

Meeting Date:	August 28, 2023
Presented By:	Tamra Allen, Community Development Director, Grand Junction Land Company
Department:	Community Development
Submitted By:	Niki Galehouse, Planning Supervisor

Information

SUBJECT:

Redlands 360 Planned Development Update

EXECUTIVE SUMMARY:

The Redlands 360 Planned Development was approved by City Council on February 2, 2022. As part of the approval, the applicant, Grand Junction Land Company, LLC, committed to providing regular updates to City Council. This agenda item is the first of such updates.

BACKGROUND OR DETAILED INFORMATION:

The Redlands 360 Planned Development was approved by City Council on February 2, 2022. As part of these approvals, the applicant, Grand Junction Land Company, LLC, committed to providing regular updates to City Council. The Outline Development Plan (ODP) includes seven exhibits which detail land use, trails, parks, and other aspects of the development. Exhibit 5: Development Progression Plan, includes a City Council Report Schedule, which identifies the first report to coincide with Phase 1 development. The Filing 1 plat was recorded on June 14, 2023. Subsequent reports will be expected to occur approximately every five years until the project reaches buildout.

The applicant, represented by Jane Quimby, will present the update on the project.

FISCAL IMPACT:

There is no fiscal impact associated with this item.

SUGGESTED ACTION:

This item is for informational purposes only.

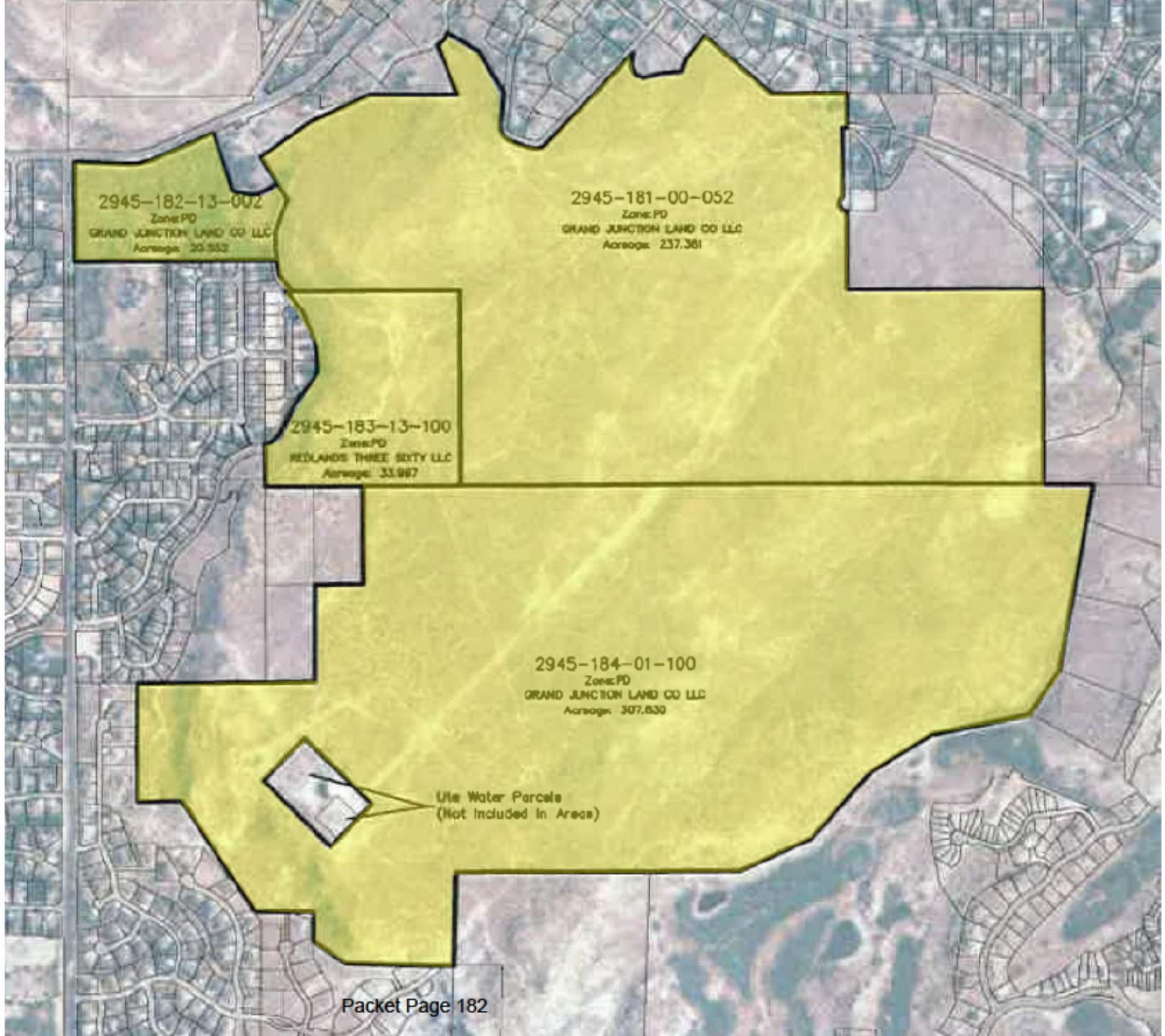
Attachments

1. August 2023 R360 Status Mtg with Council 8-30-23
2. La Plata Redlands 360 CC Presentation 2-2-22 FINAL
3. ODP Exhibits 1-5 CIty Council ppt
4. R360 Recorded IGA district 1
5. R360 Recorded IGA district 9
6. R360 Recorded Zoning Ordinance
7. Redlands 360 Master Parks Open Space Plan


REDLANDS 360°
PROJECT UPDATE
City of Grand Junction
August 2023
LA PLATA COMMUNITIES

REDLANDS 360°

Parcel Map Locations

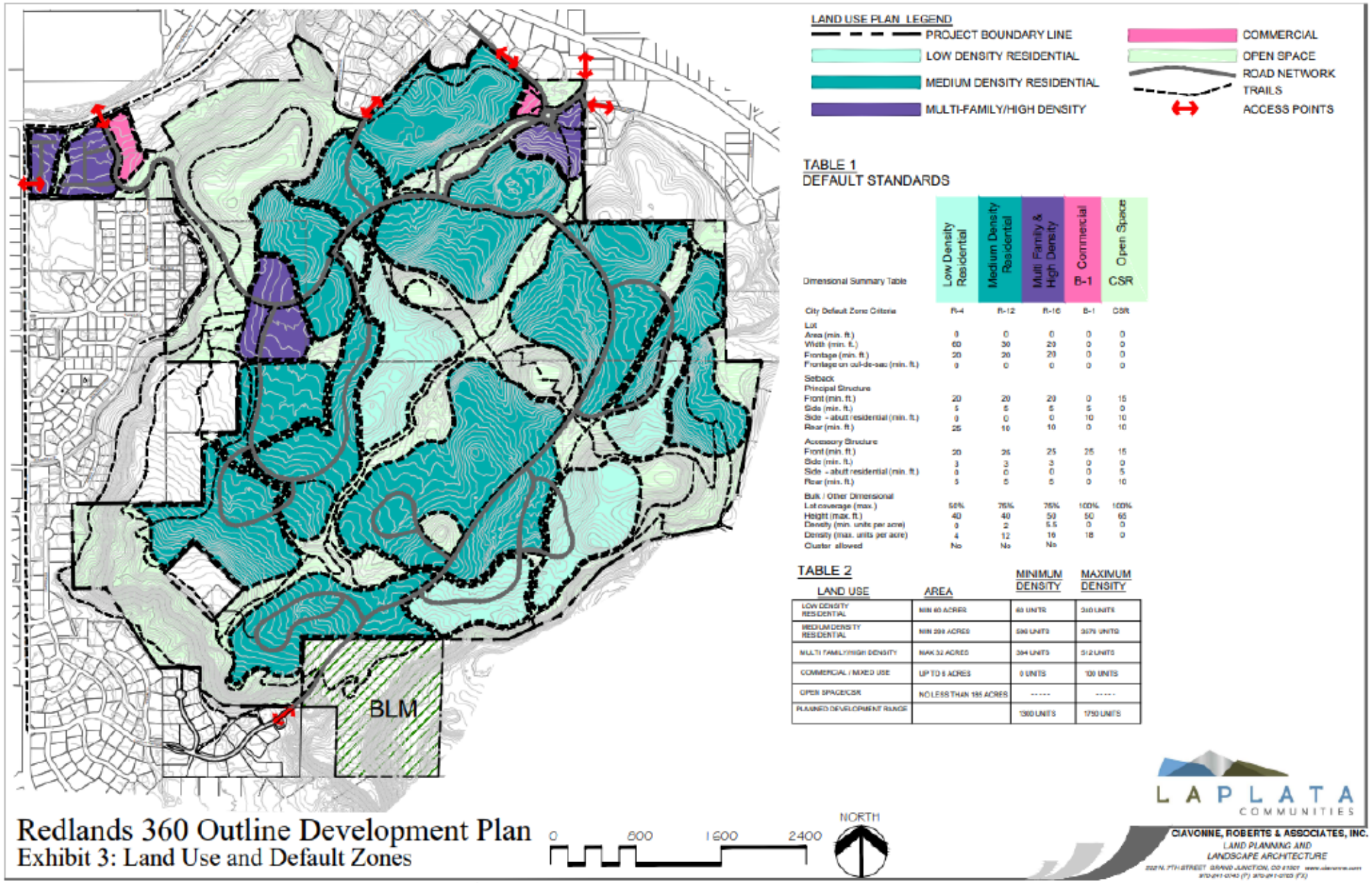


Parcel Areas:

2945-182-13-002	20.552 Ac
2945-181-00-052	237.361 Ac
2945-183-13-100	33.997 Ac
2945-184-01-100	307.830 Ac
Total	**599.740 Ac**

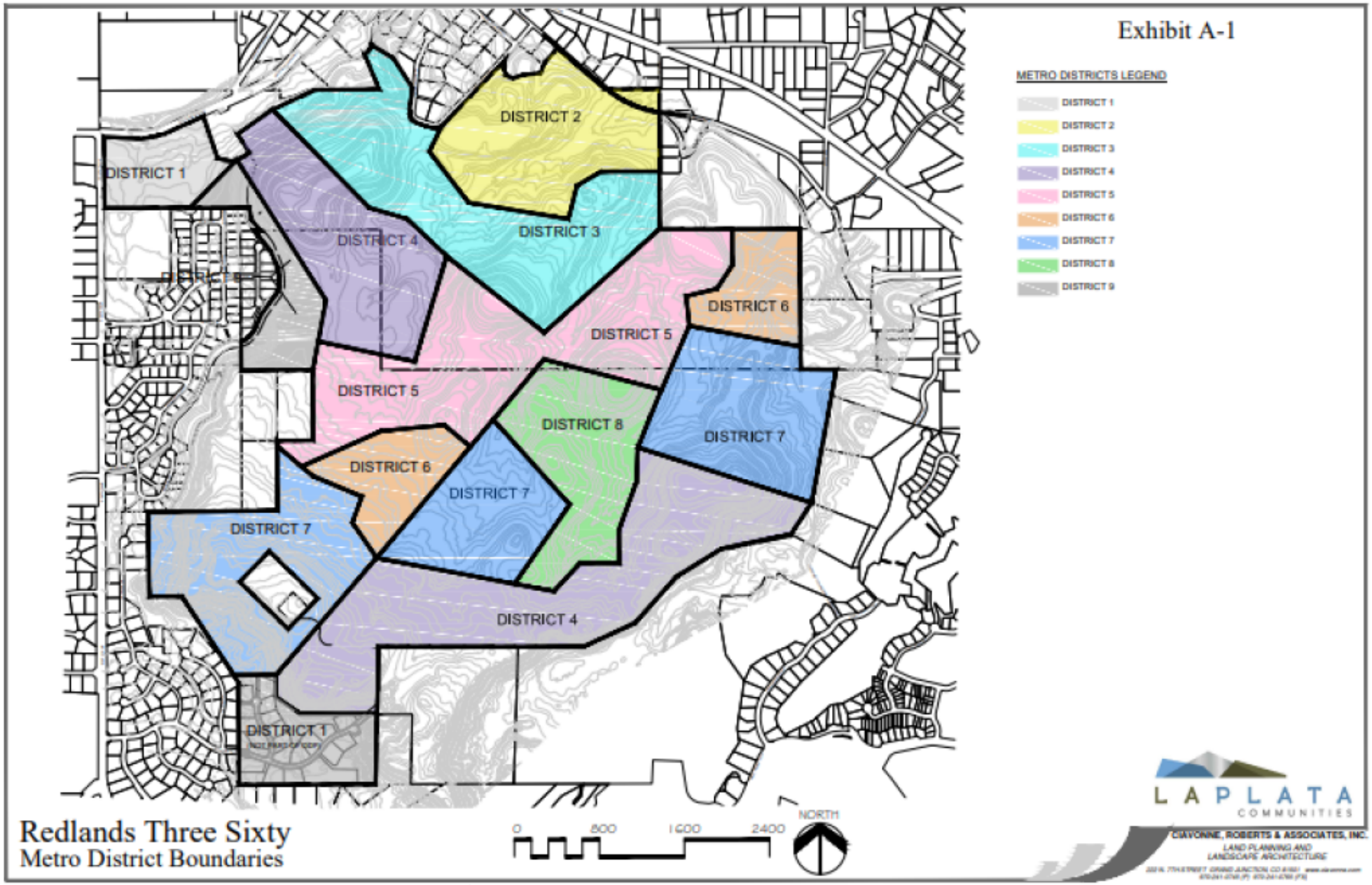
REDLANDS 360°

Approved ODP



REDLANDS 360°

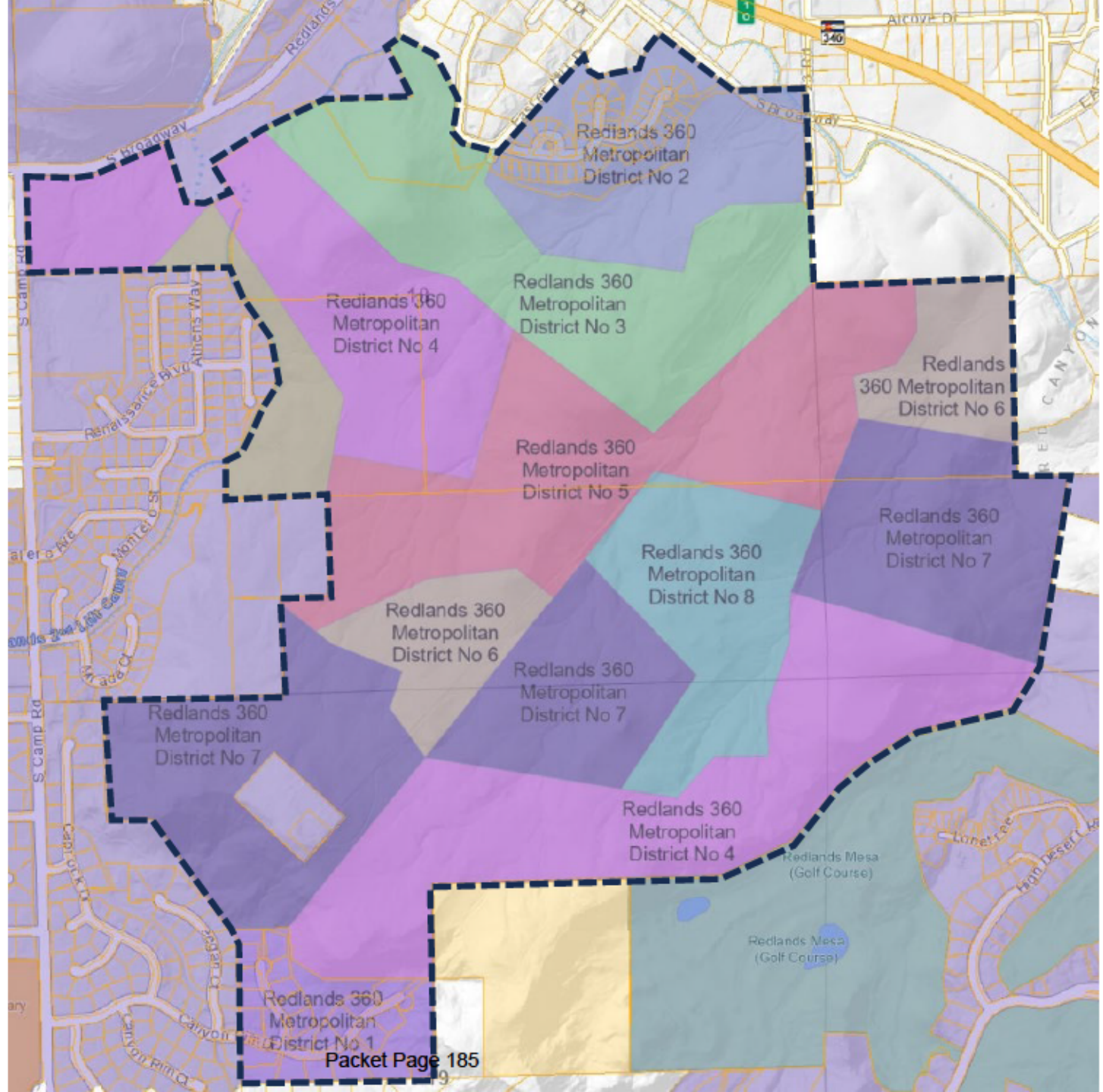
Approved Metro Districts



REDLANDS 360°

Mesa County GIS

R360 Revised District Map for District 1 & 4

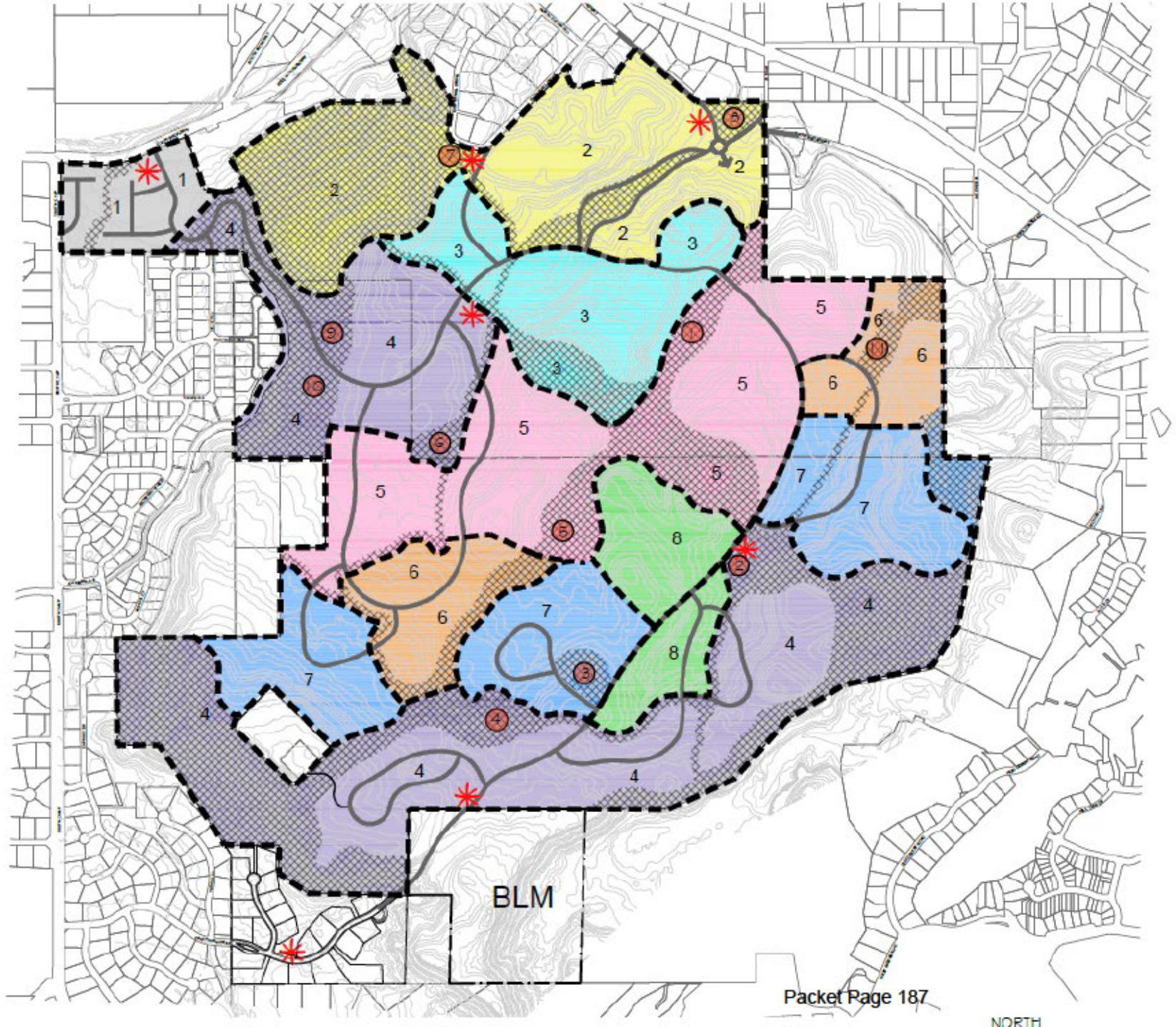


REDLANDS 360°

Timeline

Approvals and Processing To Date

Projects:	Submittal:	Approval:
Renaissance 360	8/13/19	10/12/20
Annexation	3/13/20	7/15/20
R360 Metro District		6/17/20
R360 ODP	11/20/20	2/02/22
Canyon Rim 360	11/24/20	10/07/21
R360 MD IGA with City		3/01/22
Filing 1 (Easter Hill)	7/29/22	6/15/23



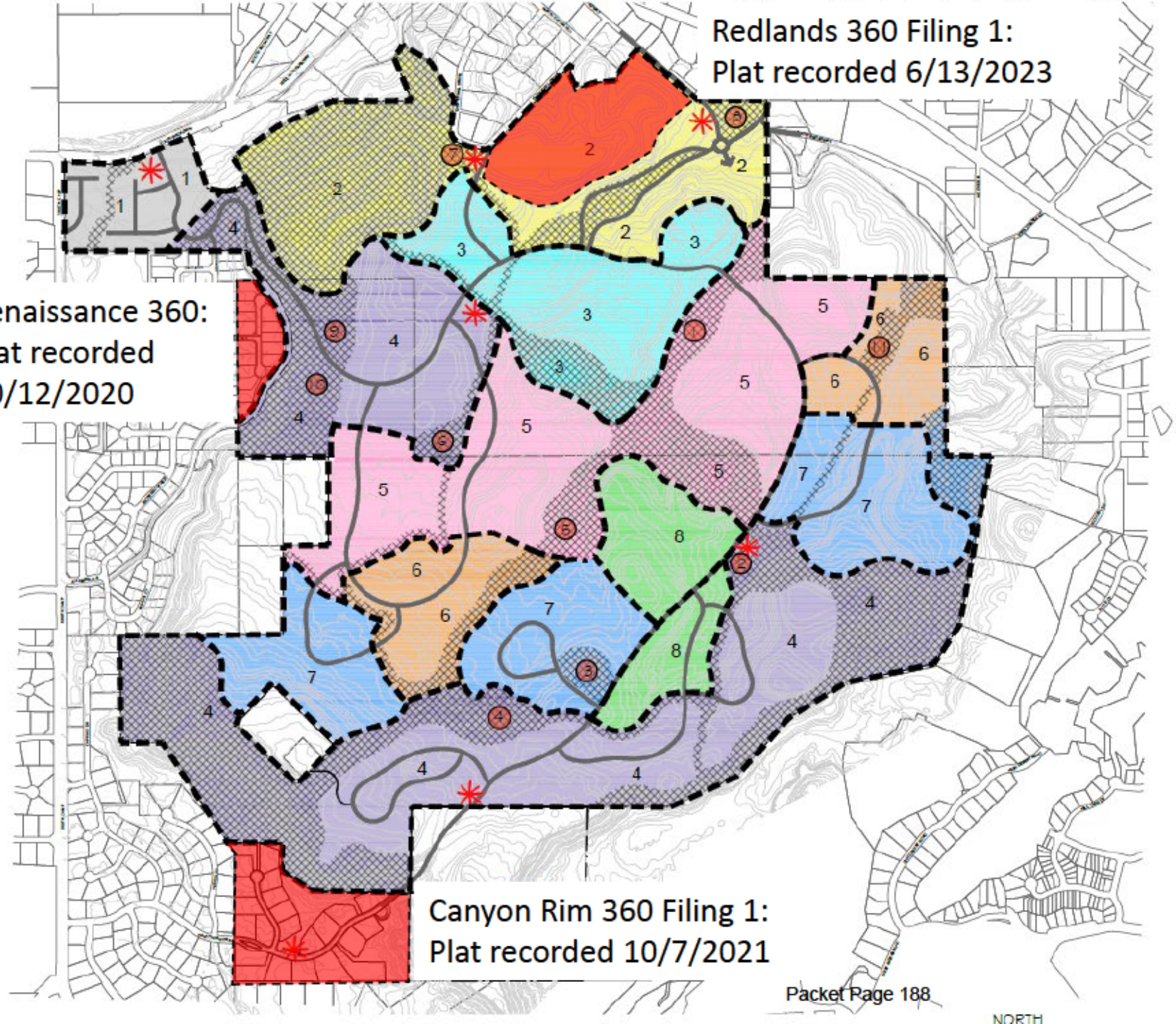
DEVELOPMENT PROGRESSION SCHEDULE

- 1 - TARGETED START 2022
- 2 - TARGETED START 2025
- 3 - TARGETED START 2028
- 4 - TARGETED START 2031
- 5 - TARGETED START 2034
- 6 - TARGETED START 2037
- 7 - TARGETED START 2040
- 8 - TARGETED START 2043
- OPEN SPACE; SEE EXHIBIT 2
- TRADITIONAL PARK; SEE EXHIBIT 2
- TRAILHEAD - SEE EXHIBIT 2

CITY COUNCIL REPORT SCHEDULE

PHASE #	ESTIMATED DATE OF COMMENCEMENT	
PHASE 1	2022	
PHASES 2-7	UPDATE MEETINGS WITH CITY COUNCIL	2027 2032 2037 2042
PHASE 8	2043	

REDLANDS 360°



DEVELOPMENT PROGRESSION SCHEDULE

- 1 - TARGETED START 2022
- 2 - TARGETED START 2025
- 3 - TARGETED START 2028
- 4 - TARGETED START 2031
- 5 - TARGETED START 2034
- 6 - TARGETED START 2037
- 7 - TARGETED START 2040
- 8 - TARGETED START 2043
- OPEN SPACE; SEE EXHIBIT 2
- TRADITIONAL PARK; SEE EXHIBIT 2
- TRAILHEAD - SEE EXHIBIT 2

CITY COUNCIL REPORT SCHEDULE

PHASE #	ESTIMATED DATE OF COMMENCEMENT	
PHASE 1	2022	
PHASES 2-7	UPDATE MEETINGS WITH CITY COUNCIL	2027 2032 2037 2042
PHASE 8	2043	

REDLANDS 360°

RENAISSANCE 360 SUBDIVISION
NE1/4 SW1/4 SECTION 18
TOWNSHIP 1 SOUTH, RANGE 1 WEST, UTE MERIDIAN
GRAND JUNCTION, MESA COUNTY, COLORADO

DEDICATION

KNOW ALL MEN BY THESE PRESENTS:

That REDLANDS THREE SIXTY, LLC, A Colorado limited liability company, is the owner of that real property located in the Northeast Quarter of the Southwest Quarter (NE¼ SW¼) Section 18, Township 1 South, Range 1 West of the Ute Meridian in the City of Grand Junction, Mesa County, Colorado, being more particularly described as follows:
(Original Warranty Correction Deed Reception Number 2910282.)

BEGINNING at the Northwest corner of the Northeast Quarter of the Southwest Quarter (NE¼ SW¼) Section 18, Township 1 South, Range 1 West of the Ute Meridian in Mesa County, Colorado, whence the Northeast corner of said NE¼ SW¼ Section 18 bears North 89°52'08" East, a distance of 1319.13 feet for a basis of bearings with all bearings contained herein relative thereto; thence North 89°52'08" East, a distance of 1319.13 feet, to the Northeast corner of said NE¼ SW¼ Section 18; thence South 00°18'52" East, a distance of 1318.42 feet, to the Southeast corner of said NE¼ SW¼ Section 18; thence South 89°46'40" West, a distance of 1316.82 feet, to the Southwest corner of said NE¼ SW¼ Section 18; thence North 00°24'51" West, a distance of 1320.53 feet to the POINT OF BEGINNING.

Said parcel containing an area of 39.92 Acres, as herein described.

That said owners have by these presents laid out, platted, and subdivided the above described real property into lots, blocks, and tracts, as shown hereon, and designated the same as RENAISSANCE 360 SUBDIVISION, a subdivision in the City of Grand Junction, Colorado, and hereby offers the following dedications and grants:

All streets, roads and Rights-of-Way are dedicated to the City of Grand Junction for the use of the public forever.

Tracts A, B, and C are granted to the Homeowners Association for their purposes by separate document. Access also granted to Tracts B and C to the Redlands Water and Power Company for operation and maintenance and to the City of Grand Junction for Public access.

All Multipurpose Easements are dedicated to the City of Grand Junction as perpetual easements for City approved utilities including the installation, operation, maintenance and repair of said utilities and appurtenances which may include but are not limited to, electric lines, cable TV lines, natural gas pipelines, sanitary sewer lines, storm sewers, water lines, telephone lines, traffic control facilities, street lighting, landscaping, trees and grade structures.

All Drainage Easements are granted to the Homeowners Association by separate document as perpetual easements for the inspection, installation, operation, maintenance and repair of detention and drainage facilities and appurtenants thereto. The owner(s) and/or the property owners' association, if one exists, is not relieved of its responsibility to inspect, install, operate, maintain, and repair the detention and drainage facilities.

The City of Grand Junction is hereby dedicated a perpetual drainage easement along, over, under, across, and through Tract A for the inspection, installation, operation, maintenance, and repair of detention and drainage facilities and appurtenants thereto. The owners and/or the property owners' association, is not relieved of its responsibility to inspect, install, operate, maintain, and repair the detention and drainage facilities.

All Irrigation Easements are granted to the Homeowners Association by separate document as perpetual easements for the inspection, installation, operation, maintenance and repair of irrigation facilities and appurtenants thereto.

All Trail Easements including over Tract B and Tract C are dedicated to the City of Grand Junction as a perpetual easement for the use of the public forever, subject to the rules and regulations of said City, for purposes includingbut not limited to, constructing, installing, maintaining and repairing a trail and appurtenant facilities and for ingress, egress and access for the public with accompanying pets, if any, for use as pedestrians, and/or with wheelchairs (motorized and non-motorized, bicycles, motorized bicycles (a vehicle having two or three wheels, cylinder capacity not exceeding 50 C.C., and an automatic transmission which does not exceed thirty miles per hour), electric scooters(an electric powered vehicle having two or three wheels and does not exceed thirty miles per hour), and other non-motorized forms of transportation for commuting and recreational purposes, subject to any historical and recorded rights and usage of the Redlands Water and Power Company to install, operate, maintain and repair irrigation water and water transmission and distribution facilities.

All Tracts/Easements include the right of ingress and egress on, along, over, under, through and across by the beneficiaries, their successors, or assigns, together with the right to trim or remove interfering trees and brush, and in Drainage and Detention/Retention easements or tracts, the right to dredge; provided however, that the beneficiaries/owners shall utilize the same in a reasonable and prudent manner. Furthermore, the owners of said lots or tracts hereby platted shall not burden or overburden said easements by erecting or placing any improvements thereon which may impede the use of the easement and/or prevent the reasonable ingress and egress to and from the easement.

Owners hereby declare all lienholders of record to herein described real property are shown hereon.

IN WITNESS WHEREOF, said owners, REDLANDS THREE SIXTY, LLC, A Colorado limited liability company, has caused their name to be hereunto subscribed this 1st day of October A.D. 2020.

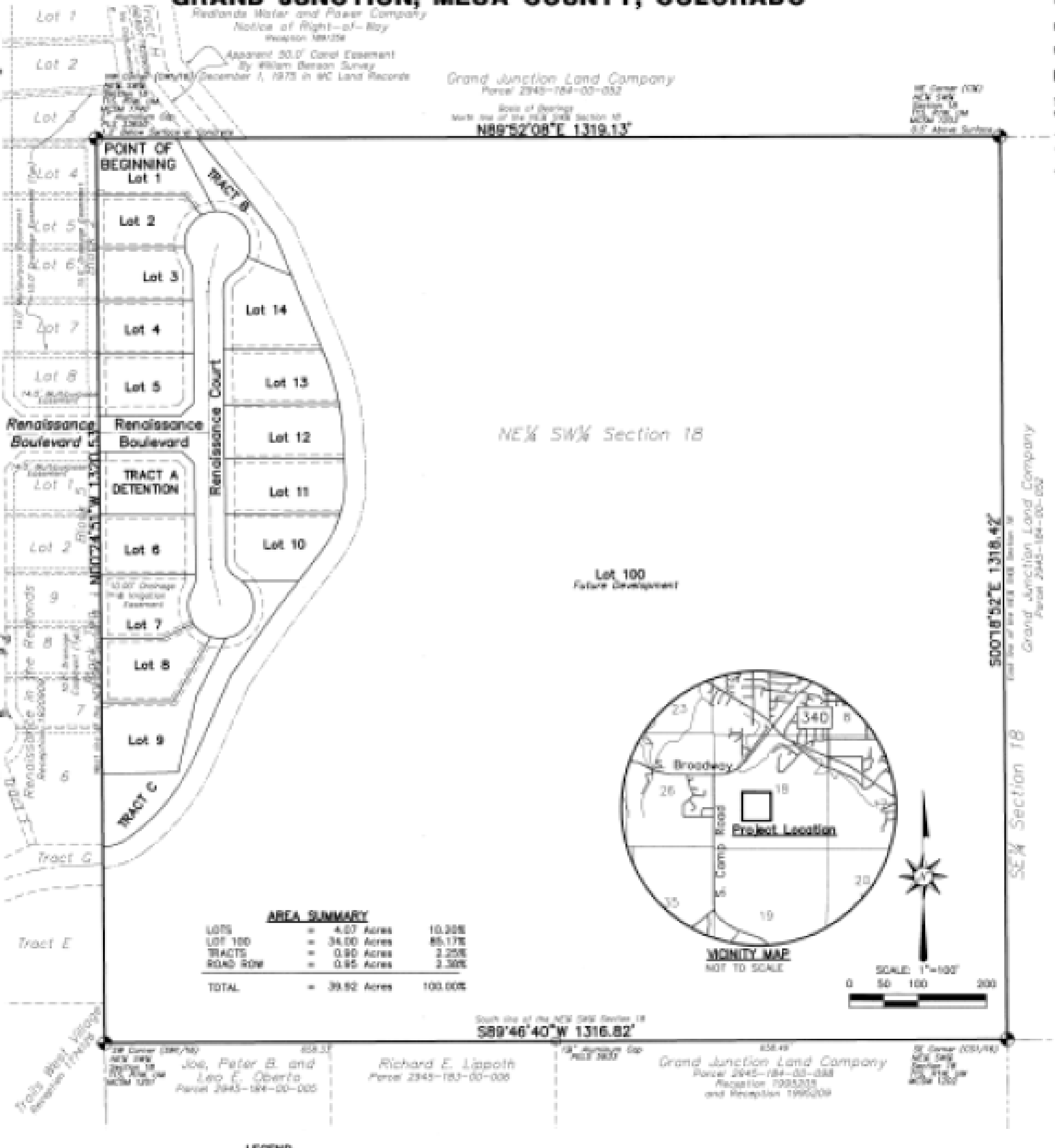
By La Plata Communities, Inc., a Colorado corporation, manager

By: B. Douglas Quimby
B. Douglas Quimby, president

NOTARY PUBLIC'S CERTIFICATE

STATE OF COLORADO)
COUNTY OF EL PASO) ss

The foregoing instrument was acknowledged before me this 1st day of October, 2020 by B. Douglas Quimby as President of La Plata Communities, Inc., a Colorado corporation, as manager of Redlands Three Sixty, LLC, a Colorado limited liability company.



LEGEND

LIENHOLDERS RATIFICATION OF PLAT

THE UNDERSIGNED, hereby certifies that it is a holder of a security interest upon the property described hereon described and does hereby join in and consent to the dedication of the land described in said dedication by the owners thereof, and agree that its' security interest, as shown in document recorded at Reception Number 2912662 public records of Mesa County, Colorado, shall be subordinated to the dedications shown hereon.

IN WITNESS WHEREOF, the said corporation has caused these presents to be signed by its Senior Vice President with the authority of its Board of Directors, this 2 day of October, 2020.

By: [signature] (title) Senior Vice President

For: Bank of Colorado

NOTARY PUBLIC CERTIFICATION

STATE OF COLORADO)
COUNTY OF MESA) ss

The foregoing instrument was acknowledged before me by John Schmidt (title) Senior Vice President for Bank of Colorado this 2 day of October A.D. 2020

Witness my hand and official seal.

Notary Public

My Commission Expires: March 9, 2024

STEFANIE MARIE BUSH
NOTARY PUBLIC
STATE OF COLORADO
NOTARY ID [illegible]
My Commission Expires March 9, 2024

TITLE CERTIFICATION

STATE OF COLORADO)
COUNTY OF MESA) ss

We, Land Title Guarantee Company, a title insurance company, as duly licensed in the state of Colorado, hereby certify that we have examined the title to the hereon described property, that we find the title to the property is vested to Redlands Three Sixty, LLC; that the current taxes have been paid; that all mortgages not satisfied or released of record nor otherwise terminated by law are shown hereon and that there are no other encumbrances of record; that all easements, reservations and rights of way of record are shown hereon.

Date: October 2, 2020 by: Karen A. Crespin / Sr. Title Ex. Name And Title

for: Land Title Guarantee Company Karen A. Crespin

GENERAL NOTES

Easement and Title information provided by Land Title Guarantee Company for Old Republic National Title Insurance Corporation, Commitment No. GJF65031?8-2, dated July 20, 2020.

Basis of bearings is the North line of the NE¼ SW¼ Section 18 which bears North 89°52'08" East, a distance of 1319.13 feet, established by observation of the MCGPS control network, which is based on the NAD 83 datum for Horizontal and NAVD 88 datum for Vertical information. Both monuments on this line are Aliquot Survey Markers, as shown on the face of this plat.

All lineal units shown hereon in U.S. Survey feet.

FOR CITY USE ONLY

Associated Recorded Documents

Reception	Type
2946939	Declaration of Covenants and Restrictions
2946940	Tracts A through C to the Homeowners Association
2946941	All Irrigation and Drainage Easements to the Homeowners Association by separate document

CITY OF GRAND JUNCTION APPROVAL

This plat of RENAISSANCE 360 SUBDIVISION, a subdivision of a part of the City of Grand Junction, County of Mesa, State of Colorado, is approved and accepted this 12 day of October A.D. 2020

City Manager [signature]

Mayor [signature]

CLERK AND RECORDER'S CERTIFICATE

STATE OF COLORADO)
COUNTY OF MESA) ss

REDLANDS 360°

REDLANDS 360°

Renaissance 360

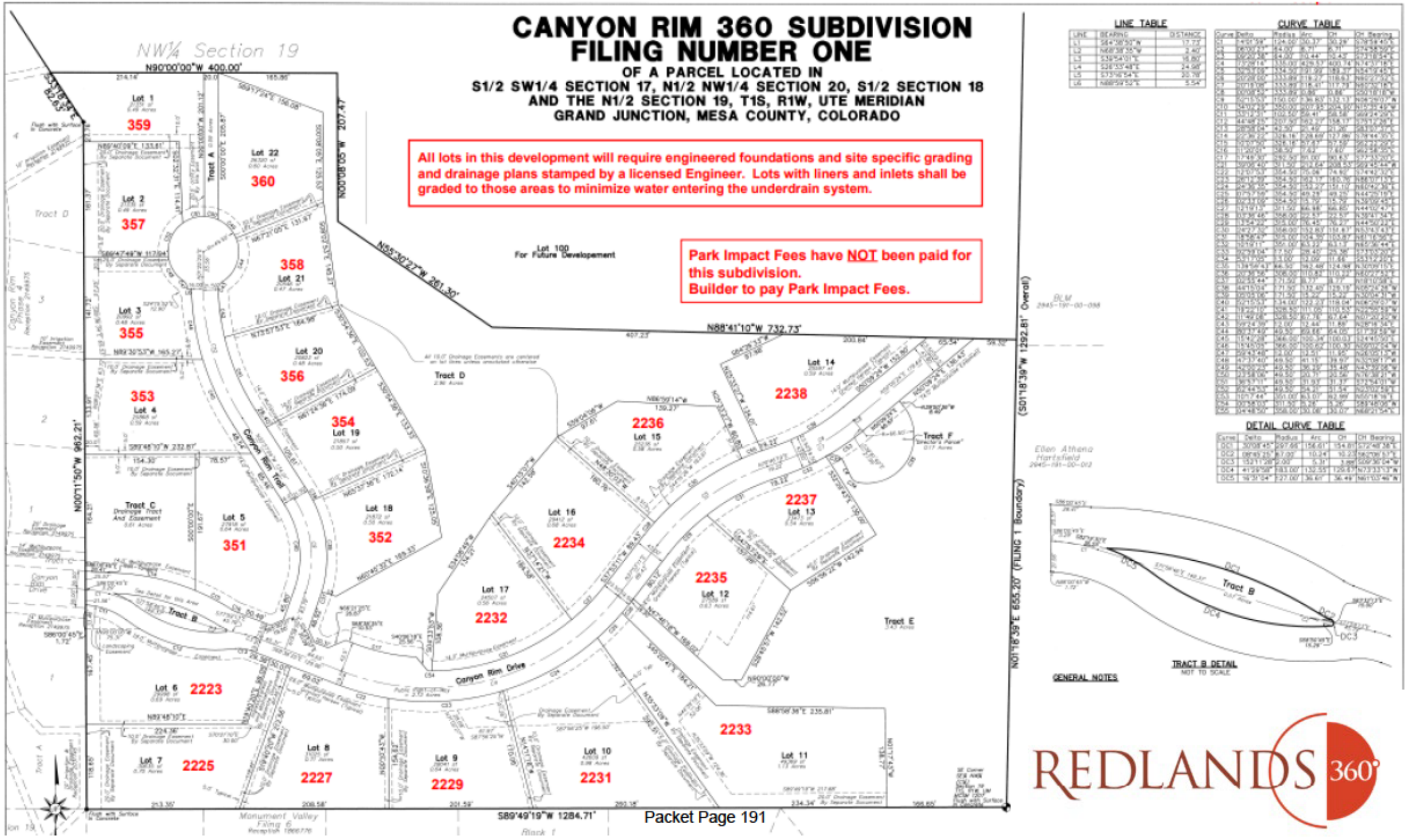


CANYON RIM 360 SUBDIVISION
FILING NUMBER ONE

OF A PARCEL LOCATED IN
S1/2 SW1/4 SECTION 17, N1/2 NW1/4 SECTION 20, S1/2 SECTION 18
AND THE N1/2 SECTION 19, T1S, R1W, UTE MERIDIAN
GRAND JUNCTION, MESA COUNTY, COLORADO

All lots in this development will require engineered foundations and site specific grading and drainage plans stamped by a licensed Engineer. Lots with liners and inlets shall be graded to those areas to minimize water entering the underdrain system.

Park Impact Fees have NOT been paid for this subdivision.
Builder to pay Park Impact Fees.



LINE TABLE

LINE	BEARING	DISTANCE
L1	S64°58'52"W	17.73'
L2	N68°38'14"W	9.40'
L3	S33°54'03"E	38.80'
L4	S35°03'48"E	24.98'
L5	S13°16'54"E	20.19'
L6	N88°09'50"E	9.54'

CURVE TABLE

Curve	Delta	Radius	Arc	CH	CH Bearing
C1	14°07'39"	124.00'	30.57'	30.49'	S79°18'41"E
C2	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C3	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C4	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C5	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C6	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C7	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C8	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C9	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C10	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C11	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C12	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C13	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C14	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C15	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C16	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C17	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C18	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C19	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C20	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C21	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C22	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C23	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C24	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C25	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C26	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C27	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C28	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C29	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C30	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C31	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C32	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C33	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C34	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C35	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C36	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C37	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C38	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C39	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C40	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C41	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C42	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C43	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C44	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C45	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C46	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C47	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C48	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C49	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C50	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C51	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C52	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C53	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C54	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C55	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C56	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C57	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C58	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C59	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C60	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C61	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C62	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C63	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C64	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C65	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C66	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C67	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C68	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C69	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C70	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C71	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C72	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C73	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C74	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C75	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C76	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C77	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C78	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C79	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C80	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C81	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C82	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C83	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C84	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C85	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C86	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C87	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C88	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C89	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C90	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C91	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C92	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C93	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C94	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C95	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C96	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C97	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C98	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C99	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C100	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C101	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C102	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C103	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C104	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C105	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C106	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C107	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C108	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C109	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C110	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C111	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C112	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C113	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C114	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C115	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C116	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C117	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C118	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C119	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C120	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C121	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C122	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C123	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C124	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C125	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C126	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C127	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C128	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C129	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C130	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C131	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C132	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C133	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C134	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C135	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C136	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C137	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C138	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C139	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C140	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C141	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C142	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C143	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C144	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C145	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C146	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C147	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C148	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C149	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C150	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C151	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C152	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C153	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C154	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C155	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C156	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C157	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C158	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C159	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C160	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C161	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C162	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C163	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C164	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C165	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C166	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C167	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C168	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C169	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C170	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C171	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C172	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C173	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C174	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C175	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C176	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C177	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C178	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C179	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C180	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C181	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C182	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C183	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C184	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C185	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C186	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C187	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C188	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C189	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C190	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C191	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C192	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C193	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C194	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C195	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C196	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C197	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C198	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C199	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C200	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C201	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C202	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C203	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C204	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C205	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C206	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C207	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C208	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C209	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C210	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C211	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C212	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C213	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C214	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C215	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C216	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C217	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C218	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C219	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C220	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C221	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C222	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C223	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C224	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C225	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C226	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C227	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C228	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C229	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C230	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C231	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C232	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C233	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C234	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C235	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C236	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C237	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C238	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C239	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C240	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C241	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C242	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C243	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C244	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C245	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C246	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C247	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C248	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C249	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C250	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C251	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C252	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C253	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C254	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C255	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C256	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C257	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C258	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C259	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C260	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C261	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C262	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C263	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C264	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C265	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C266	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C267	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C268	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C269	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C270	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C271	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C272	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C273	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C274	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C275	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C276	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C277	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C278	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C279	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C280	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C281	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C282	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C283	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C284	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C285	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C286	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C287	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C288	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C289	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C290	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C291	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C292	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C293	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C294	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C295	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C296	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C297	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C298	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C299	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C300	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C301	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C302	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C303	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C304	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C305	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C306	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C307	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C308	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C309	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C310	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C311	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C312	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C313	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C314	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C315	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C316	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C317	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C318	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C319	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C320	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C321	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C322	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C323	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C324	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C325	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C326	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C327	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C328	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C329	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C330	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C331	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C332	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C333	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C334	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C335	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C336	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C337	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C338	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C339	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C340	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C341	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C342	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C343	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C344	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C345	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C346	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C347	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C348	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C349	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C350	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C351	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C352	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C353	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C354	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C355	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C356	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C357	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C358	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C359	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C360	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C361	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C362	90°00'00"	14.00'	21.99'	19.80'	S44°08'05"E
C363	90°00'00"	14.00'	21.99'	19.80'	N45°51'55"E
C364	90°00'00"	14.00'	21.99'	19.80'	N44°08'05"W
C365	90°00'00"	14.00'	21.99'	19.80'	S45°51'55"W
C366	90°00'00"	14.00'	21.99'	19.80'	S44

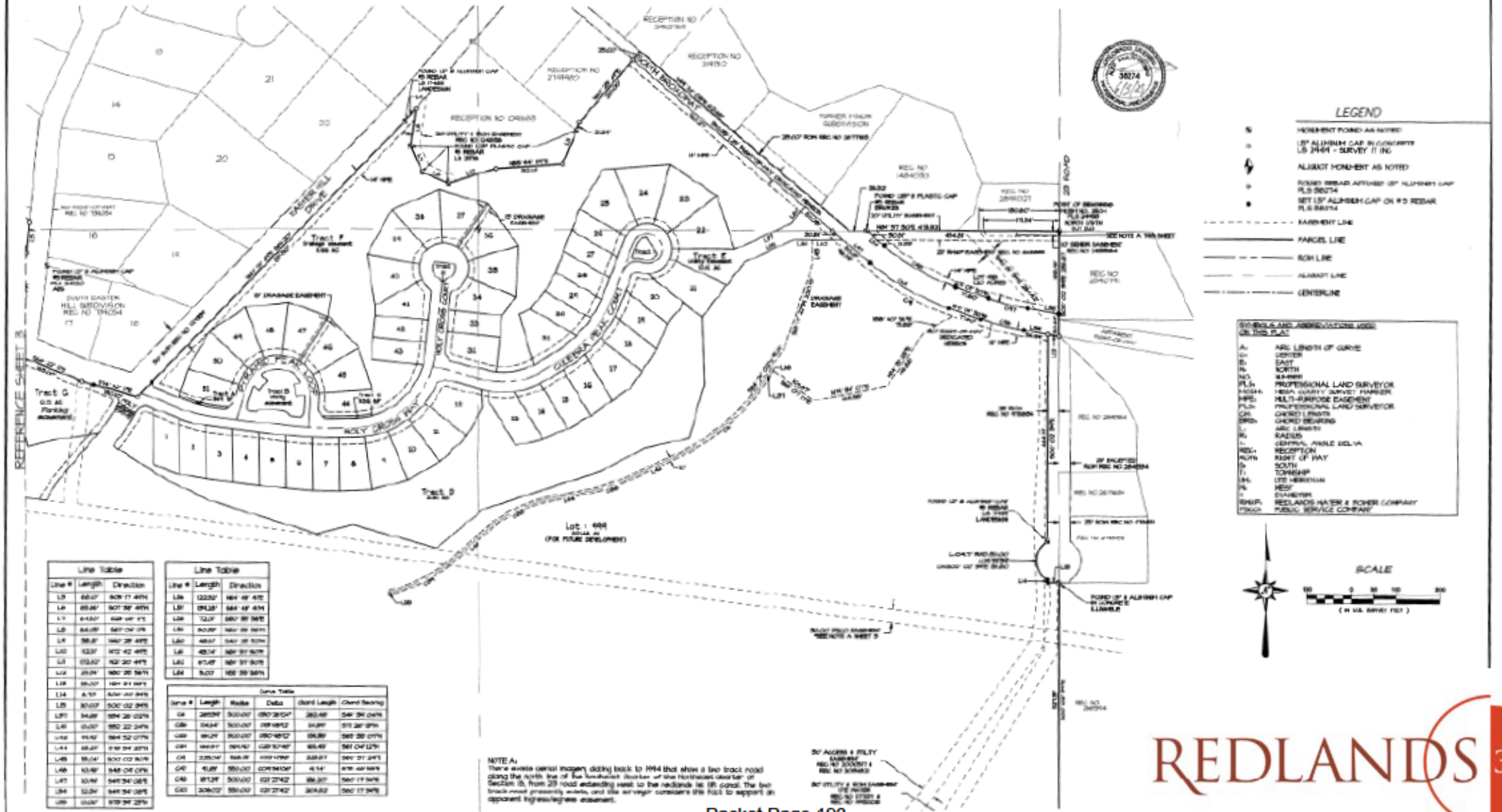
REDLANDS 360°

Canyon Rim 360



REDLANDS 360 FILING 1

Situated in Section 18 and the Northwest Quarter of the Southwest Quarter of Section 17, Township 1 South, Range 1 West of the Ute Meridian, City of Grand Junction, County of Mesa, State of Colorado.



Line Table		
Line #	Length	Direction
L9	68.07'	N39°17'49"W
L10	123.31'	N72°42'49"E
L11	172.62'	N22°20'49"E
L12	23.01'	N80°39'58"E
L13	68.07'	N84°41'58"E
L14	6.10'	S04°49'49"E
L15	30.00'	S00°02'24"E
L16	94.89'	S84°28'03"W
L17	23.00'	S82°22'24"W
L42	19.92'	S84°52'07"W
L44	68.81'	S19°34'20"W
L45	85.04'	S00°02'24"E
L46	10.48'	S48°08'09"E
L47	10.98'	S41°34'08"E
L54	12.24'	S41°34'08"E
L55	68.07'	S19°34'20"W

Line Table		
Line #	Length	Direction
L36	122.32'	N84°48'49"E
L37	194.28'	S84°48'49"W
L38	72.01'	S80°39'58"E
L39	8.00'	N84°39'58"E
L40	48.61'	S41°39'58"E
L48	48.14'	N84°39'58"E
L49	87.49'	N84°39'58"E
L50	5.00'	N88°39'58"E

Curve Table					
Curve #	Length	Radius	Delta	Chord Length	Chord Bearing
C9	285.59'	500.00'	032°43'04"	281.69'	S41°34'08"E
C38	314.64'	500.00'	036°03'12"	309.39'	S72°38'18"W
C39	89.29'	500.00'	010°14'02"	89.17'	S60°39'01"W
C51	169.01'	500.00'	019°22'00"	168.23'	S51°04'12"W
C6	235.04'	948.28'	014°12'00"	234.37'	S80°37'24"E
C40	41.89'	550.00'	004°21'42"	41.88'	S78°49'58"E
C48	87.28'	500.00'	010°00'00"	87.17'	S84°17'58"E
C50	208.02'	550.00'	021°40'42"	206.82'	S80°17'34"E

NOTE A:
There's aerial (vertical) imagery dating back to 1994 that shows a two track road along the north line of the Northwest Quarter of the Northwest quarter of Section 18, from 25 road extending west to the redlands (as it is called). The two track road presently exists, and the surveyor considers this road to support an apparent ingress/egress easement.

Filing 1 – Easter Hill





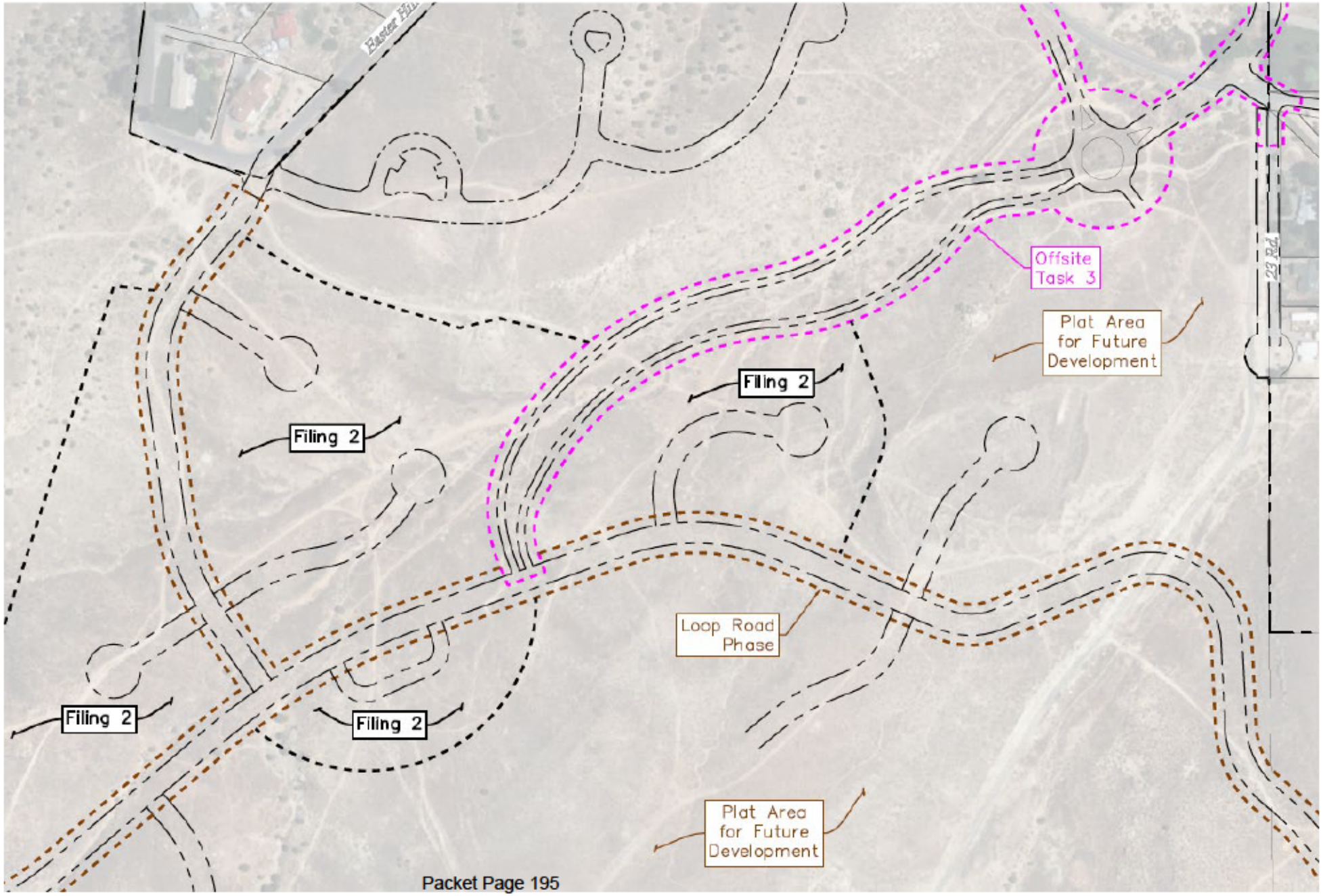




REDLANDS 360°

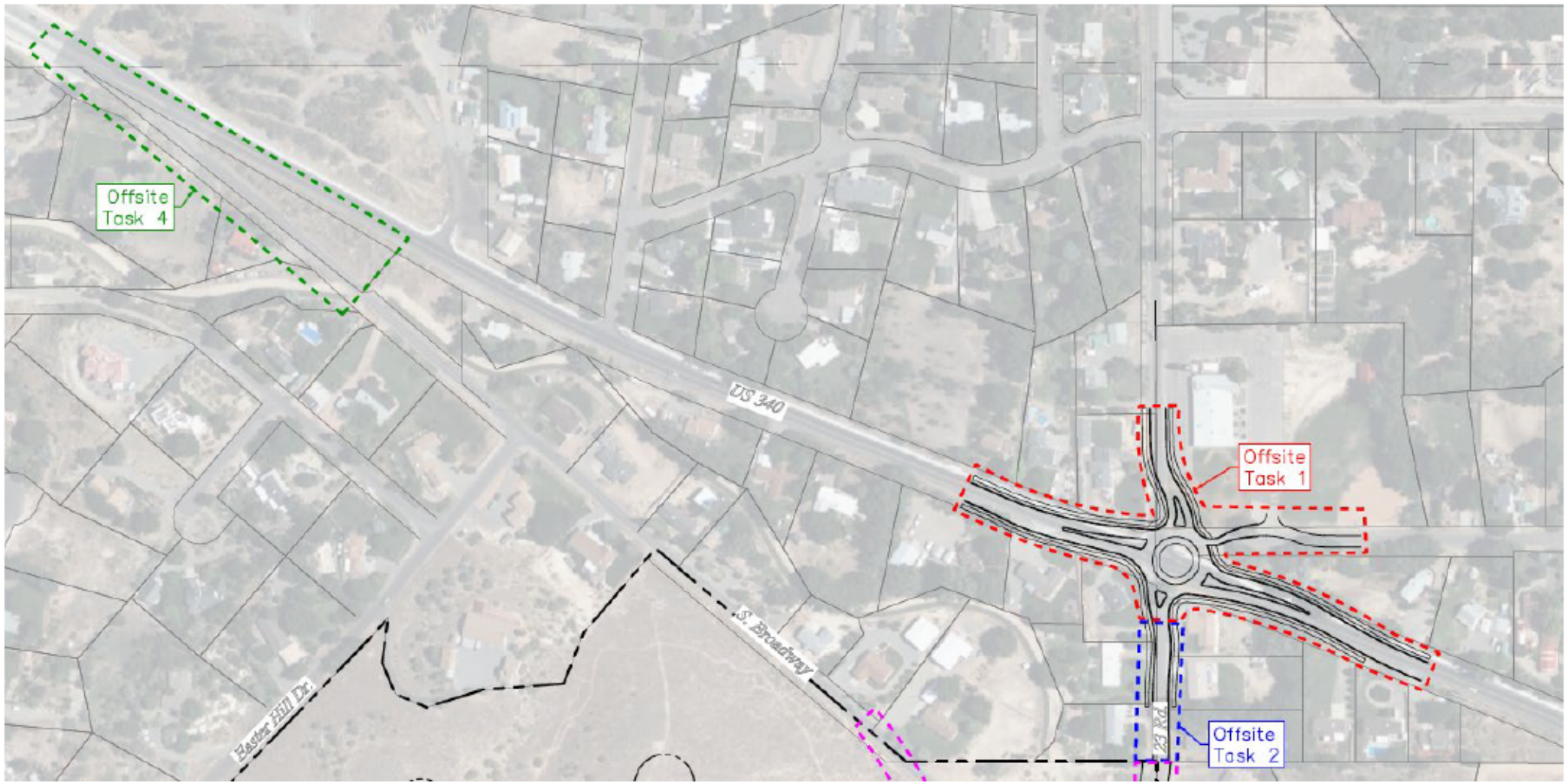
Project Update:

Potential Next Filing



REDLANDS 360°

Project Update: Offsite Requirements



REDLANDS 360°

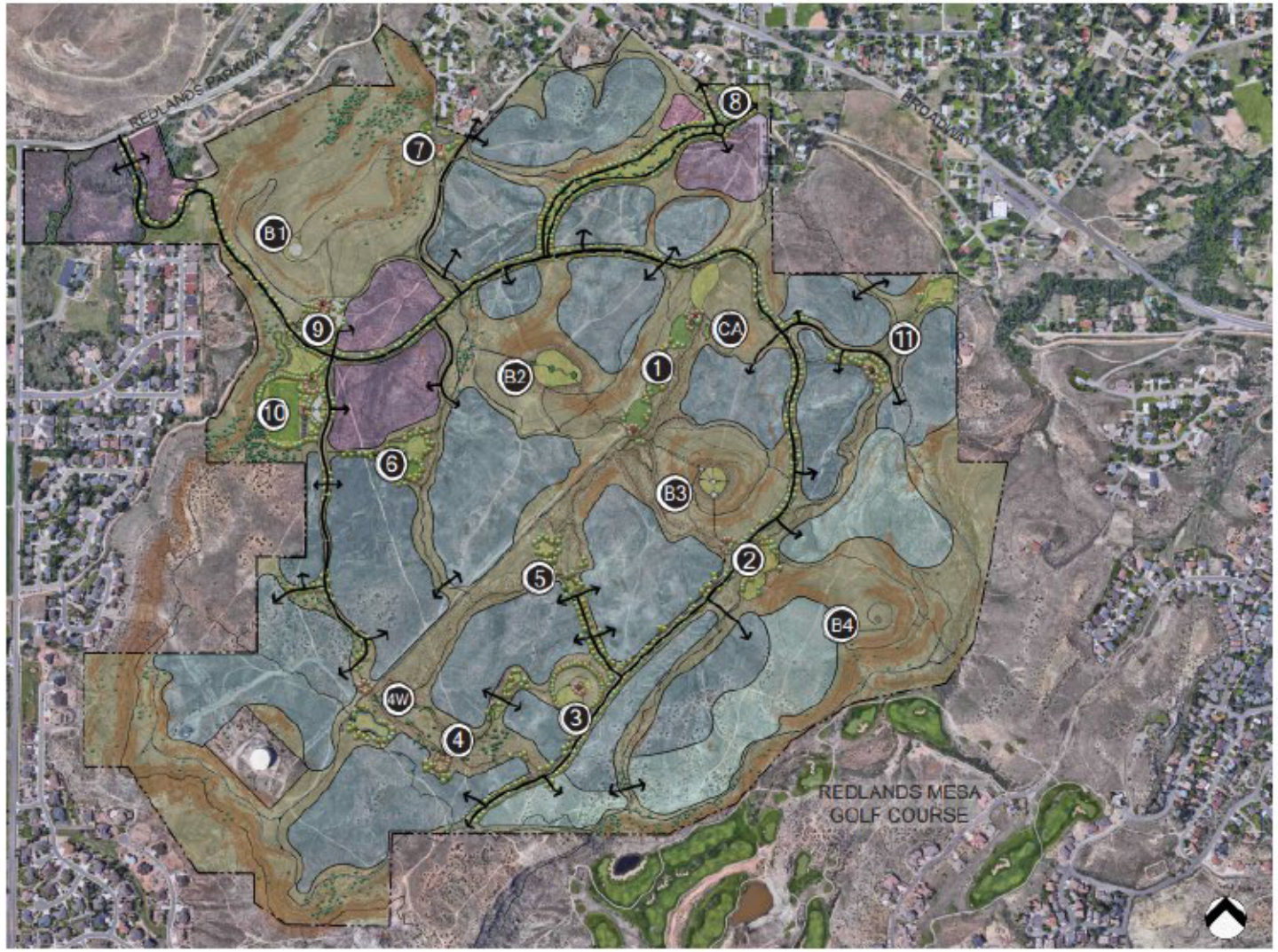
PARK AND OPEN SPACE MASTER PLAN



MAY | 2023

LA PLATA COMMUNITIES

CONSILIUM DESIGN



PARK 1
- ACTIVE AREA WITH LAWN
- PRESERVED TRAIL
- TRADITIONAL PLAYGROUND & PICNIC SHELTER
- TRAIL CONNECTION *
- FRISBEE GOLF COURSE

PARK 2
- TRAILHEAD *
- RESTROOMS & WATER FOUNTAIN
- TRAIL CONNECTION *
- NATIVE GRASS PASTURE
- INTERPRETIVE TRAIL
- TRAIL TO BROTHER 4

PARK 3
- PICNIC SHELTER
- SLOPE PLAY
- NATIVE GRASS LAWN
- WATER QUALITY & DETENTION

PARK 4
- FRISBEE GOLF
- DOG PARK
- TRAIL CONNECTION *
- PICNIC SHELTER
- ACTIVE LAWN AREA

PARK 4 WEST (4W)
- FRISBEE GOLF
- TRAIL CONNECTION *
- DOG PARK
- IRRIGATION POND

PARK 5
- FRISBEE GOLF
- NATURAL PLAY FEATURE *
- WATER QUALITY & DETENTION POND

PARK 6
- NATURAL PLAY FEATURE *
- SEASONAL RUNOFF FEATURE
- TRAIL CONNECTION *

PARK 7
- TRAILHEAD *
- KIOSK WITH TRAIL MAP
- SHADE STRUCTURE
- PARKING
- ACTIVE LAWN AREA

PARK 8
- TRAILHEAD *
- KIOSK WITH TRAIL MAP
- WATER QUALITY & DETENTION POND
- PARKING

PARK 9
- PICNIC SHELTER WITH RESTROOM
- INFORMAL AMPHITHEATER
- NATIVE GRASS LAWN
- PARKING
- TRAIL TO BROTHER 1

PARK 10
- CITY PARK DEDICATION* *
- PROGRAMMED FIELD SPACE
- PARKING
- COMMUNITY PAVILION/ GATHERING SPACE*
- TRADITIONAL PLAY STRUCTURE
- WATER QUALITY & DETENTION
- PICKLEBALL
- RESTROOMS & WATER FOUNTAIN
- DOG PARK

PARK 11
- TRAIL CONNECTION *
- NATURAL PLAY FEATURE*
- MOUNTAIN BIKE SKILLS COURSE
- WATER QUALITY & DETENTION

BROTHER 1 (B1)
- "EASTER HILL" SUNRISE PARK
- TRAIL CONNECTION *
- COMMUNITY GATHERING SPACE*
- SUNRISE CELEBRATION ELEMENT

BROTHER 2 (B2)
- "EARTH"
- INCLINE STEPS
- GEOLOGY WALK & INTERPRETIVE SIGNAGE
- BOULDER SCRAMBLE
- FITNESS CIRCUIT FROM BROTHER 2 TO BROTHER 3 *

BROTHER 3 (B3)
- "HORIZON"
- INCLINE STEPS
- SUNDIAL WITH INTERPRETIVE SIGNAGE
- EXERCISE AREA
- BOULDER SCRAMBLE
- FITNESS CIRCUIT FROM BROTHER 2 TO BROTHER 3 *

BROTHER 4 (B4)
- "NATURE" SUNSET PARK
- BENCHES
- NATURE BLIND
- INTERPRETIVE TRAIL ABOUT FLORA & FAUNA
- TRAIL CONNECTION *

COMMUNITY AMENITY (CA)

* INDICATES TOP 10 AMENITIES WANTED FOR NEW DEVELOPMENTS IN THE PARKS & RECREATION PROS SURVEY
** MEETS IGA REQUIREMENTS

In homage to the City of Grand Junction Three Sisters Park, the four prominent mesas that bisect the Redlands 360 site are referred to as "The Four Brothers". They are the backbone of the Redlands 360 parks and open space master plan. Each of the Four Brothers and their unique personalities will connect the Redlands 360 community to the land it sits upon. See more in depth descriptions on the individual Brothers' pages.

"CONCEPT ONLY, NOT FOR CONSTRUCTION"

REDLANDS 360°

LAND USE/PARKS/OPEN SPACE/TRAILHEAD TRACKING MATRIX

Plat Name / Improvements	Total Acres of Filing (Note 1)	Low Density Residential Acres	Medium Density Residential Acres	Multi-family HD Residential Acres	Commercial / Mixed Use Acres	ROW Acres	Units	City Park Fee Per Unit	City Park Total Impact Fee	Open Space Tracts Acreage	Park Tracts Acreage	Park Land Valuation per Acre	TH/Park Amenity Costs	INVOICE INFO
CR 360	**23.16**	**13.7**				**2.13**	22	$ 743	$ 16,346	**6.33**			$ 110,526	
Single Track/Soft Surface Trail													$ 5,585	Mesa County Health 11/30/21 6/1/22 12/22/22
Concrete Trail/Sidewalk/Gutter													$ 20,222	Sorter 12/19/22
Trailhead Signage/Receptacles													$ 840	RV Park Supplies 8/23/22 (2 of 4)
Trailhead/Park Amenities														
Planning and Design														KAART
Landscape/Irrigation														
Trailhead & Park Land											1	$30,000	$ 30,000	at $30,000 per acre per appraisal
Parking/Prep/Excavation													$ 53,880	Sorter 12/19/22
Fencing														
							Not included in City tracking, excluded from totals.							
Redlands 360 Filing 1									$ -				$ 20,860	not platted until 2023
Single Track/Soft Surface Trail														
Concrete Trail/Sidewalk/Gutter														
Trailhead Signage/Receptacles													$ 570	RV Park Supplies (1 of 4); LPC 11/1/22
Trailhead/Park Amenities														
Planning and Design													$ 20,290	Consilium 7/11, 10/17, 11/9, 12/12/22
Landscape/Irrigation														
Trailhead & Park Land												$ 7,000	$ -	at $7000 per acre per appraisal
Parking/Prep/Excavation														
Fencing														
SIGNATURE BLOCK - Filing 1 R360_____Date:_____GJ Planning_____Date:_____GJ Parks_____Date:_____Other_____Date:_____														
Redlands 360 ODP/Overall Project													$ 44,870	
Single Track/Soft Surface Trail														
Concrete Trail/Sidewalk/Gutter														
Trailhead Signage/Receptacles													$ 570	RV Park Supplies (1 of 4); LPC 11/1/22
Trailhead/Park Amenities														
Planning and Design													$ 44,300	Consilium 9/6, 10/10, 12/30/22;
Landscape/Irrigation														
Trailhead & Park Land												$ 7,000		at $7000 per acre per appraisal
Parking/Prep/Excavation														
Fencing														
PARK 7														
SIGNATURE BLOCK - ODP R360_____Date:_____GJ Planning_____Date:_____GJ Parks_____Date:_____Other_____Date:_____														
Redlands 360 Cumulative Total	**23.16**	**13.7**	**0**	**0**	**0**	**2.13**	0		$ 16,346	**6.33**	**1**		$ 176,256	

REDLANDS 360°

LAND USE/PARKS/OPEN SPACE/TRAILHEAD TRACKING MATRIX

Plat Name / Improvements	Total Acres of Filing (Note 1)	Low Density Residential Acres	Medium Density Residential Acres	Multi-family HD Residential Acres	Commercial / Mixed Use Acres	ROW Acres	Units	City Park Fee Per Unit	City Park Total Impact Fee	Open Space Tracts Acreage	Park Tracts Acreage	Park Land Valuation per Acre	TH/Park Amenity Costs	INVOICE INFO
Canyon Rim 360									$ -					
Single Track/Soft Surface Trail														
Concrete Trail/Sidewalk/Gutter														
Trailhead Signage/Receptacles														
Trailhead/Park Amenities														
Planning/Design/Engineering														
Landscape/Irrigation														
Trailhead & Park Land														
Parking/Prep/Excavation														
Fencing														
SIGNATURE BLOCK - Filing 1														
R360 Date: GJ Planning Date: GJ Parks Date: Other Date:														
Redlands 360 Filing 1	36.6		9.2			3.14	51	$ 1,333	$ 67,983	22.76			$ 105,164	
Single Track/Soft Surface Trail														
Concrete Trail/Sidewalk/Gutter														
Trailhead Signage/Receptacles														
Trailhead/Park Amenities														
Planning/Design/Engineering													$ 69,822	River City 6/22/2023
Landscape/Irrigation														
Trailhead & Park Land											0.71	$7,000	$ 4,970	
Parking/Prep/Excavation													$ 30,372	Sorter 4/28/23
Fencing														
SIGNATURE BLOCK - Filing 1														
R360 Date: GJ Planning Date: GJ Parks Date: Other Date:														
Redlands 360 Filing 2													$ -	
Single Track/Soft Surface Trail														
Concrete Trail/Sidewalk/Gutter														
Trailhead Signage/Receptacles														
Trailhead/Park Amenities														
Planning/Design/Engineering														
Landscape/Irrigation														
Trailhead & Park Land												$ 7,000	$ -	per acre per appraisal
Parking/Prep/Excavation														
Fencing														
SIGNATURE BLOCK - Filing 2														
R360 Date: GJ Planning Date: GJ Parks Date: Other Date:														
Redlands 360 ODP/Overall Project													$ 14,360	
Single Track/Soft Surface Trail														
Concrete Trail/Sidewalk/Gutter														
Trailhead Signage/Receptacles														
Trailhead/Park Amenities														
Planning/Design/Engineering													$ 14,360	Consilium 1/9. 5/24/2023:
Landscape/Irrigation														
Trailhead & Park Land												$ 7,000	$ -	at $7000 per acre per appraisal
Parking/Prep/Excavation														
Fencing														
PARK 7														
SIGNATURE BLOCK - ODP														
R360 Date: GJ Planning Date: GJ Parks Date: Other Date:														
R 360 2023 Cumulative Total	36.6	0	9.2	0	0	3.14	51		$ 67,983	22.76	0.71		$ 119,524	
R 360 2022 Cumulative Total	23.16	13.7	0			2.13			$ 16,346	6.33	0		$ 176,256	carryover from 2022
Cumulative Units/Fees/Credits	59.76	13.7	9.2			5.27	51		$ 84,329	29.09	0.71		$ 295,780	

Notes

1 The noted Plat acreages do NOT include any parcels / acreage for future development

REDLANDS 360°

Grand Junction City Council Hearing

February 2, 2022



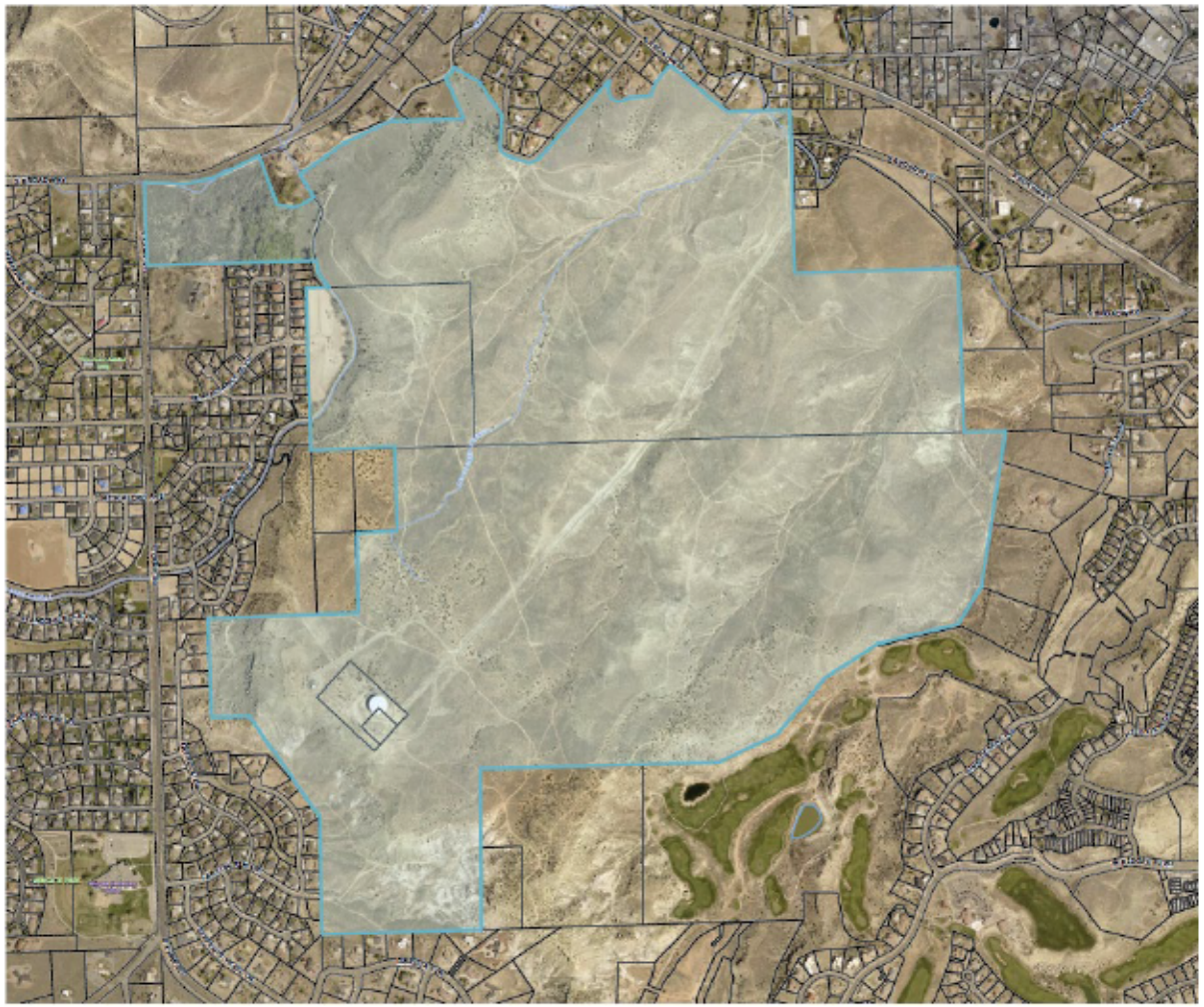
Redlands 360 Outline Development Plan (ODP) & Planned Development Zone (PD) Application

- Respectfully requesting the approval of the proposed Redlands 360 ODP application and the proposed Redlands 360 PD application for the approximately 600 acre parcel located in the Redlands neighborhood of the City of Grand Junction



Redlands 360

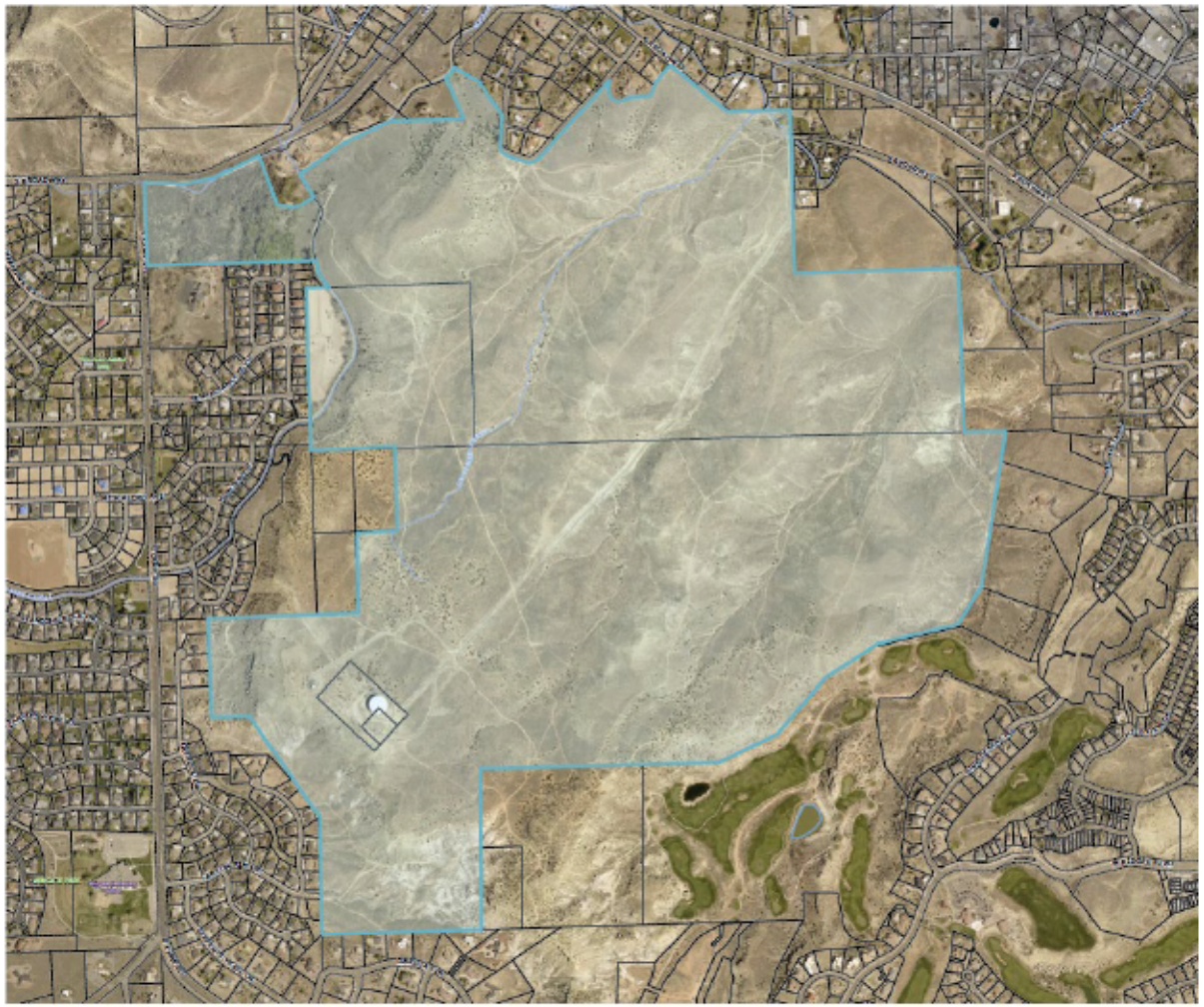
Project Overview



- The property, consisting of 628.9 acres (including Renaissance 360 & Canyon Rim 360), will be developed with a spectrum of residential products and a variety of active and passive recreational opportunities.
- A range of 1,300 to 1,750 residential units are planned for the community creating an approximate gross density range of 2.16 to 2.92 dwelling units per acre.
- Six acres of commercial/mixed use property are also planned for the community.
- A minimum of 35 acres of traditional parks and 150 acres of unique parks and open space totaling 30% of the total acreage will be built and open to the public. The City code requires 10% of the land be dedicated as park/open space.

Redlands 360

Project Overview

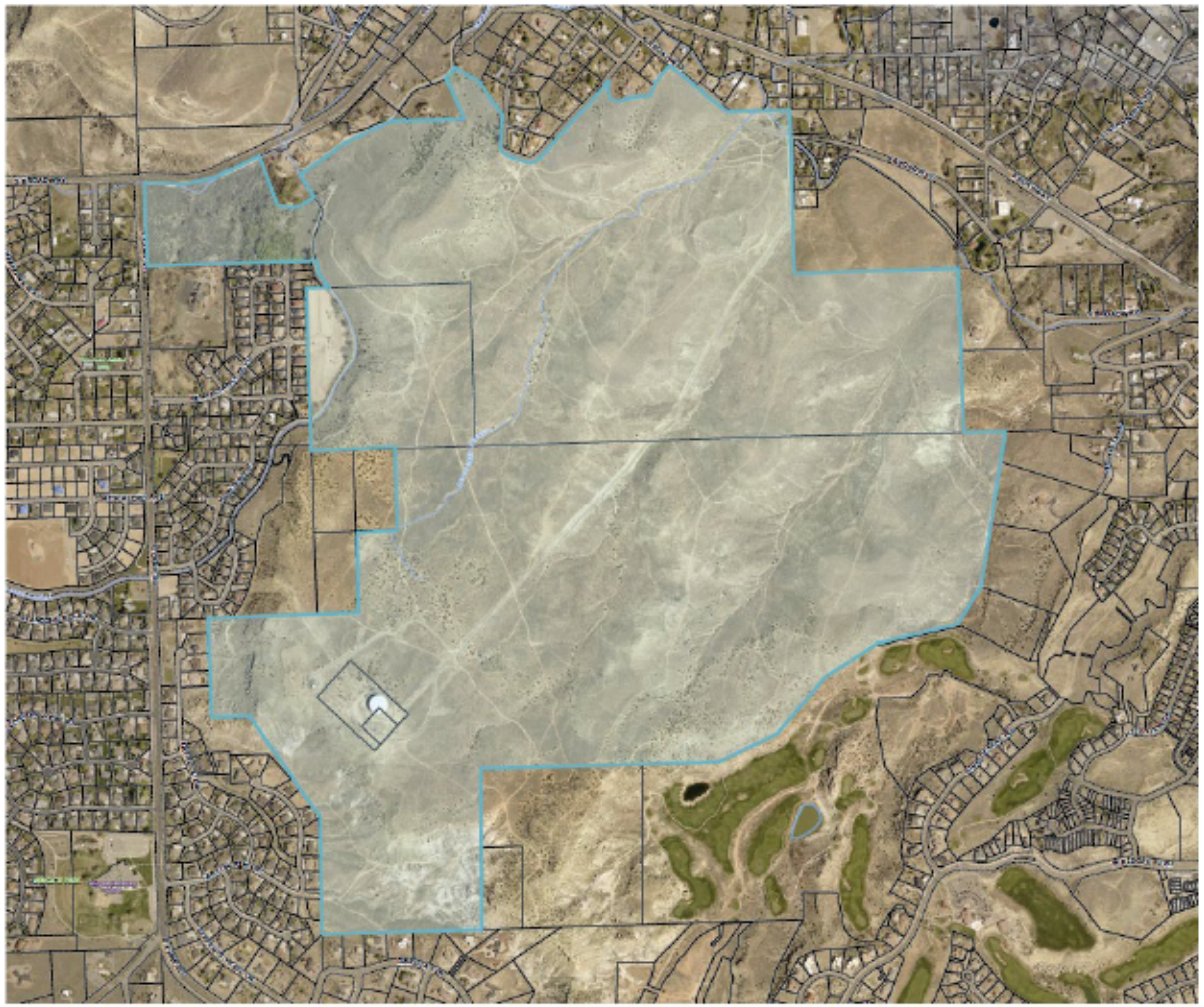


The Outline Development Plan (ODP) and Planned Development (PD) is the culmination of the approval of the following processes to date:

- The City Council approval of the Metro District for the proposed 600-acre ODP including Canyon Rim 360 (6/17/2020)
- Annexation of 237.57 acres to bring the entirety of the 600-acre project area into the City limits (7/15/2020)
- The City Planning conditional approval of the 23-acre Canyon Rim 360 Major Subdivision application (7/26/2021) Plat was recorded on 10/7/21.
- The City Planning 5-0 vote approving the Redlands 360 ODP and PD (1/11/22)

Redlands 360

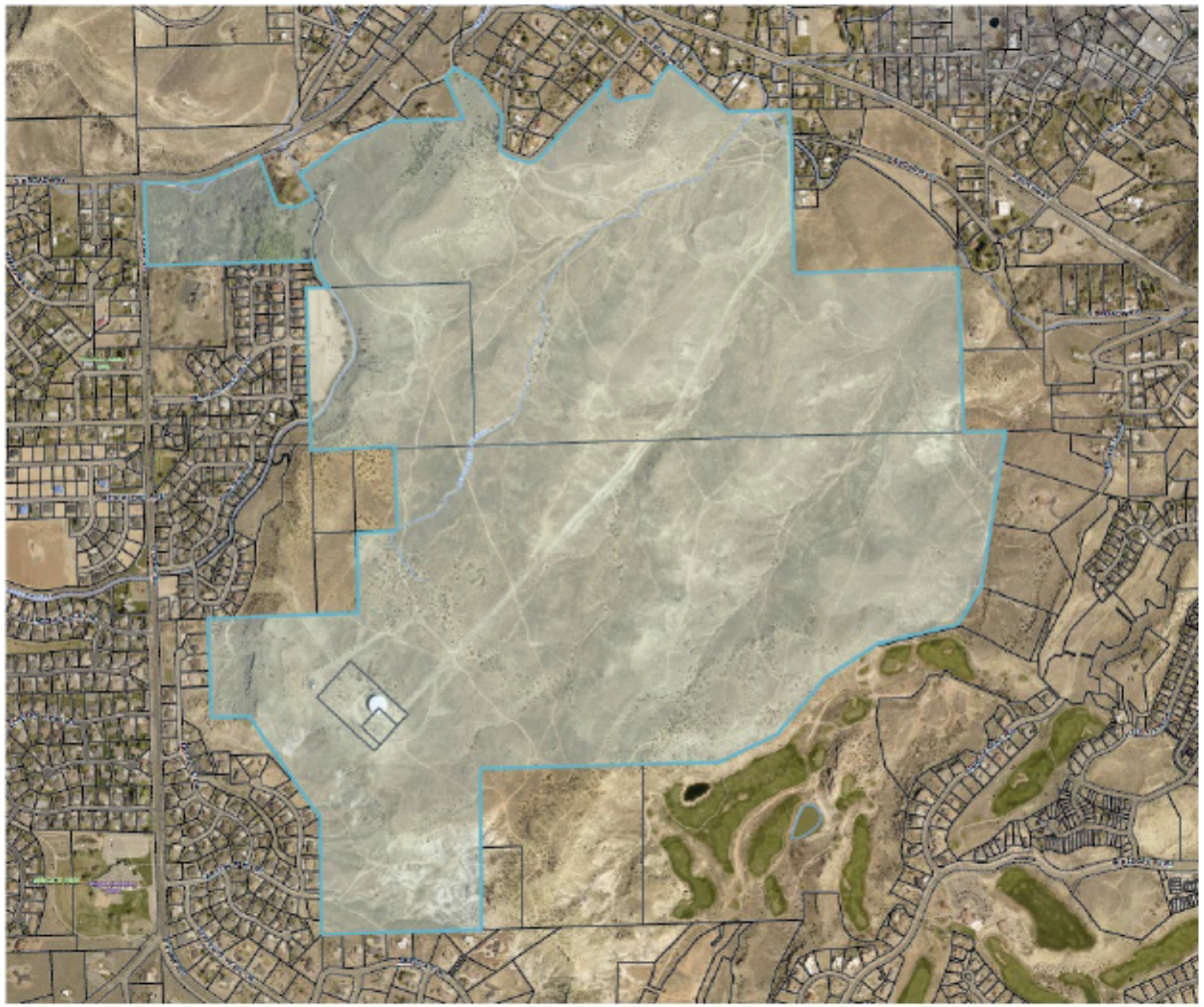
Project Overview



- Three neighborhood meetings were held over two days on July 13th and 14th, 2020. Approximately 60 neighbors attended in person with over 300 people viewing the presentation online.
- Multiple meetings between La Plata Communities and various City and County Departments as well as volunteer/non-profit organizations have been held over the last three years:
  - City of Grand Junction Planning and Engineering
  - Grand Junction Parks and Recreation Advisory Board
  - Mesa County Regional Transportation Office
  - Urban Trails Committee – City of Grand Junction
  - Ute Water Conservancy District
  - Redlands Trail Advisory Committee consisting of representatives from COPMOBA, BLM, Mesa County, City of Grand Junction and Colorado West Land Trust
  - Mesa County Trails Coordinator

Redlands 360

Project Overview



- Traffic Study by Kimley – Horn and Associates
  - Based on the analysis, Kimley-Horn believes the proposed development will be successfully incorporated into the existing and future roadway network with the incorporation of short-term and long-term improvement recommendations.
- Soils Analysis by Huddleston Berry Geotechnical Engineers
  - HBET does not believe any geologic conditions present should preclude development of the site. However, foundations, pavements, and earthwork will have to consider the impacts of the shallow bedrock and presence of moisture sensitive soils and/or bedrock.
- Phase 1 Environmental Site Assessment by Avant Environmental Services
  - The assessment has revealed no evidence of recognized environmental conditions in connection with the site.

REDLANDS 360°

The Community Vision



Redlands 360

Design Drivers

- Create a master planned community that focuses on promoting a pedestrian-oriented atmosphere, an inclusive culture and an outdoor lifestyle unmatched by any community within Grand Junction
- Commit to putting the pedestrian first where uninterrupted open space and a variety of trail types offer a safe, alternative means of transportation for the residents throughout the entirety of the community
- Celebrate the amazing 360-degree vistas, unique landforms (“Four Brothers”) and social trail network found on the site through a conscious effort of preservation
- Offer a variety of amenities specifically geared toward getting residents and families to be outdoors and active within the community
- Provide a mix of housing product and architectural styles that establish a unique community character at a variety of price points
- Provide enhanced community landscaping that is water conserving, xeric in nature and appropriately fits the existing geography of the Colorado Plateau

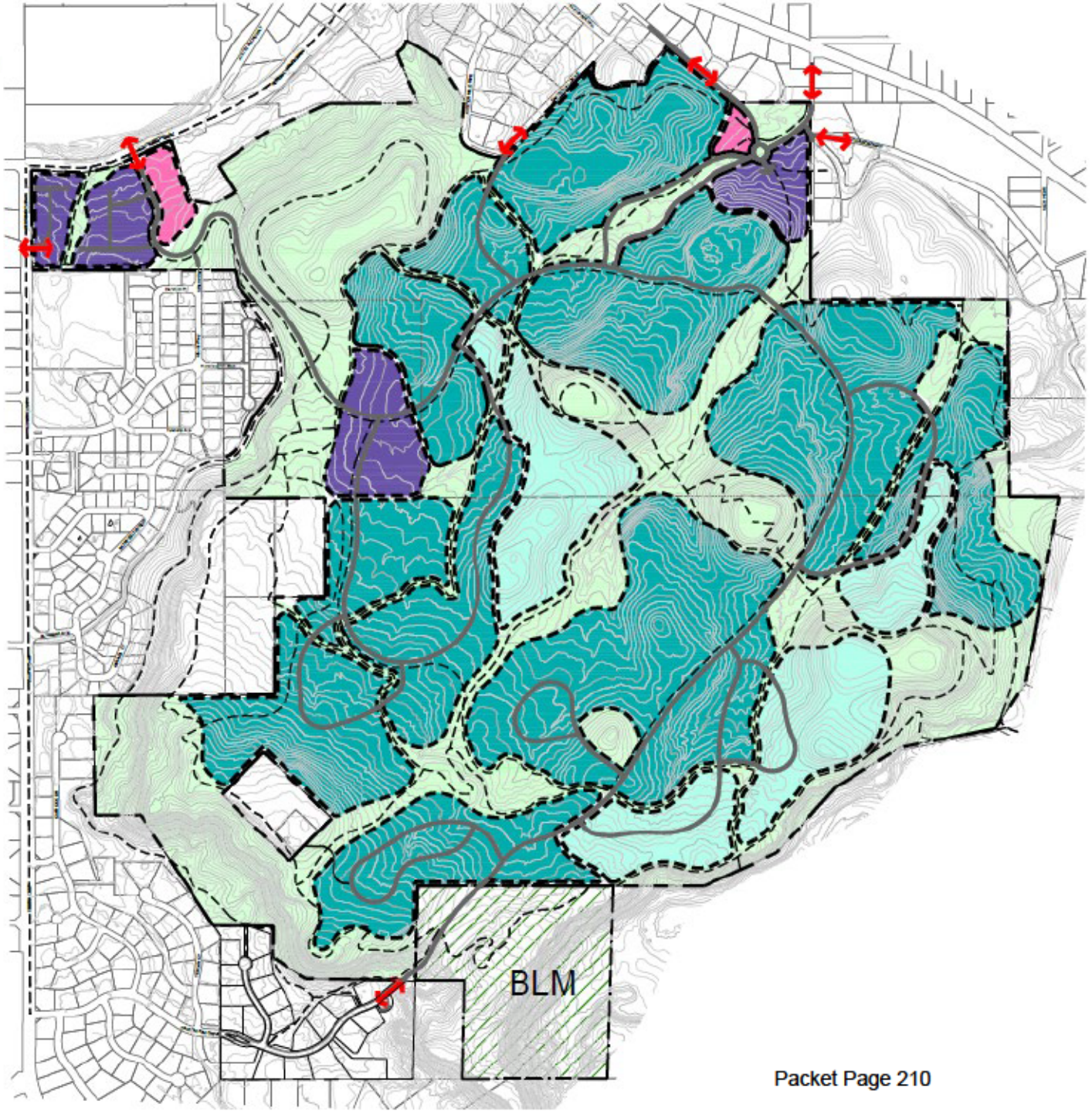
Redlands 360
Concept Diagram



- Preserve natural features such as the “Four Brothers”, existing vegetation and drainage ways that maintain the character of the land
- Design for large open space swaths with minimal interruptions from intersecting roads creating a safe and inviting experience for all users
- Create six defined neighborhoods, each with a set of unique attributes, interconnected through trails and open space
- Provide a simple but effective road system that allows for easy vehicular access throughout the community

Redlands 360

Land Use & Default Zones



LAND USE PLAN LEGEND

- PROJECT BOUNDARY LINE
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- MULTI-FAMILY/HIGH DENSITY
- COMMERCIAL
- OPEN SPACE
- ROAD NETWORK
- TRAILS
- ACCESS POINTS

Redlands 360

Diversity of Product & Price Point













- Variety of housing types/segments to be offered, appealing to a wide range of price segments for buyers

- Attached Multi-Family
  - Townhomes
  - Duplex/Triplex

- Detached Single Family
  - Detached Townhomes
  - Patio Homes
  - Small Lot/Cluster/Alley-Loaded
  - One-story and two-story options
  - Walkout conditions to pick up grade

- Variety of architectural styles that fit in the context of the existing desert landscape

Redlands 360

Community Vision

The Vision for Redlands 360 consists of four key elements, each playing a vital role in making this community a desirable place to live:

- The Land
- The (Modern) History
- The Views
- The Amenities

Redlands 360

The Land

A majority of the land sits on an elevated mesa that generally slopes to the north. The site has four major plateaus, which we have coined the "Four Brothers," a play off the name of the Three Sisters Park. The Four Brothers, along with the existing natural features of the site, including the undulating topography, distinct drainage ways and scattered vegetation, inspire the community planning to not only preserve as much of the character of the land but enhance it every opportunity we get.

- The Overall Character
- The Topography
- The Drainage Patterns
- The "Four Brothers"

Redlands 360

The Land

Overall Character







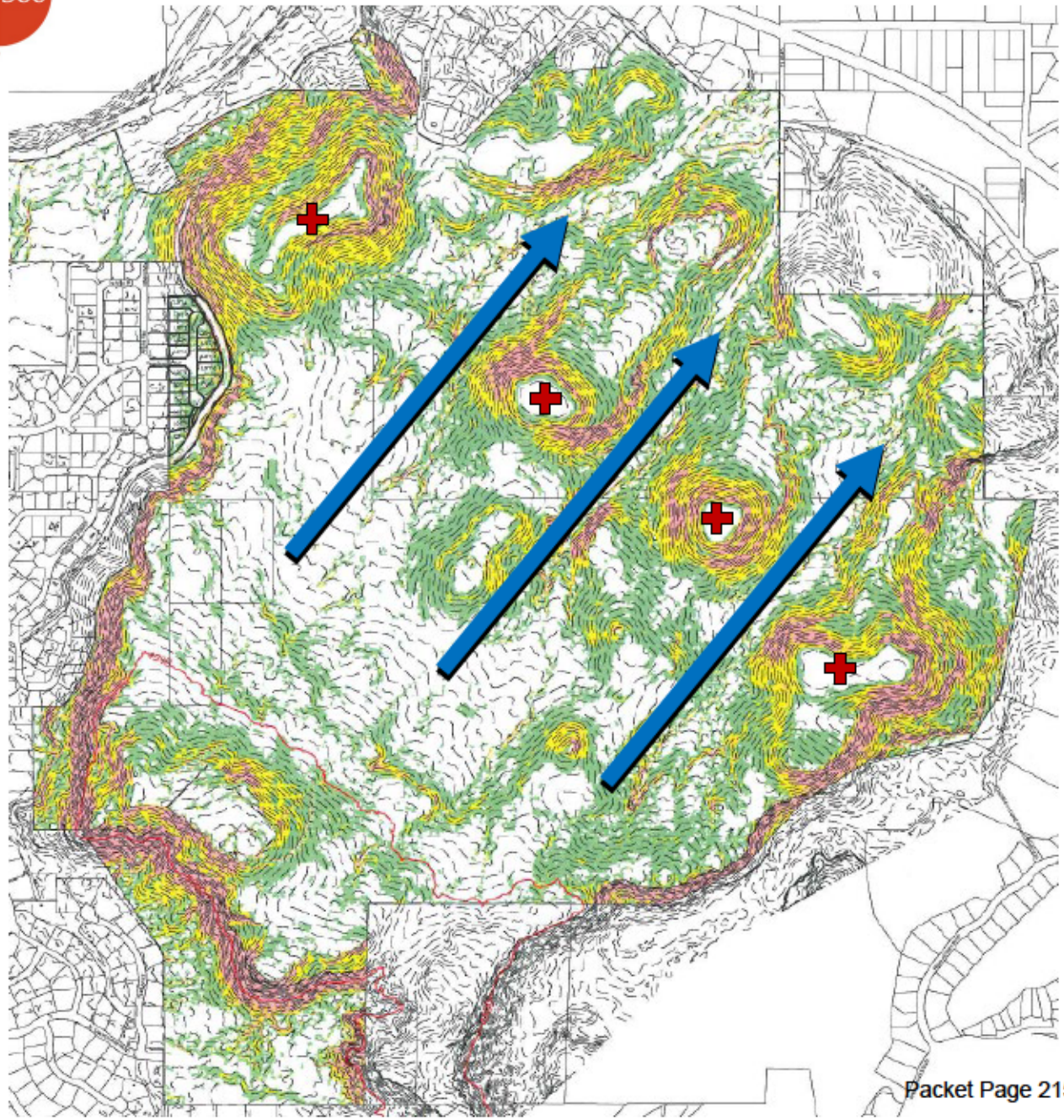




Redlands 360

The Land

Topography and Drainage Patterns



Slopes Table					
Number	Minimum Slope	Maximum Slope	Acres	Color	% of Total Land
1	0.00%	10.00%	**256**		41%
2	10.00%	20.00%	**200**		32%
3	20.00%	30.00%	**100**		16%
4	30.00%	100.00%	**68**		11%

Redlands 360

The Land

"Four Brothers"



Redlands 360

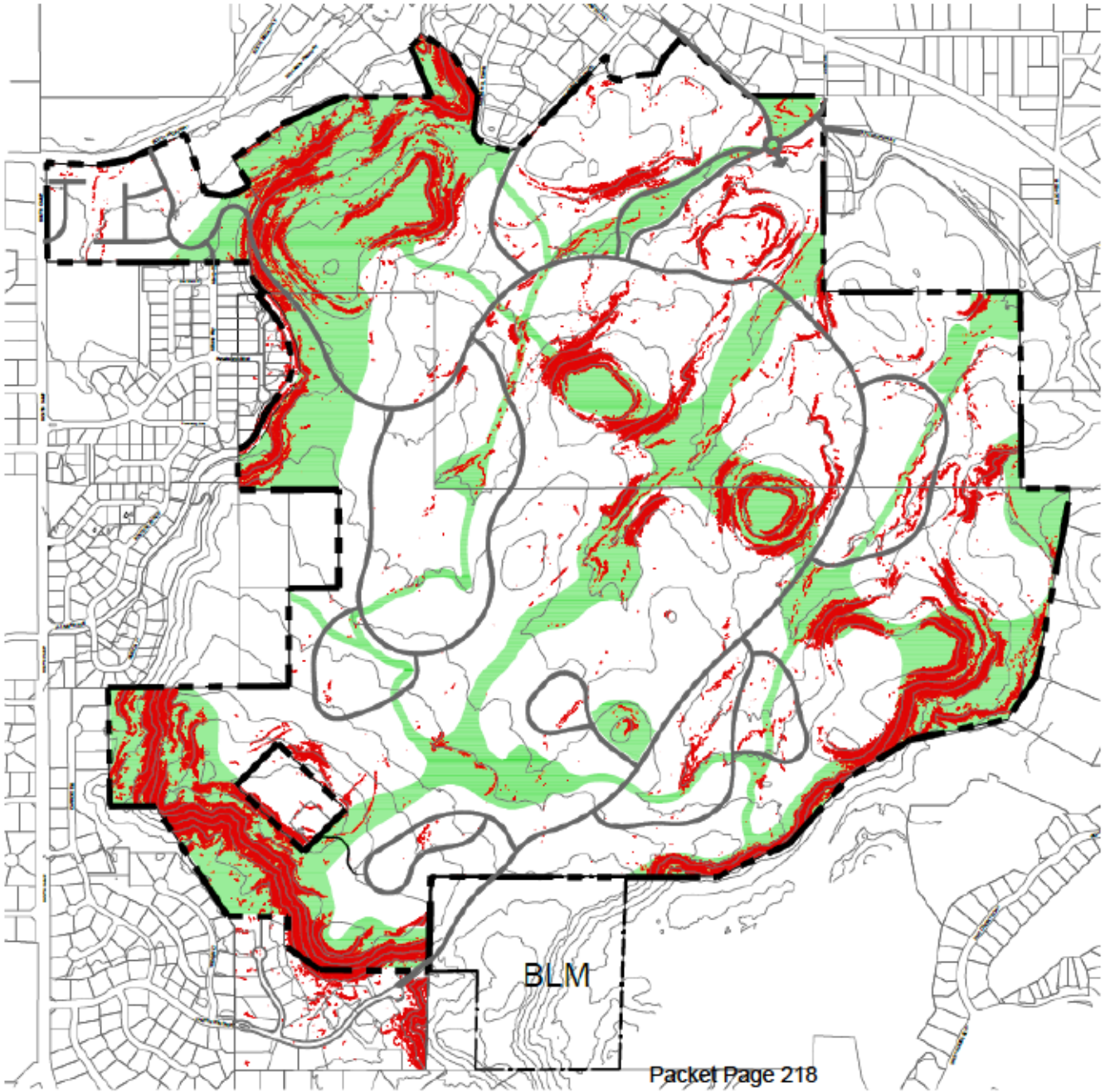
The Land





Redlands 360

The Land



SLOPE MAP LEGEND

- 30% OR GREATER SLOPES
- OPEN SPACE
- 25 FT CONTOURS
- PROPOSED ROADS

Redlands 360

Concept Diagram



Redlands 360

The (Modern) History

To many local residents, this property is known as the "Water Tower" parcel. Many miles of social trails have been created throughout the decades of use by area residents. The stewardship shown by users and trail advocates is evident when hiking or biking the trails that currently exist on the property. With as many daily users there are on the property, the land remains unlittered and well maintained. We recognize the property's value as an open space amenity to local residents and are aiming to preserve several of the more popular trails along with hundreds of acres of open space.

- Land Stewardship
- Hiking / Biking Trails
- Art & Fun

Redlands 360

The (Modern) History













Redlands 360

The Views

The views from the property are genuinely amazing. One can have a view of the Book Cliffs, Grand Mesa and Colorado National Monument from multiple locations on site. The majority of the property's upper mesa also provides enough elevation to over look the City of Grand Junction to see the city lights at night. These 360 degree views are an important aspect that will drive much of the planning and community design.

- Colorado National Monument
- Bookcliffs (or Book Cliffs)
- Grand Mesa
- Uncompahgre Plateau

Redlands 360

The Views









Redlands 360

The Amenities

The community will offer a variety of outdoor-focused amenities, both active and passive in nature. A multitude of public parks, open spaces, multi-use trail systems, enhanced landscaping, unique fencing and signage, and possibly community art are all elements of the amenity package envisioned for Redlands 360.

- Community Landscaping
- Parks & Open Space
- Trails

Community Landscaping





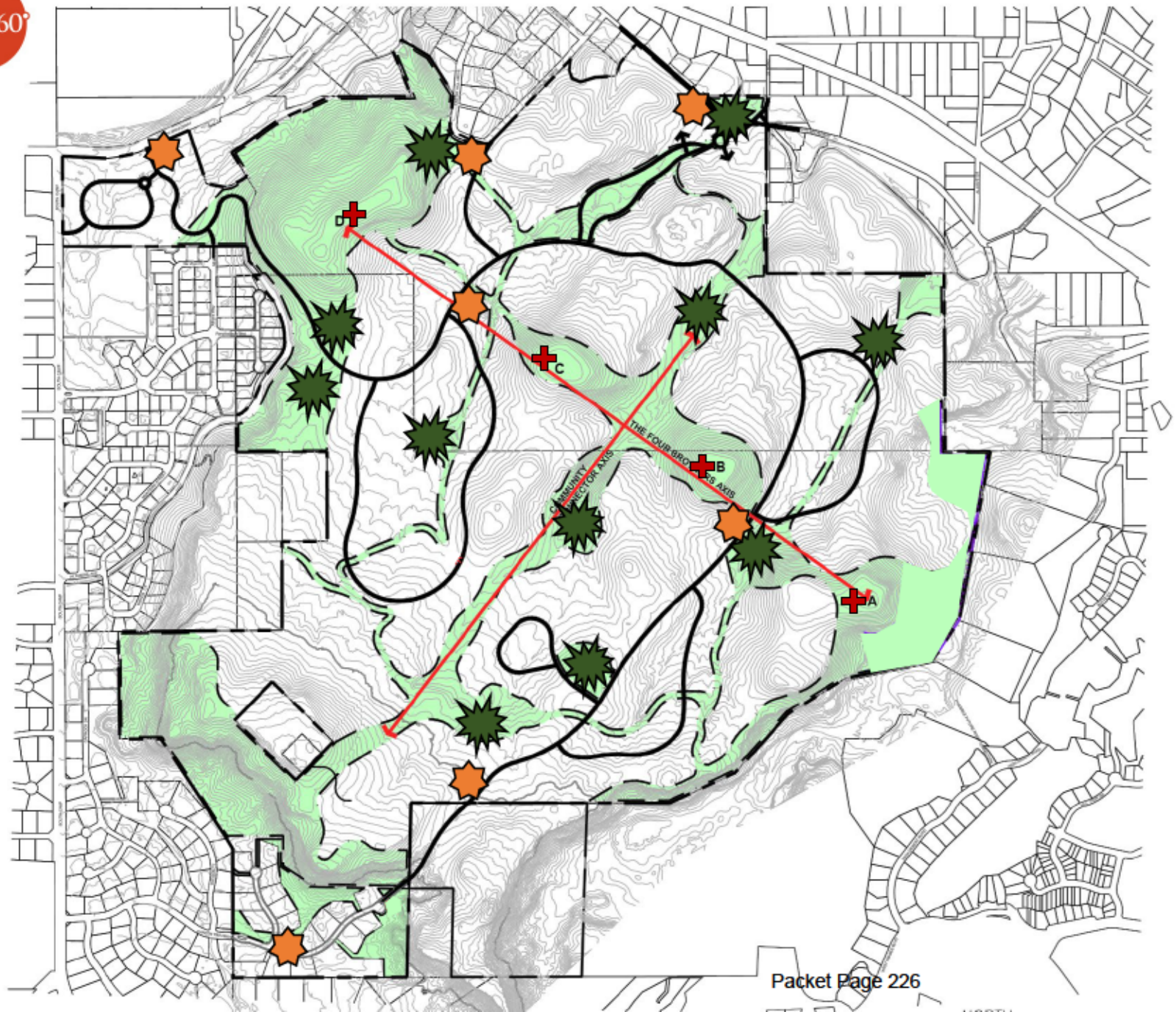






Redlands 360

Parks & Open Space Amenities



Legend:

- Parks (11)
- Open Space
- Trailheads (7)

Parks Amenities









Open Space Amenities



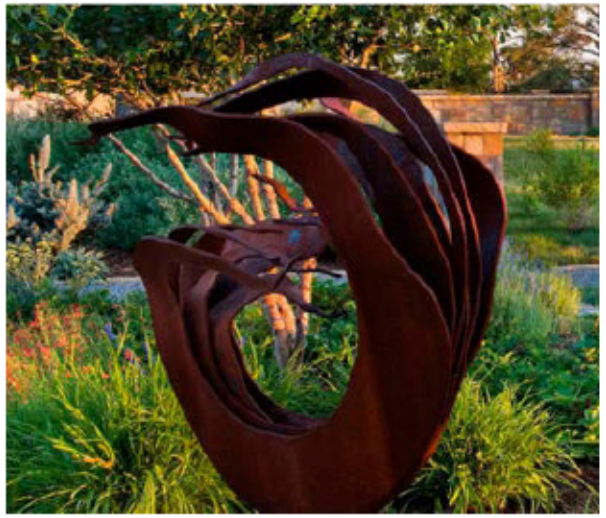


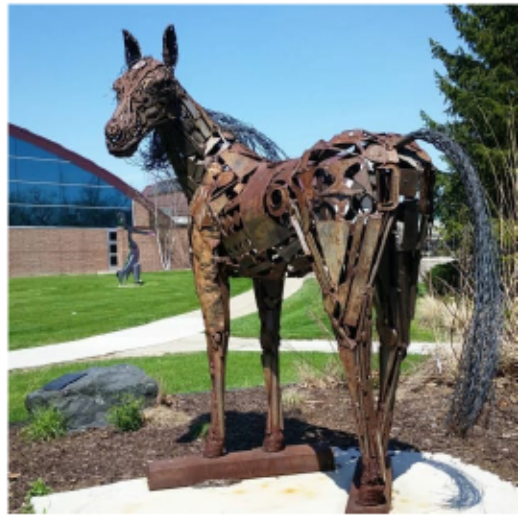




Parks & Open Space Amenities







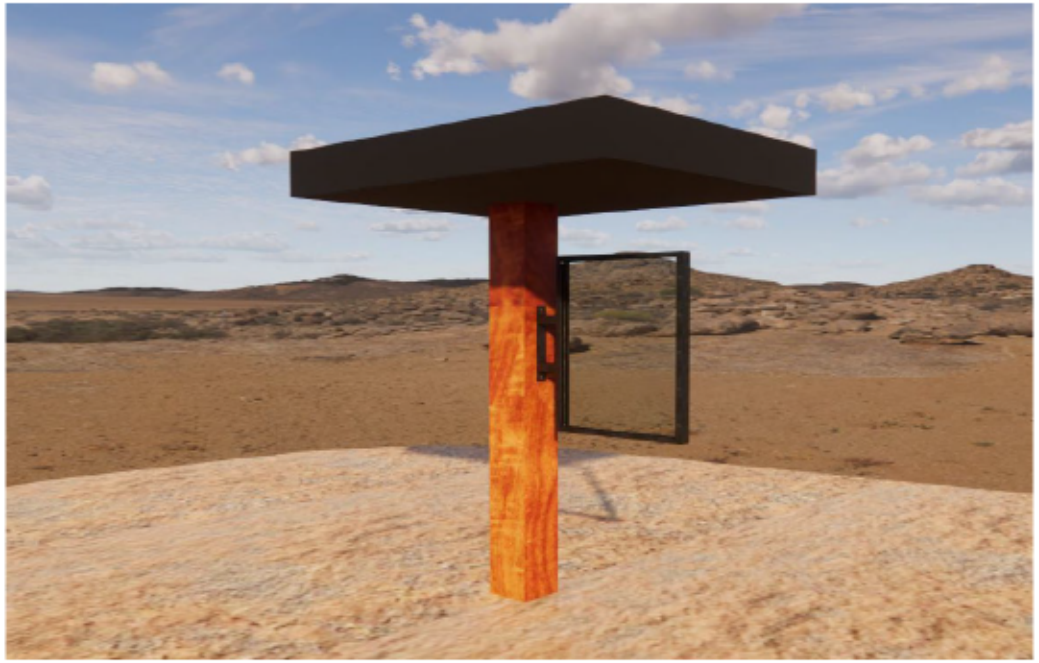




Canyon Rim 360 Amenities



Mail Kiosk



Trail Head Kiosk



Monument Sign

Canyon Rim 360 Amenities



Monument Sign with Redlands 360 Logo

Desert Plant Sculptures

King Cup Cactus





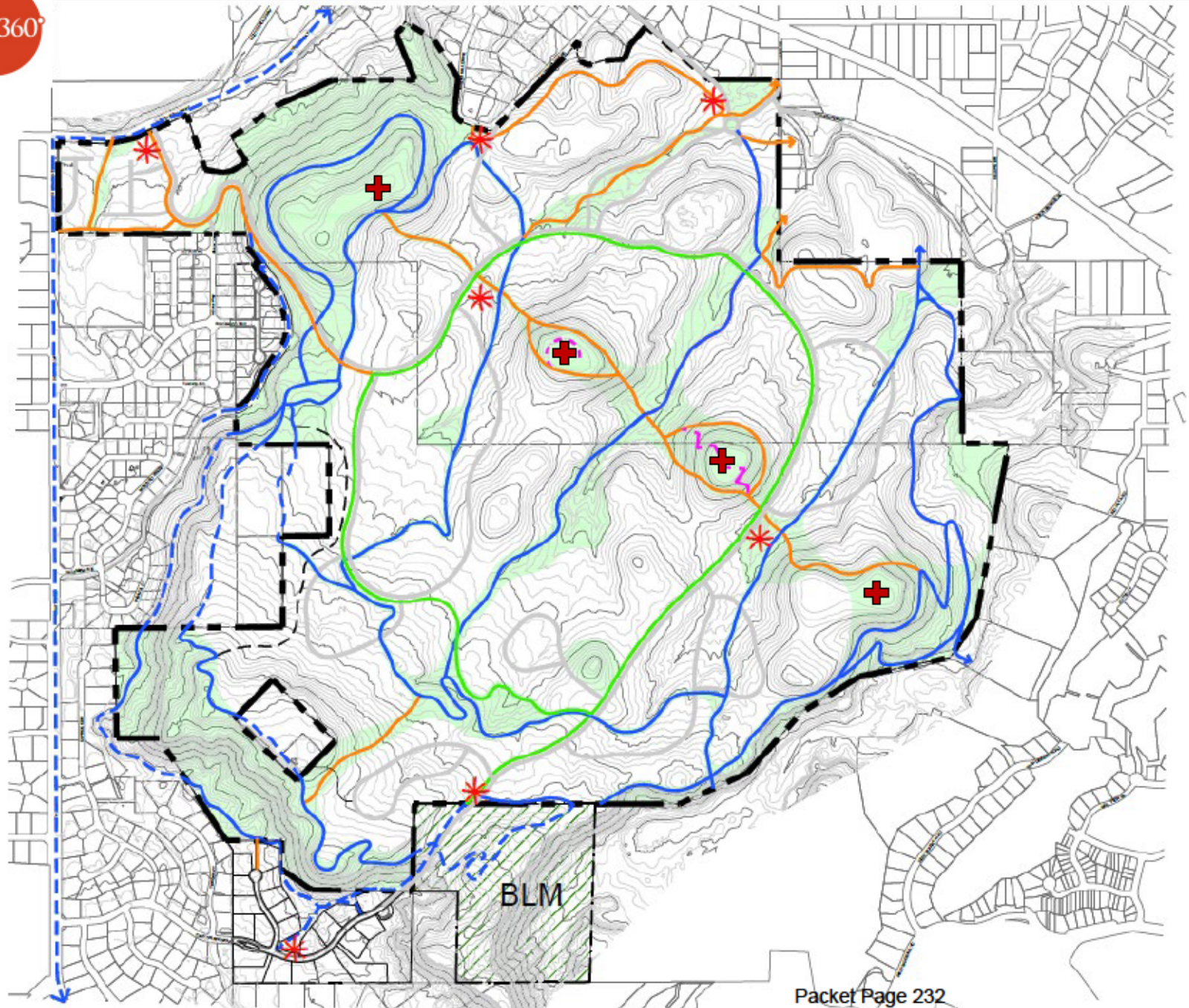
Prickly Pear Cactus



Yucca

Redlands 360

Trail Types



TRAILS LEGEND

- 8 FT DETACHED, PAVED LOOP MOSTLY FOLLOWING ROADS
- HISTORICAL ON-SITE
- HISTORICAL OFF-SITE
- NEW ON-SITE; SOFT SURFACE, 2 FT MIN. WIDTH
- SPECIAL - INCLINE OR OTHERWISE DIFFERENT FROM OTHERS
- BYPASS FOR HISTORICAL TRAIL - SINGLE TRACK (IF NEEDED)
- OPEN SPACE
- EXISTING BLM
- TRAILHEADS

Trails & Streetscapes







Trail Types







REDLANDS 360°

The Proposed Outline Development Plan (ODP) & Planned Development Zone (PD)



Exhibit A:
Existing Site Area

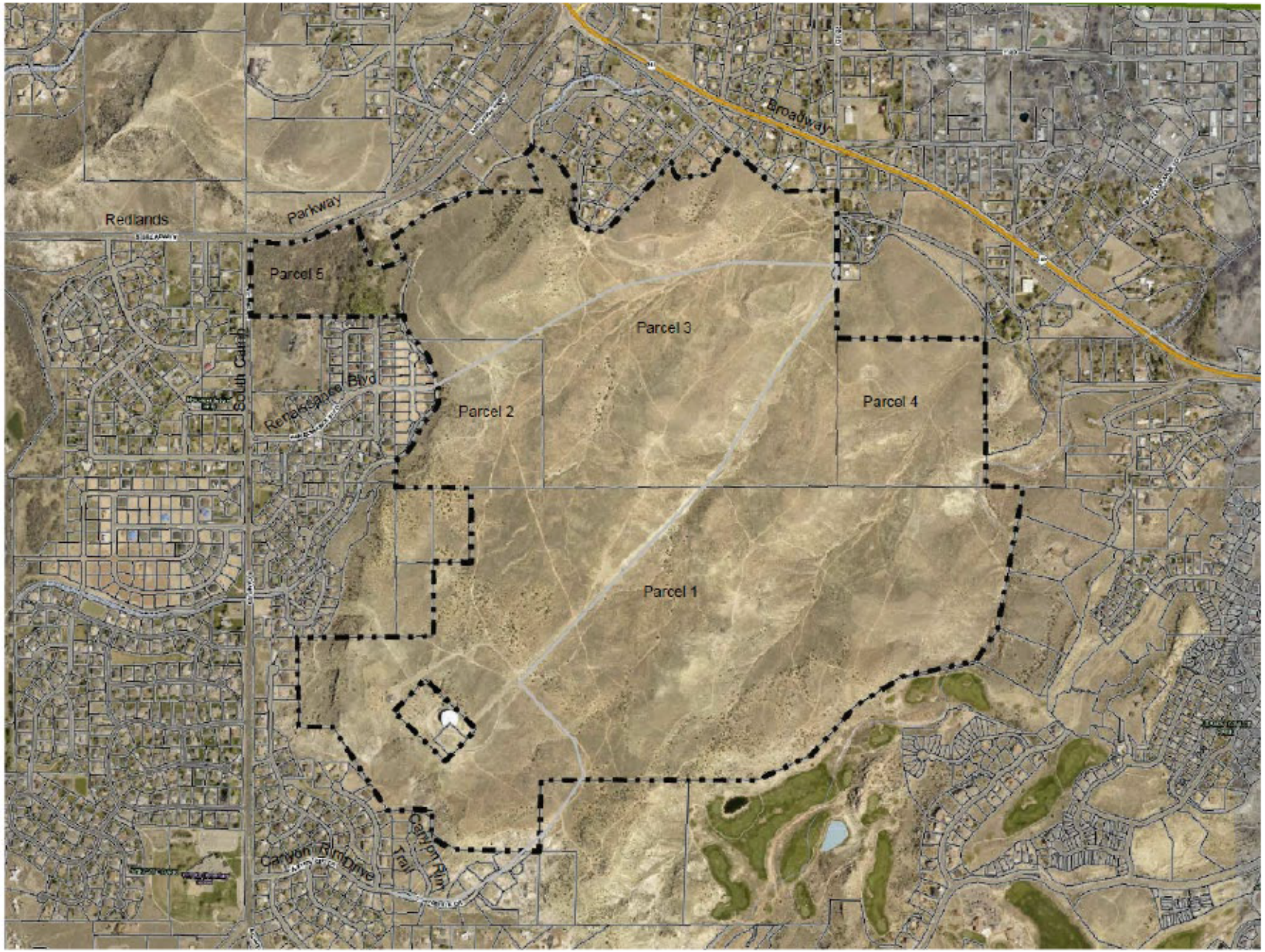
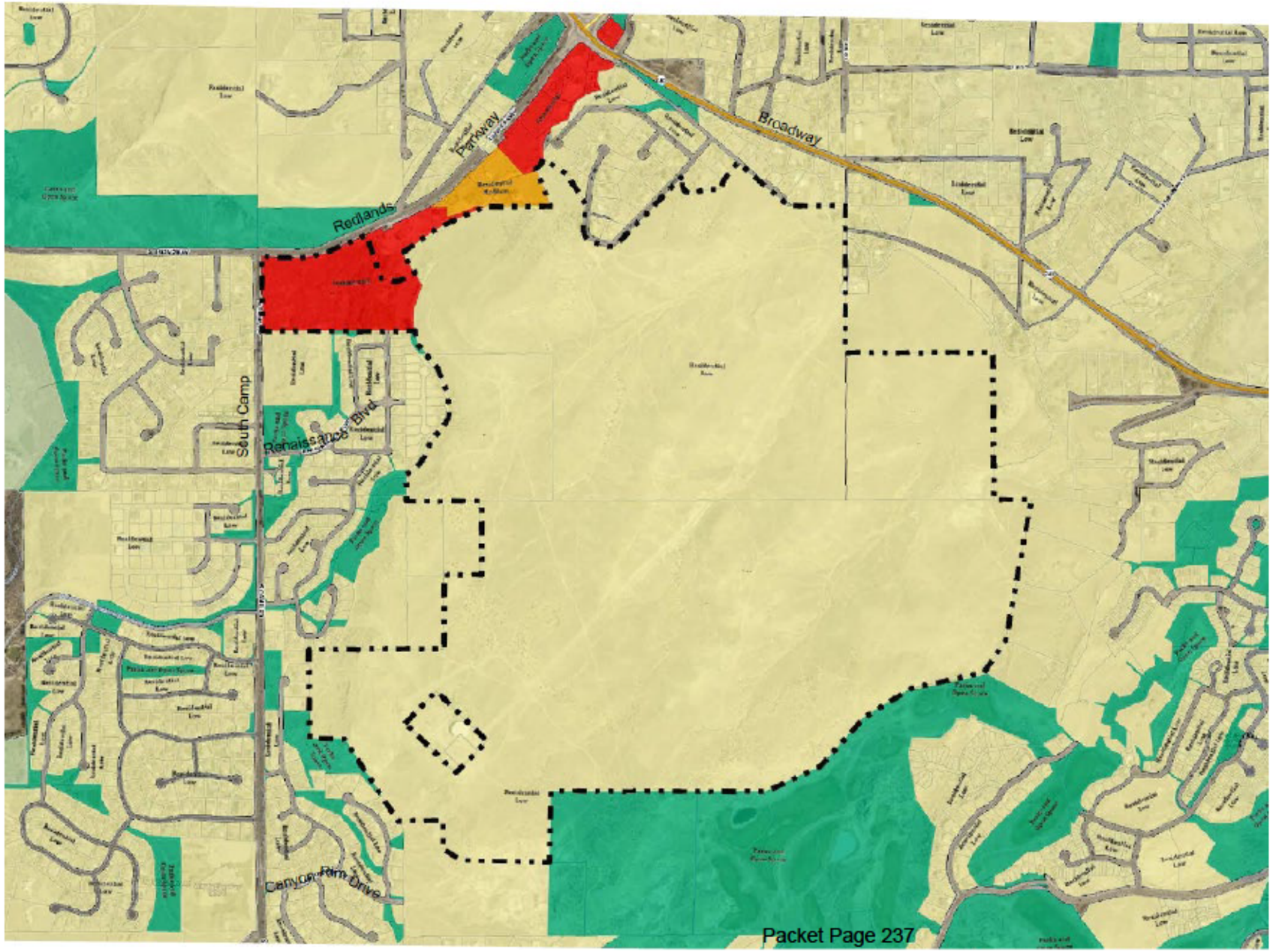


Exhibit B:

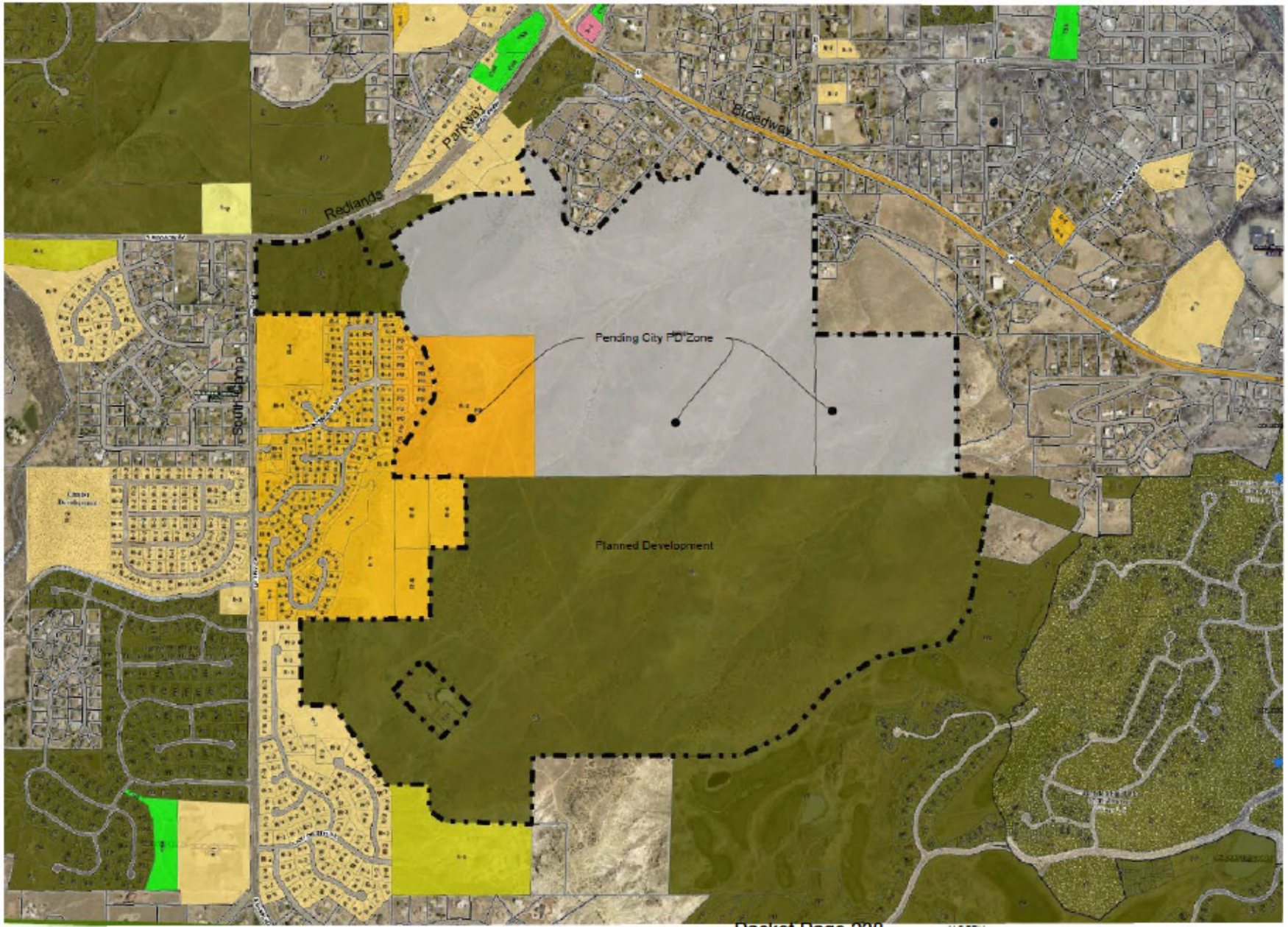
One Grand Junction Comprehensive Plan 2020



LEGEND

- RESIDENTIAL LOW 2-5.5 DU/AC
- RESIDENTIAL MEDIUM 5.5-12 DU/AC
- COMMERCIAL
- PARKS AND OPEN SPACE

Exhibit C:
City of Grand Junction Existing Zoning



LEGEND

- R-R RURAL
- R-1
- R-2
- R-4
- PD
- B-1
- CSR
- NONE (ZONING IN PROCESS)

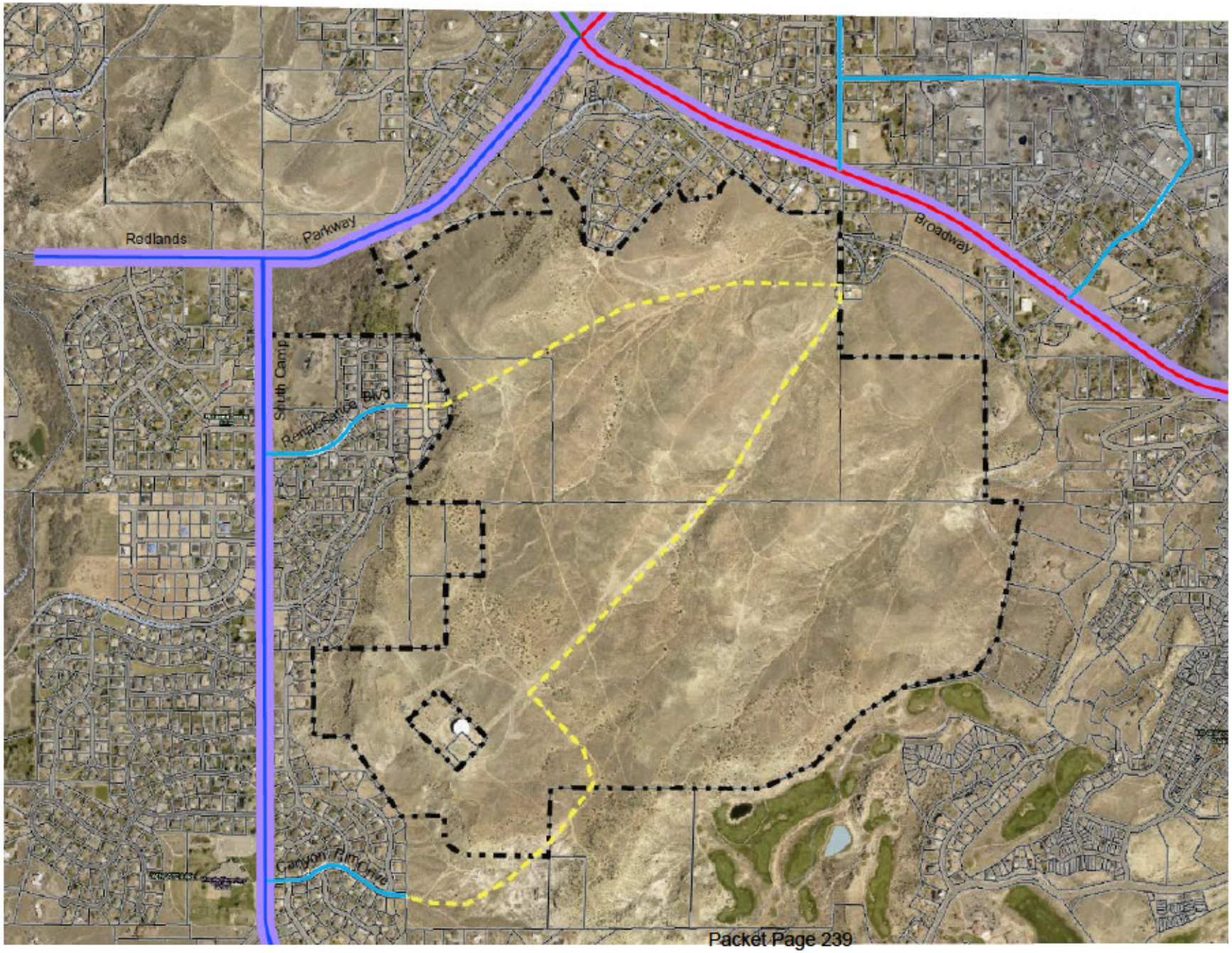


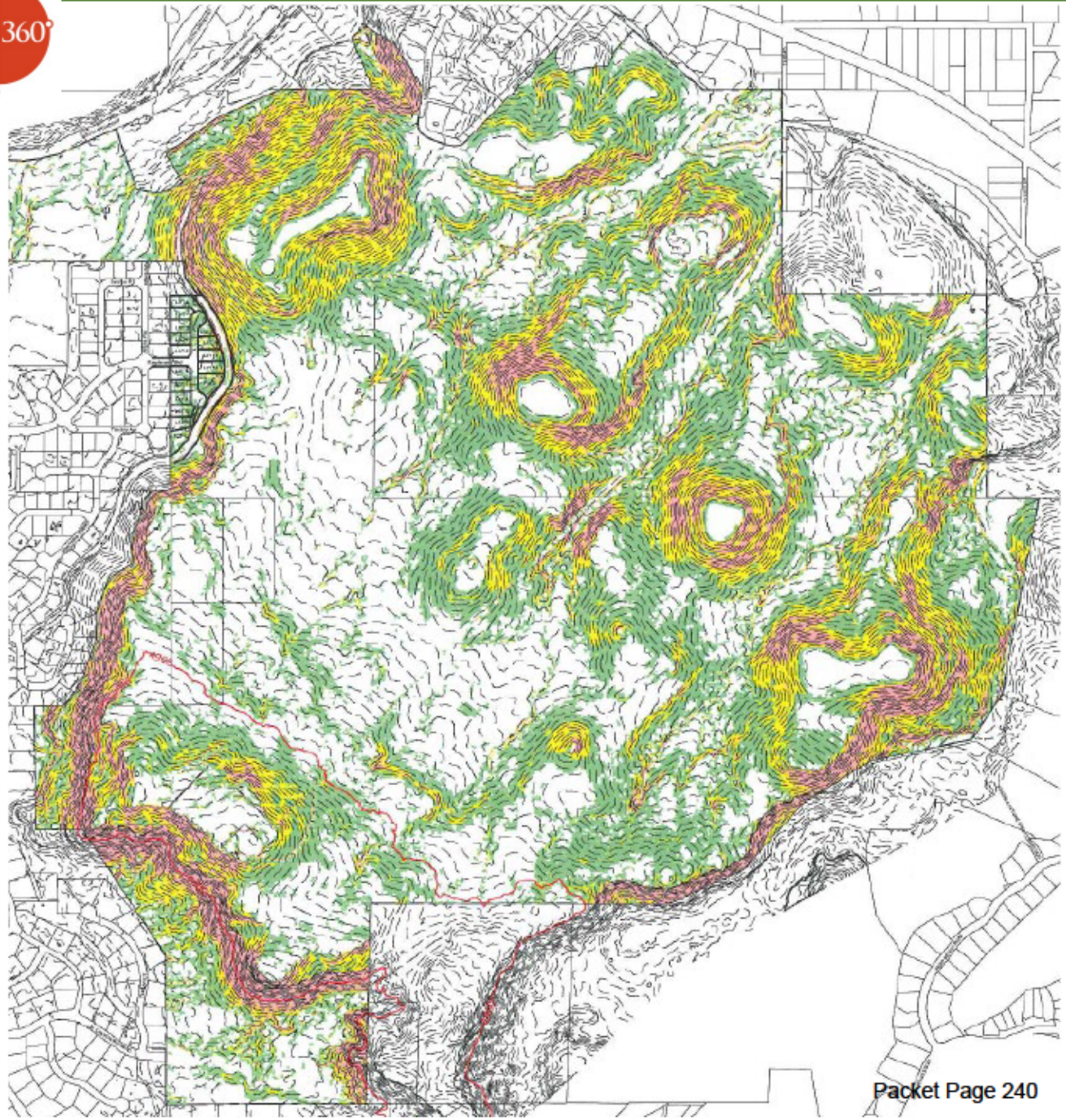
Exhibit D:
City of Grand Junction Circulation Plan

LEGEND

- PRINCIPAL ARTERIAL
- MINOR ARTERIAL
- MAJOR COLLECTOR
- MINOR COLLECTOR
- UNCLASSIFIED
- ACTIVE TRANSPORTATION CORRIDORS

Redlands 360

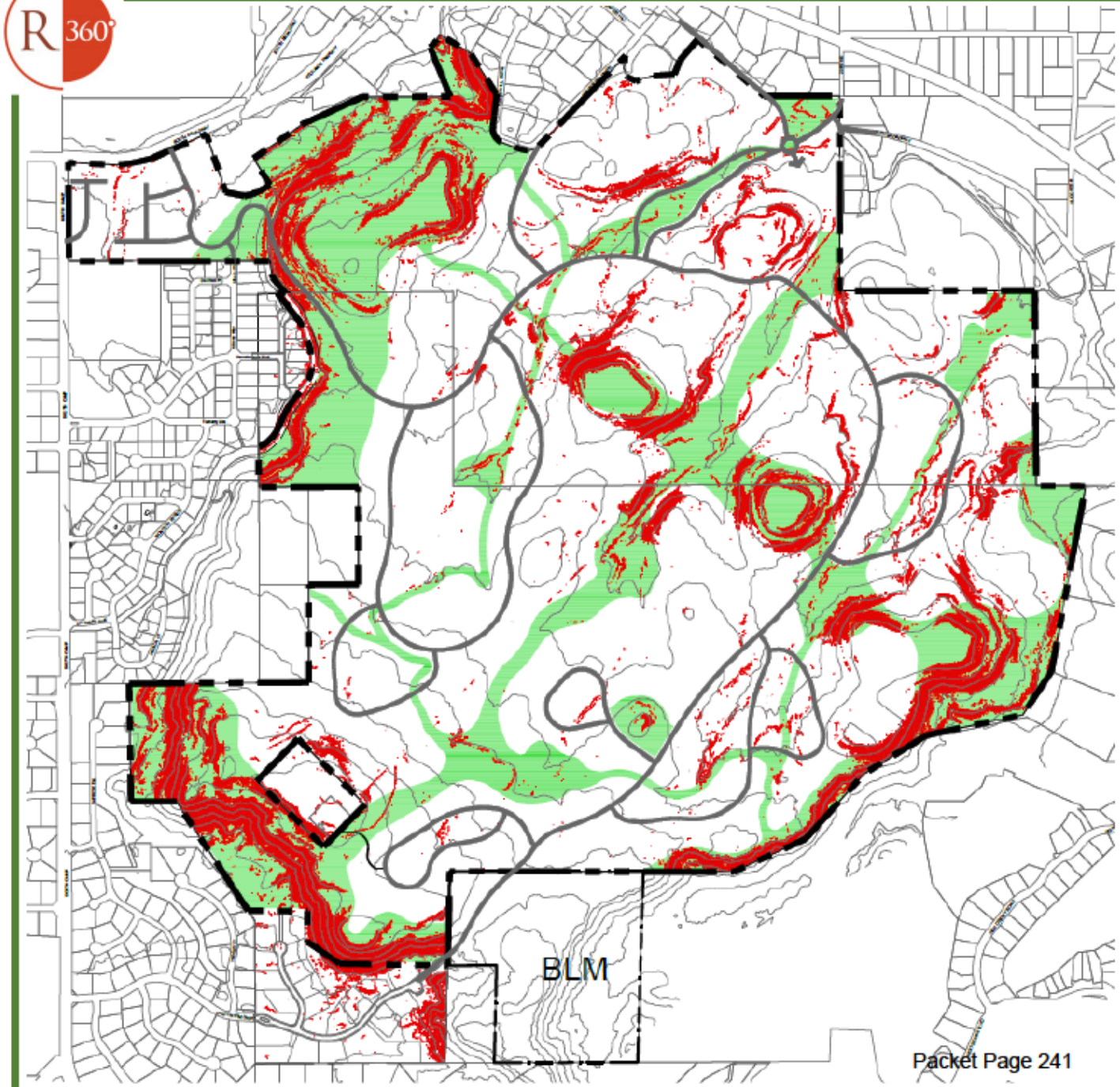
Slope Analysis



Slopes Table					
Number	Minimum Slope	Maximum Slope	Acres	Color	% of Total Land
1	0.00%	10.00%	**256**		41%
2	10.00%	20.00%	**200**		32%
3	20.00%	30.00%	**100**		16%
4	30.00%	100.00%	**68**		11%

Redlands 360

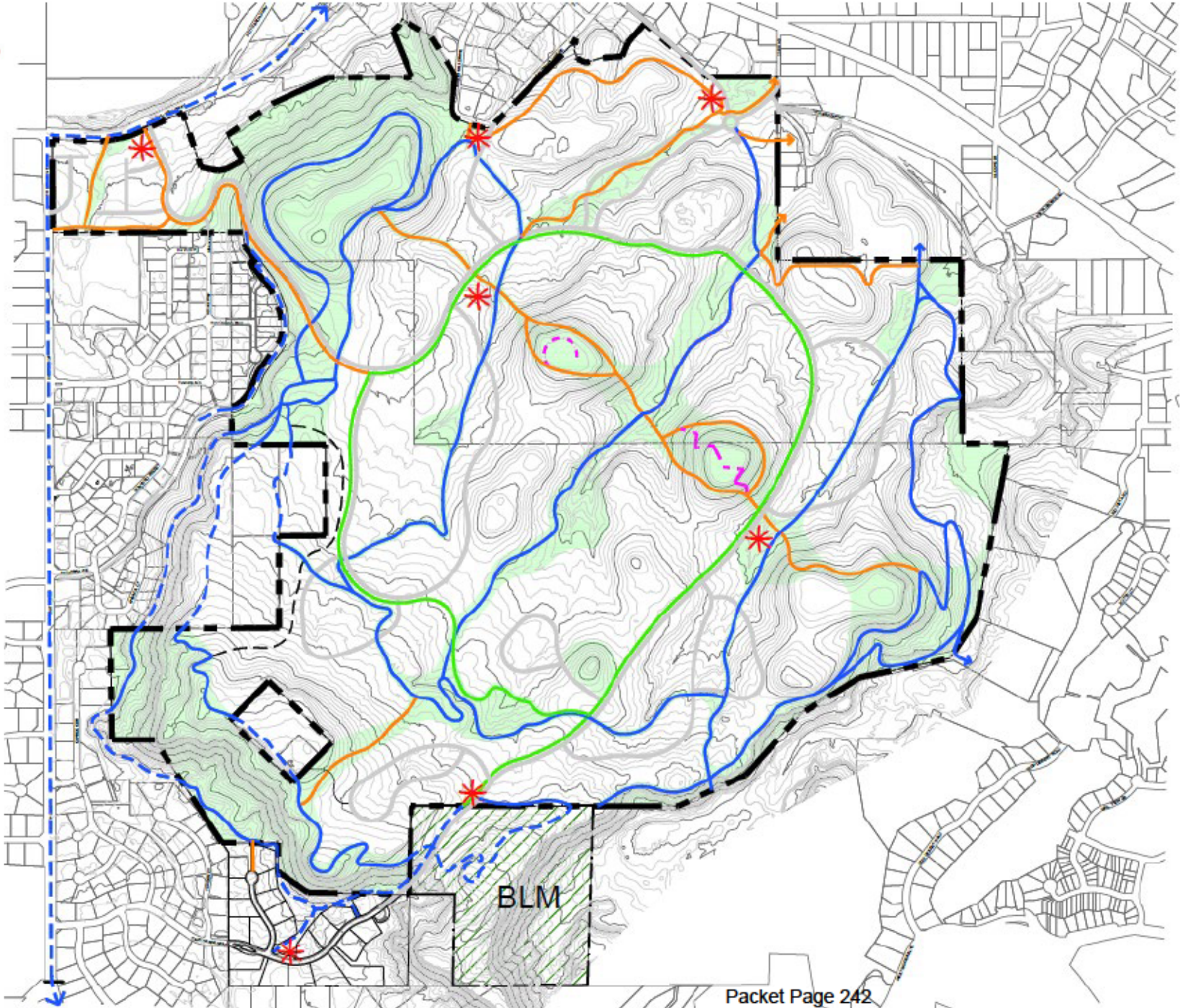
Slope Analysis



SLOPE MAP LEGEND

- 30% OR GREATER SLOPES
- OPEN SPACE
- 25 FT CONTOURS
- PROPOSED ROADS

Exhibit 1:
Trail Types



TRAILS LEGEND

- 8 FT DETACHED, PAVED LOOP MOSTLY FOLLOWING ROADS
- HISTORICAL ON-SITE
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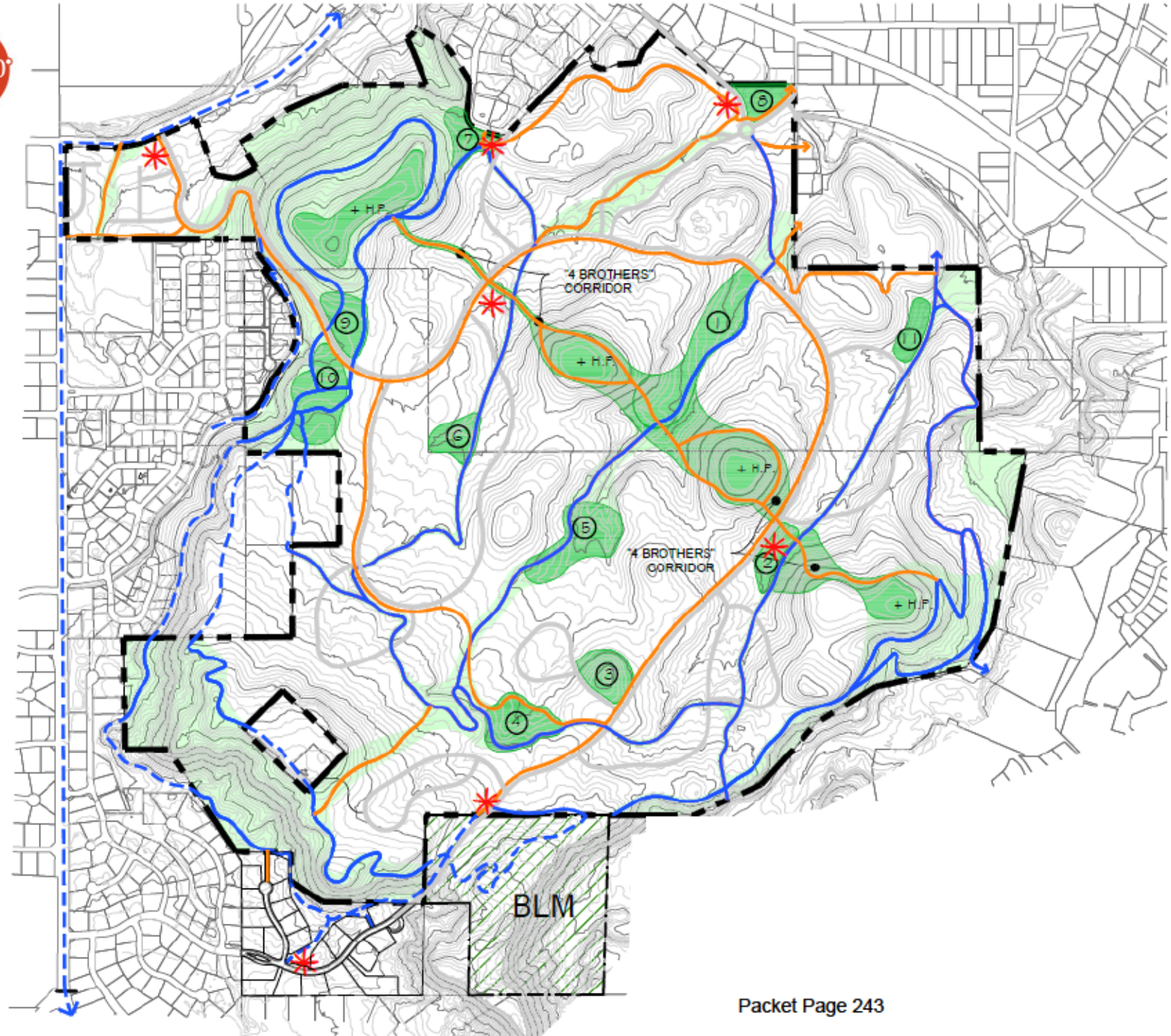
- SPECIAL - INCLINE OR OTHERWISE DIFFERENT FROM OTHERS
- BYPASS FOR HISTORICAL TRAIL - SINGLE TRACK (IF NEEDED)
- OPEN SPACE
- EXISTING BLM
- TRAILHEADS

NOTE: A NUMBER OF THE HISTORIC TRAILS ARE SHOWN AS 'REHABILITATED' ON THE PARK AREA PLAN.

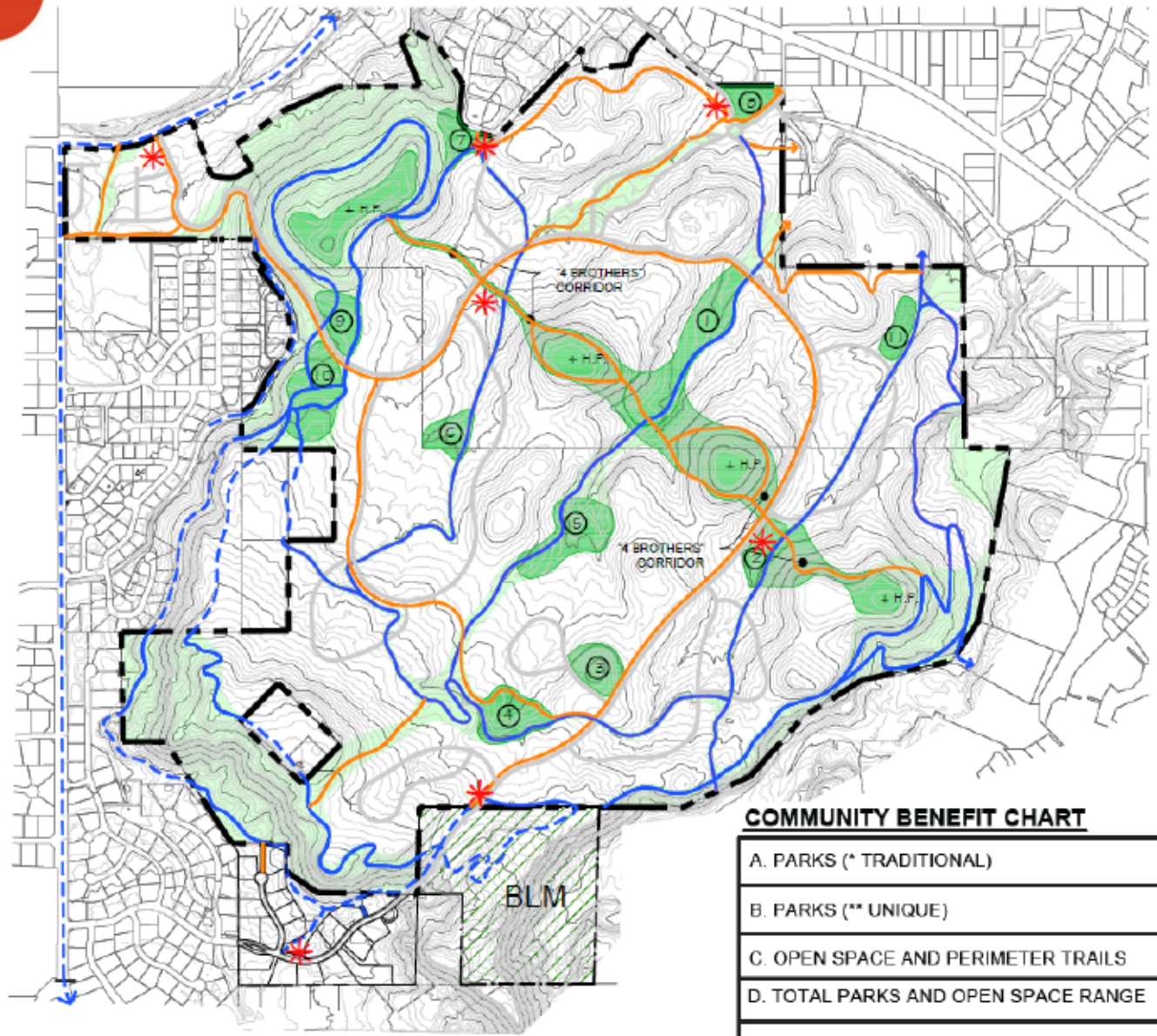
Exhibit 2:
Public Park Areas



LEGEND

- HISTORICAL ON-SITE TRAIL
- HISTORICAL OFF-SITE TRAIL
- NEW AND REHABILITATED TRAILS, WITHIN DEVELOPMENT AREA
- OPEN SPACE
- EXISTING BLM
- TRAILHEADS
- PARK AREA

Exhibit 2:
Public Park Areas



A. PARKS (TRADITIONAL)

1	7.4 ACRES
2	1.6 ACRES
3	2.4 ACRES
4	3.7 ACRES
5	5.0 ACRES
6	2.0 ACRES
7	2.0 ACRES
8	1.6 ACRES
9	2.5 ACRES
10	4.9 ACRES
11	1.9 ACRES
TOTALS	35 ACRES

B. PARKS (UNIQUE)

* THE 4 BROTHERS / 4 HIGH POINTS CORRIDOR	25-30 ACRES
* LINEAR PARKS WITHIN DEVELOPMENT AREA (NOT IN PERIMETER OR PARKS)	25-30 ACRES
TOTAL FOR UNIQUE PARKS	50-60 ACRES
C. REMAINING OPEN SPACE AND PRIMARY EXISTING RIM TRAILS	100-120 ACRES
D. TOTAL OPEN SPACE/PARKS RANGE (THE ODP PLAN SHALL INCLUDE NO LESS THAN 185 ACRES.)	185 - 225 ACRES

NOTE: PARK AREAS ARE SUBJECT TO SOME CHANGE; EXACT LOCATION TO BE DETERMINED CONCURRENT WITH EACH SUBDIVISION AND PROGRESSION PHASE.

COMMUNITY BENEFIT CHART

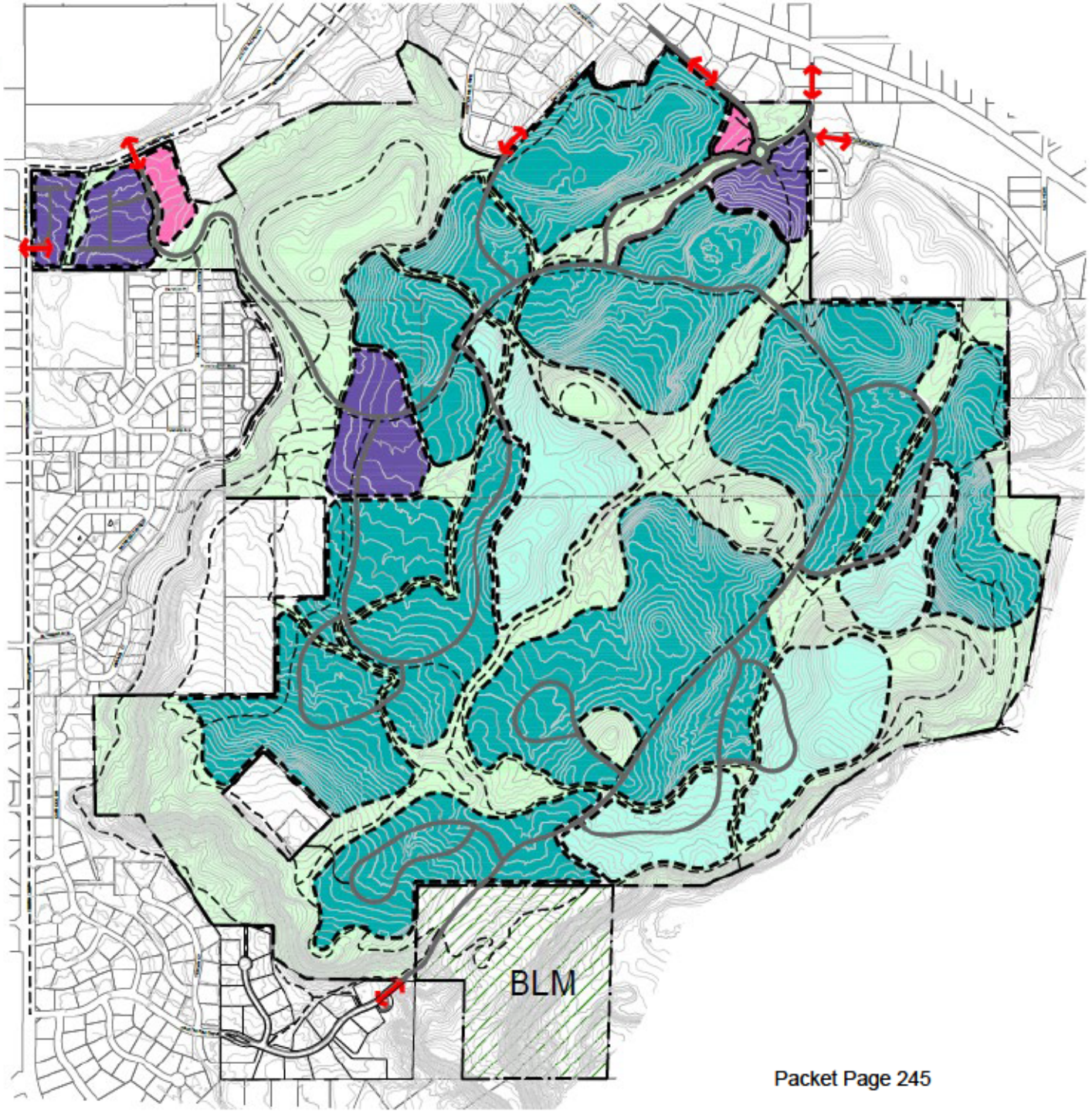
A. PARKS (* TRADITIONAL)	35 ACRES	6%
B. PARKS (** UNIQUE)	50-60 ACRES	8-10%
C. OPEN SPACE AND PERIMETER TRAILS	100-120 ACRES	17-20%
D. TOTAL PARKS AND OPEN SPACE RANGE	±185 - ±225 ACRES	±31 - ±38%
TOTAL PROPERTY	600 ACRES	100%

*FOR EXAMPLE: LAWN, PLAY EQUIPMENT, PICNIC, POTENTIALLY PARKING AND RESTROOMS.
**FOR EXAMPLE: INCLINE/ADVANCED HIKING OR RUNNING, TRAIL CORRIDORS (ALL TYPES), CIRCUIT TRAINING/EVENTS, FRISBEE GOLF.

EXISTING SLOPE BREAKDOWN OF PARKS (TRADITIONAL)

0-10% SLOPE	18 ACRES	51%
10-20% SLOPE	13 ACRES	37%
20-30% SLOPE	3 ACRES	9%
>30% SLOPE	1 ACRES	3%
TOTAL	35 ACRES	100%

Exhibit 3:
Land Use & Default Zones



LAND USE PLAN LEGEND

- PROJECT BOUNDARY LINE
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- MULTI-FAMILY/HIGH DENSITY
- COMMERCIAL
- OPEN SPACE
- ROAD NETWORK
- TRAILS
- ACCESS POINTS

Exhibit 3:
Land Use & Default Zones

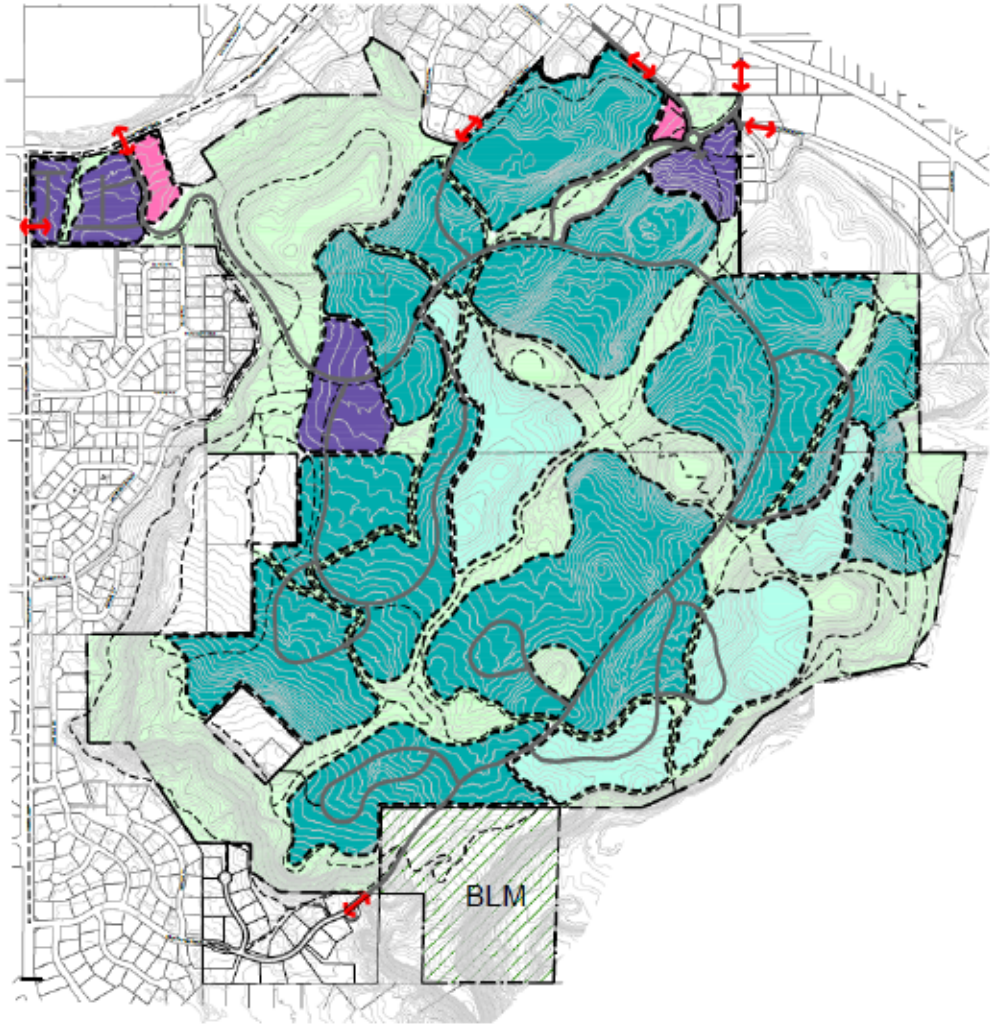


TABLE 1
DEFAULT STANDARDS

Dimensional Summary Table	Low Density Residential	Medium Density Residential	Multi Family & High Density	Commercial	Open Space
City Default Zone Criteria	R-4	R-12	R-16	B-1	CSR
Lot					
Area (min. ft.)	0	0	0	0	0
Width (min. ft.)	60	30	20	0	0
Frontage (min. ft.)	20	20	20	0	0
Frontage on cul-de-sac (min. ft.)	0	0	0	0	0
Setback					
Principal Structure					
Front (min. ft.)	20	20	20	0	15
Side (min. ft.)	5	5	5	5	0
Side - abutt residential (min. ft.)	0	0	0	10	10
Rear (min. ft.)	25	10	10	0	10
Accessory Structure					
Front (min. ft.)	20	25	25	25	15
Side (min. ft.)	3	3	3	0	0
Side - abutt residential (min. ft.)	0	0	0	0	5
Rear (min. ft.)	5	5	5	0	10
Bulk / Other Dimensional					
Lot coverage (max.)	50%	75%	75%	100%	100%
Height (max. ft.)	40	40	50	50	65
Density (min. units per acre)	0	2	5.5	0	0
Density (max. units per acre)	4	12	16	18	0
Cluster allowed	No	No	No		

Exhibit 3:
Land Use & Default Zones

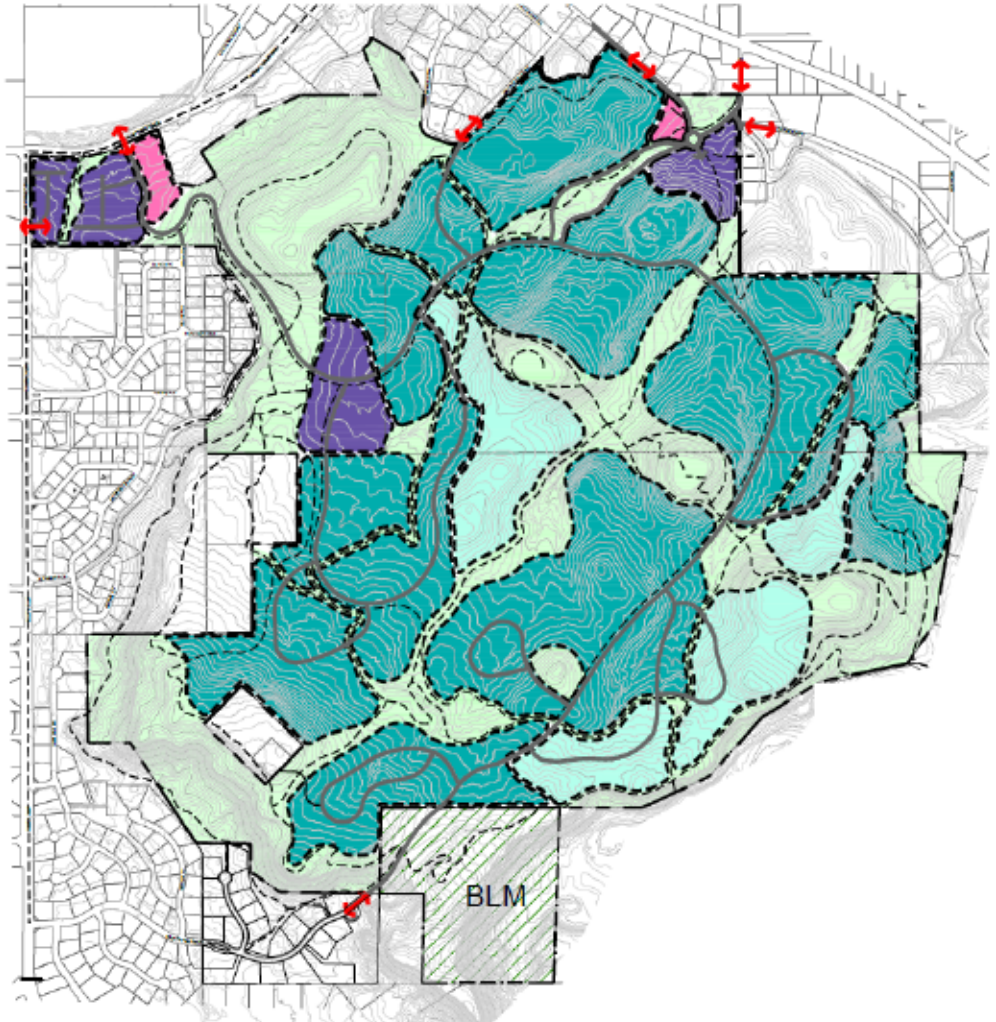


TABLE 2

LAND USE	AREA	MINIMUM DENSITY	MAXIMUM DENSITY
LOW DENSITY RESIDENTIAL	MIN 60 ACRES	60 UNITS	240 UNITS
MEDIUM DENSITY RESIDENTIAL	MIN 298 ACRES	596 UNITS	3576 UNITS
MULTI FAMILY/HIGH DENSITY	MAX 32 ACRES	384 UNITS	512 UNITS
COMMERCIAL / MIXED USE	UP TO 6 ACRES	0 UNITS	100 UNITS
OPEN SPACE/CSR	NO LESS THAN 185 ACRES	-----	-----
PLANNED DEVELOPMENT RANGE		1300 UNITS	1750 UNITS

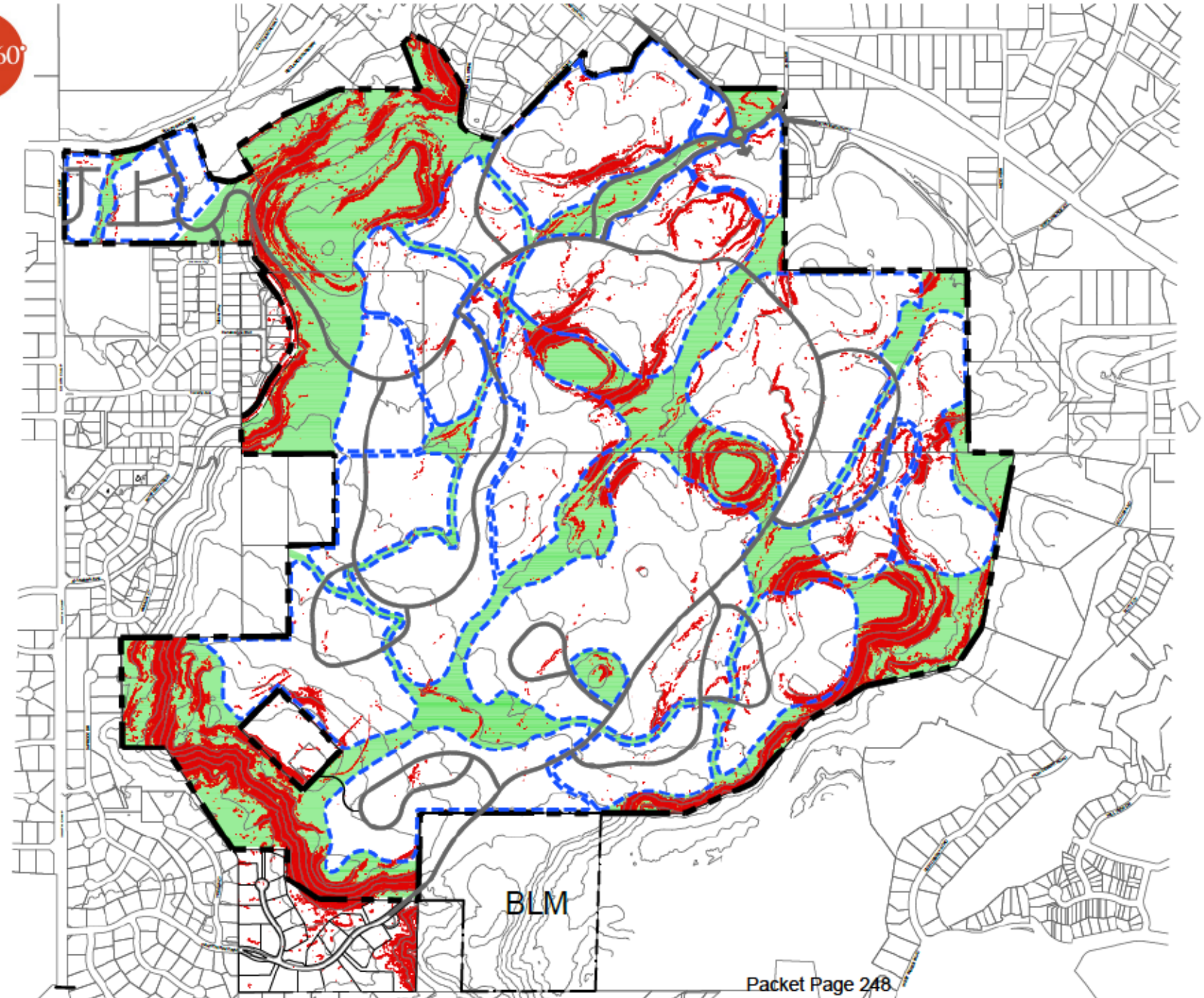
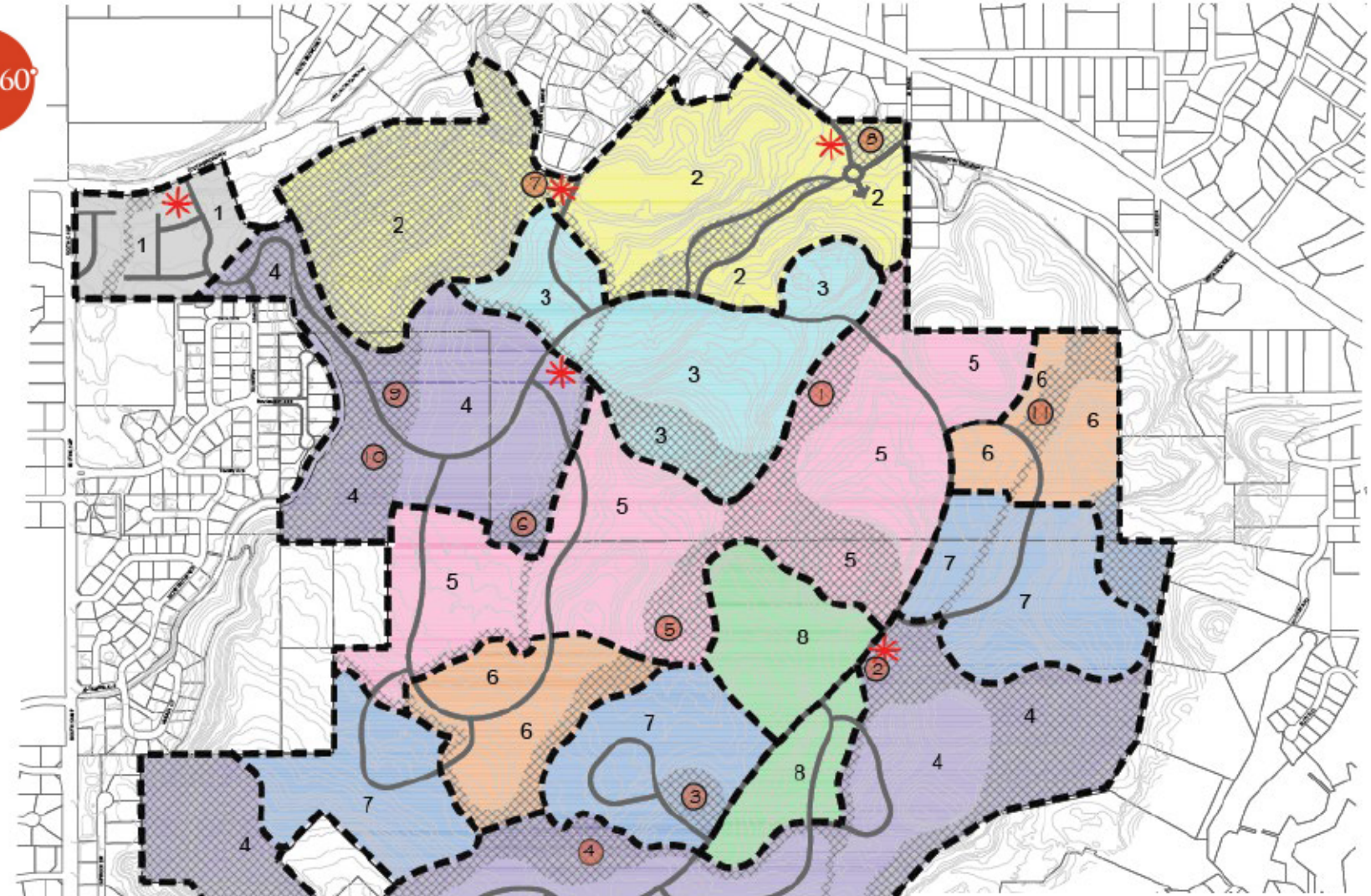


Exhibit 4:
Slope Analysis

SLOPE MAP LEGEND

- 30% OR GREATER SLOPES
- OPEN SPACE
- 25 FT CONTOURS
- PROPOSED ROADS
- ODP DEVELOPMENT 'BUBBLES'

Exhibit 5:
Development Progression Plan



DEVELOPMENT PROGRESSION SCHEDULE

- 1 - TARGETED START 2022
- 2 - TARGETED START 2025
- 3 - TARGETED START 2028
- 4 - TARGETED START 2031
- 5 - TARGETED START 2034
- 6 - TARGETED START 2037
- 7 - TARGETED START 2040
- 8 - TARGETED START 2043
- OPEN SPACE; SEE EXHIBIT 2
- TRADITIONAL PARK; SEE EXHIBIT 2
- TRAILHEAD - SEE EXHIBIT 2

CITY COUNCIL REPORT SCHEDULE

PHASE #	ESTIMATED DATE OF COMMENCEMENT	
PHASE 1	2022	
PHASES 2-7	UPDATE MEETINGS WITH CITY COUNCIL	2027 2032 2037 2042
PHASE 8	2043	

Disclaimer: This Progression Plan is conceptual in nature and is our best estimate at this point as to how the master plan will be developed into the future. Factors such as market trends, product mix, etc., will dictate future decisions on how the community will be developed with future phases.

Exhibit 6A:
Use Table

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
RESIDENTIAL						
Household Living – residential occupancy of a dwelling unit by a "household"	Business Residence				A	A
	Two Family Dwelling	A	A		A	
	Single-Family Detached	A	A		A	A
	Multifamily		A	A	A	
	Accessory Dwelling Unit	A	A			
	Agricultural Labor Housing					A
	Manufactured Housing Park		C			
	All Other Household Living		A			
Home Occupation	Home Occupation	A	A	A	A	
Group Living – residential occupancy of a structure by a group of people who do not meet the definition of "Household Living"	Small Group Living Facility	A	A	A	A	
	Large Group Living Facility		A	A	A	
	Unlimited Group Living Facility		A	A	A	
	Fraternities/Sororities	A1	A1	A1		
	Rooming/Boarding House		A	A	A	
	Other Group Living (e.g., dormitory style living)		A	A	A	A
INSTITUTIONAL AND CIVIC						
Colleges and Vocational Schools – colleges and institutions of higher learning	Colleges and Universities					A
	Vocational, Technical and Trade Schools				A	A
Community Service – uses providing a local service to the community	Community Activity Building	A	A	A	A	A
	All Other Community Service	A	A	A	A	A
Cultural – establishments that document the social and religious structures and intellectual and artistic manifestations that characterize a society	Museums, Art Galleries, Opera Houses, Libraries		A	A	A	A
Day Care – care, protection and supervision for children or adults on a regular basis away from their primary residence for less than 24 hours per day	Home-Based Day Care (1 – 12)	A	A	A	A	
	General Day Care	C	A	A	A	
Detention Facilities – facilities for the detention or incarceration of people	Jails, Honor Camps, Reformatories					C
	Community Corrections Facility				C	C
	Law Enforcement Rehabilitation Centers				C	C

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
treatment or surgical care to patients	Physical and Mental Rehabilitation (Resident)				C	C
	All Other					
Parks and Open Space – natural areas consisting mostly of vegetative landscaping or outdoor recreation, community gardens, etc.	Cemetery	A	A	A	A	C
	Golf Course	A	A	A	A	C
	Golf Driving Ranges	C	C	C	A	C
	Parks, Lakes, Reservoirs, Other Open Space	A	A	A	A	A
Religious Assembly – meeting area for religious activities	All	A	A	A	A	A
Funeral Home/Mortuary	All				A	
Crematory	All					
Safety Services – public safety and emergency response services	All	A	A	A	A	A
Schools – schools at the primary, elementary, middle, junior high or high school level	Boarding Schools		A	A	A	A
	Elementary Schools	A	A	A	A	A
	Secondary Schools	A	A	A	A	A
Utility, Basic – infrastructure services that need to be located in or near the area where the service is provided	Utility Service Facilities (Underground)	A	A	A	A	A
	All Other Utility, Basic	C	C	C	A	A
Utility, Corridors – passageways for bulk transmitting or transporting of electricity, gas, oil, communication signals, or other similar services	Transmission Lines (Above Ground)	C	C	C	C	
	Transmission Lines (Underground)	C	C	C	C	
	Utility Treatment, Production or Service Facility					
	All Other	C	C	C	C	
COMMERCIAL						
Entertainment Event, Major – activities and structures that draw large numbers of people to specific events or shows	Indoor Facilities					A
	Outdoor Facilities					C
Lodging – hotels, motels, short-term rentals and similar establishments	Hotels and Motels					
	Short-Term Rentals	A	A	A	A	
Office – activities conducted in an office setting and generally focusing on business, government, professional, or financial services	General Offices				A	A
	Office with Drive-Through				A	A
Parking, Commercial – parking that is not necessary to serve a specific use and for which fees may be charged	All				A	A

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
Recreation and Entertainment, Outdoor – large, generally commercial uses that provide continuous recreation or entertainment-oriented activities	Campgrounds					A
	Resort Cabins and Lodges					A
	Swimming Pools, Community	A	A	A	A	A
	Shooting Ranges, Outdoor					C
	Amusement Park, Miniature Golf					C
	Riding Academy, Roping or Equestrian Area					C
	Zoo					C
	All Other Outdoor Recreation					C
Recreation and Entertainment, Indoor – large, generally commercial uses that provide indoor recreation or entertainment-oriented activities including health clubs, movie theaters, skating rinks, arcades	Health Club				A	A
	Movie Theater, Skating Rink, Arcade				A	A
	Shooting Ranges, Indoor					C
	All Other Indoor Recreation				C	A
Retail Sales and Service* – firms involved in the sale, lease or rental of new or used products to the general public. They may also provide personal services or entertainment, or provide product repair or services for consumer and business goods.	Adult Entertainment					
	Alcohol Beverage Production				C	
	Animal Care/Boarding/Sales, Indoor				A	
	Animal Care/Boarding/Sales, Outdoor					
	Delivery and Dispatch Services (Vehicles On-Site)					
	Drinking Establishment				C	
	Drive-Through Uses (Restaurants)					
	Food Service, Catering				A	
	Food Service, Restaurant (Including Alcohol Sales)				A	A
	Farm Implement/Equipment Sales/Service					
	Farmers' Market					
	Flea Market					
	Feed Store					
	Fuel Sales, Automotive/Appliance				A	
	Fuel Sales, Heavy Vehicle					
	General Retail Sales, Indoor Operations, Display and Storage				A	
	General Retail Sales, Outdoor Operations, Display or Storage					
	Landscaping Materials Sale/Greenhouse/Nursery					C
	Manufactured Building Sales and Service					
	Marijuana Related Business					

LEGEND
A ALLOWED USE
C CONDITIONAL USE

Exhibit 6B:
Use Table

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
	Mobile Food Vendor				A	
	Mobile Food Vendor Court				A	
	Produce Stands	A	A	A	A	
	Rental Service, Indoor Display/Storage					
	Rental Service, Outdoor Display/Storage					
	Repair, Small Appliance				A	
	Repair, Large Appliance					
	Personal Services				A	
	All Other Retail Sales and Services				A	
Self-Service Storage	Mini-Warehouse			C	C	
Vehicle Repair – repair service to passenger vehicles, light and medium trucks and other consumer motor vehicles	Auto and Light Truck Mechanical Repair					
	Body Shop					
	Truck Stop/Travel Plaza					
	Tire Recapping and Storage					
	All Other Vehicle Repair					
Vehicle Service, Limited – direct services to motor vehicles where the driver or passengers generally wait in the car or nearby while the service is performed	Car Wash, Gasoline Service Station, Quick Lube				A	
	All Other Vehicle Service, Limited					
INDUSTRIAL						
Manufacturing and Production – firms involved in the manufacturing, processing, fabrication, packaging, or assembly of goods	*Indoor Operations and Storage*					
	Assembly					
	Food Products					
	Manufacturing/Processing					
	Marijuana Related Business					
	Indoor Operations with Outdoor Storage					
	Assembly					
	Food Products					
	Manufacturing/Processing					
	Marijuana Related Business					
	Outdoor Operations and Storage					
	Assembly					
	Food Products					
	Manufacturing/Processing					
	Marijuana Related Business					
	All Other Industrial Service, including any Hazardous Occupancy per the International Fire Code or International Building Code					

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
Industrial Services, Contractors and Trade Shops, Oil and Gas Support Operations without hazardous materials	Indoor Operations and Storage					
	Indoor Operations and Outdoor Storage (including Heavy Vehicles)					
	Outdoor Storage And Operations					
	Research, Testing and Laboratory Facilities – Indoors (includes Marijuana Testing Facilities)					
Junk Yard	Junk Yard					
Impound Lot	Impound Lot					
Heavy Equipment Storage/Pipe Storage	All					
Warehouse and Freight Movement – firms involved in the storage or movement of freight	Indoor Operations, Storage and Loading					
	Indoor Storage with Outdoor Loading Docks					
	Outdoor Storage or Loading					
	Gas or Petroleum Storage					
	Sand or Gravel Storage					
	All Other					
Waste-Related Use – uses that receive solid or liquid wastes from others; uses that collect sanitary wastes or uses that manufacture or produce goods or energy from the composting of organic material	Non-Hazardous Waste Transfer Station					C
	Medical/Hazardous Waste Transfer Station					C
	Solid Waste Disposal Sites					C
	Recycling Collection Point				C	C
	All Other Waste-Related					C
Wholesale Sales – firms involved in the sale, lease or rental of products primarily intended for industrial, institutional or commercial businesses	Wholesale Business (No Highly Flammable Materials/Liquids)					
	Agricultural Products					
	All Other Wholesale Uses					
Agricultural	Animal Confinement					
	Dairy					
	Confined Animal Feeding Operation, Feedlot					
	Forestry, Commercial					
	Marijuana Related Business					
	Pasture, Commercial					
	Winery					
	All Other Agriculture					
Aviation or Surface Passenger Terminal – facilities for the landing and takeoff of flying vehicles or stations for ground-based vehicles, including loading and unloading areas	Airports/Heliports					
	Bus/Commuter Stops	A	A	A	A	
	Bus/Railroad Depot					
	Helipads					
	All Other Aviation or Surface Passenger Terminal					

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
Mining – mining or extraction of mineral or aggregate resources from the ground for off-site use	Oil or Gas Drilling					
	Sand or Gravel Extraction or Processing					
	All Other Mining					
Telecommunications Facilities – devices and supporting elements necessary to produce nonionizing electromagnetic radiation operating to produce a signal	Facilities on Wireless Master Plan Priority Site When Developed in Accordance with Wireless Master Plan Site-Specific Requirements	A	A	A	A	C
	Temporary PWSF (e.g., COW)	A	A	A	A	
	Co-Location	A	A	A	A	
	Tower Replacement	A	A	A	A	
	Dual Purpose Facility	A	A	A	A	
	DAS and Small Cell Facilities	A	A	A	A	
	Base Station with Concealed Attached Antennas	A**	A**	A**	A**	
	Base Station with Non-Concealed Attached Antennas	C**	C**	C**	C**	
	Tower, Concealed	C***	C	C	C	
	Tower, Non-Concealed					
	Broadcast Tower					

NOTES:

* Refer to Chapter 5.15 GJMC.

** Except NOT allowed on structures the principal use of which is single- or two-family residential, group living, or day care, or on multifamily structures of fewer than three stories.

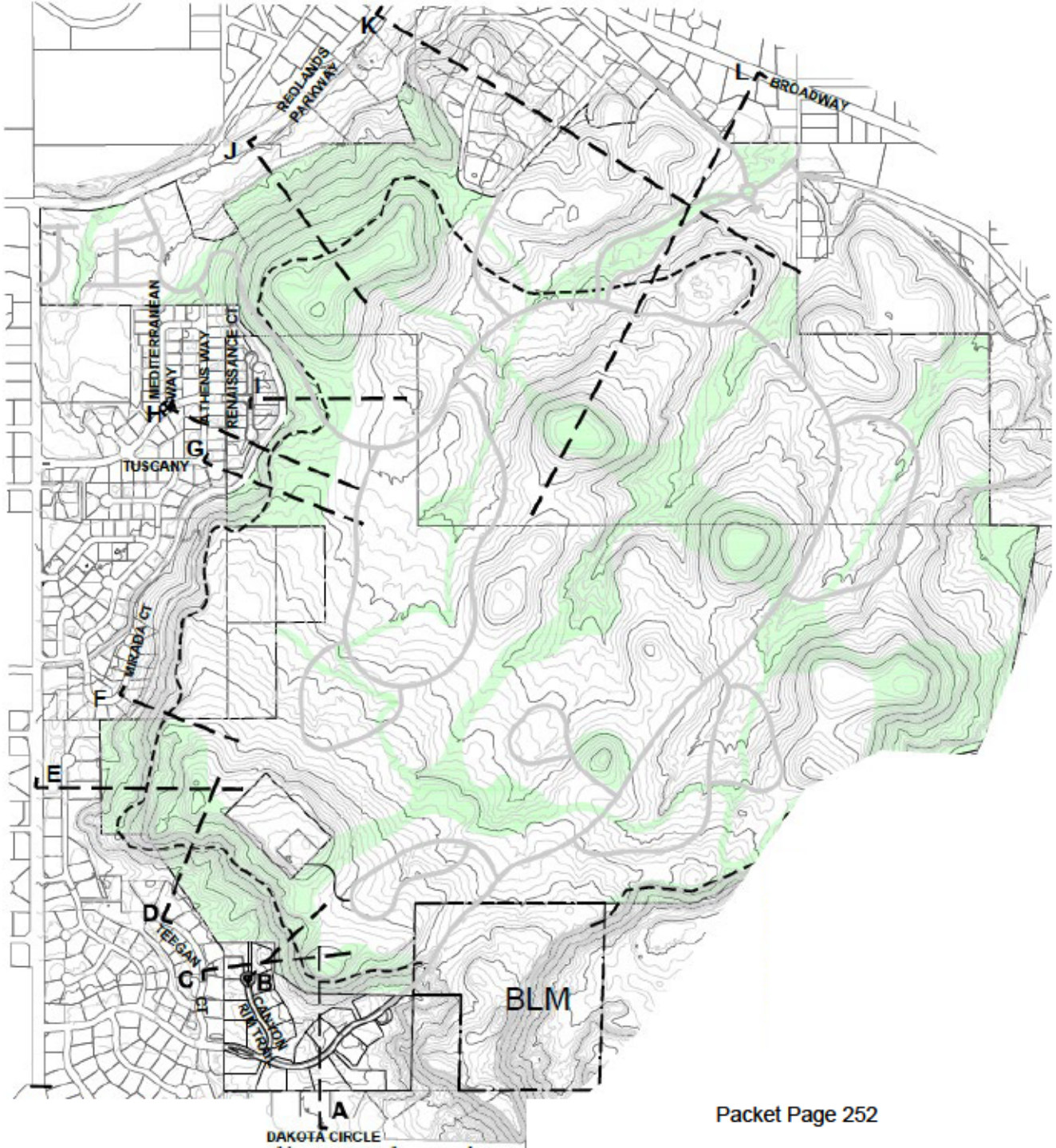
*** Except NOT allowed on any site or lot where the principal use is single- or two-family residential.

LEGEND

A ALLOWED USE

C CONDITIONAL USE

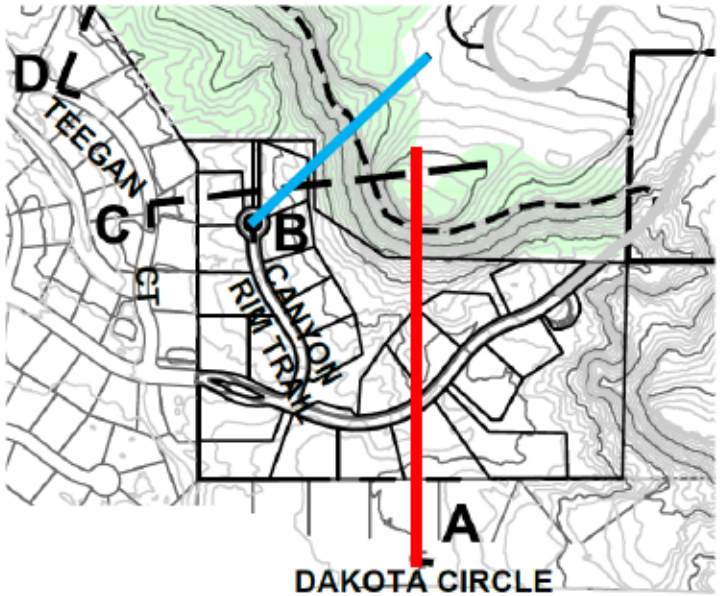
Exhibit 7:
Ridgelines & Sections

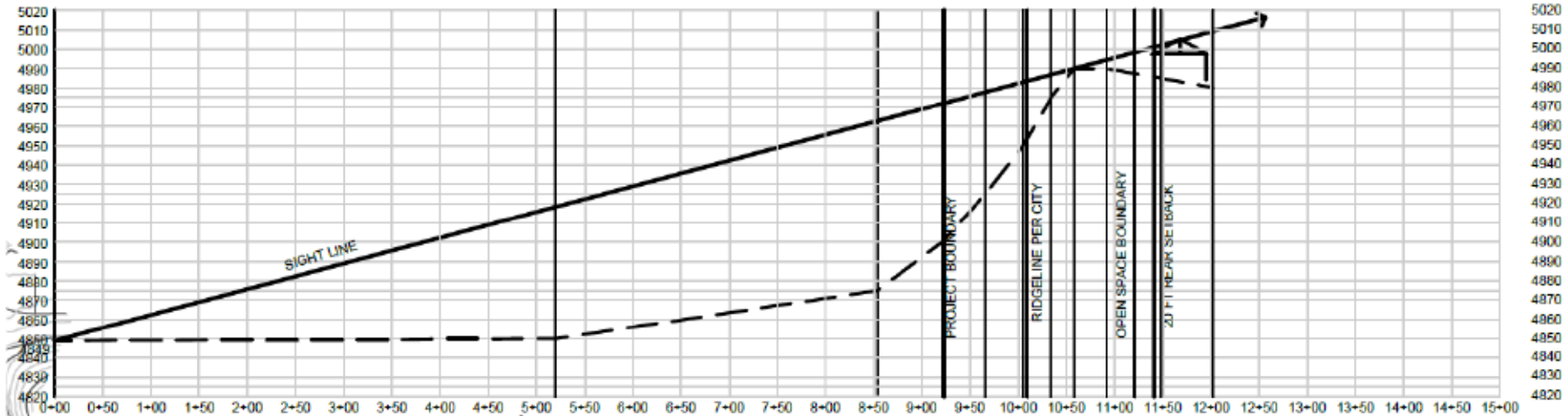


RIDGELINE MAP LEGEND

- OPEN SPACE
- RIDGELINE SECTION LINES FROM NEAREST STREET CENTER LINE PARALLEL TO RIDGE SEE SECTIONS BELOW
- RIDGELINE PER CITY OF GRAND JUNCTION; 21.07.020(g)(6) Exhibit 7.2.C2

Exhibit 7:
Ridgelines & Sections

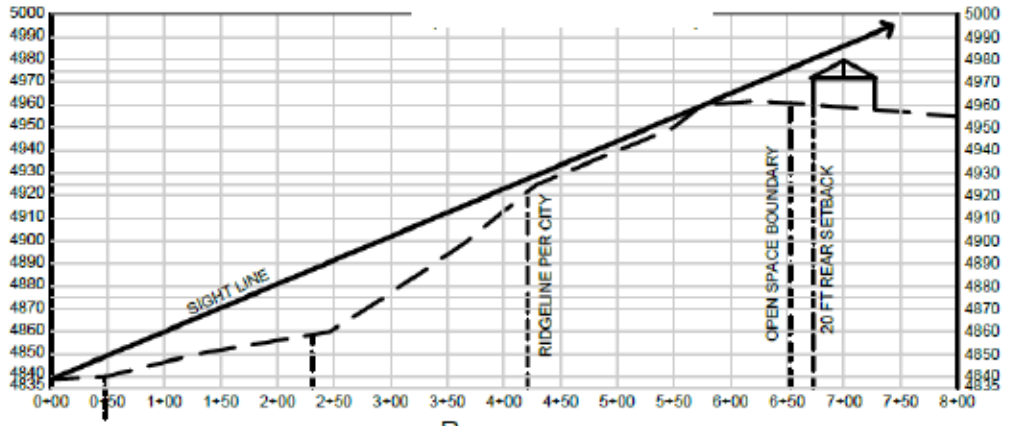




A
(Dakota Circle)

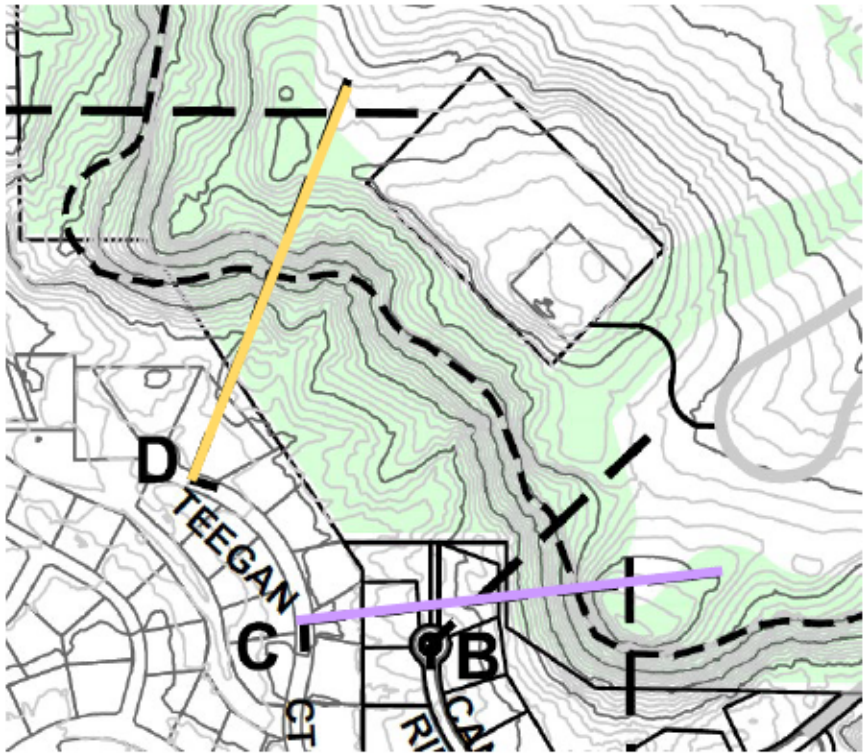
RIDGELINE MAP LEGEND

- OPEN SPACE
- RIDGELINE SECTION LINES FROM NEAREST STREET CENTER LINE PARALLEL TO RIDGE SEE SECTIONS BELOW
- RIDGELINE PER CITY OF GRAND JUNCTION; 21.07.020(g)(6) Exhibit 7.2.C2



B
(CANYON RIM TRAIL)

Exhibit 7:
Ridgelines & Sections



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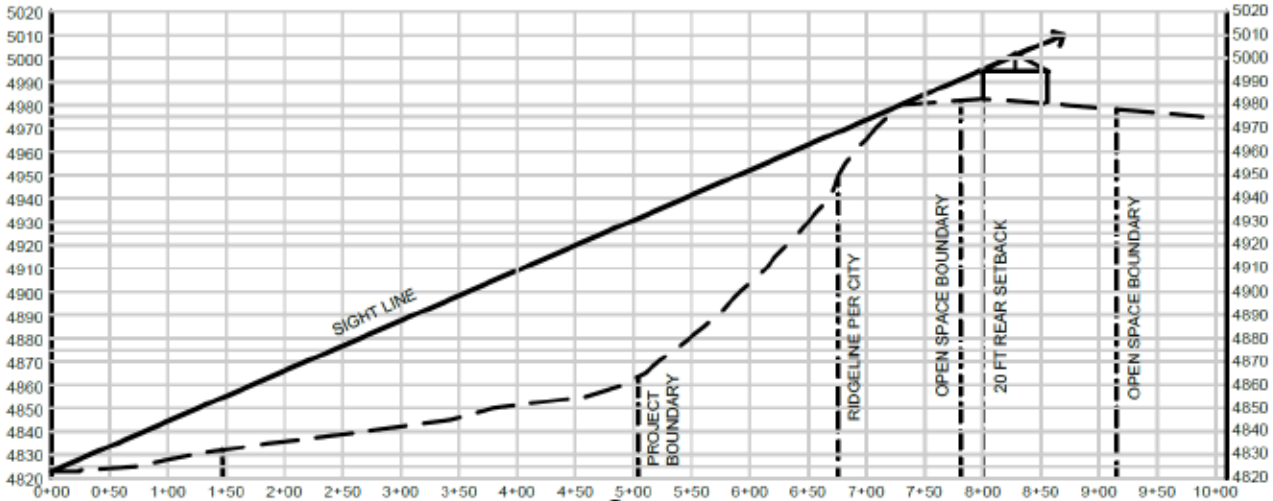
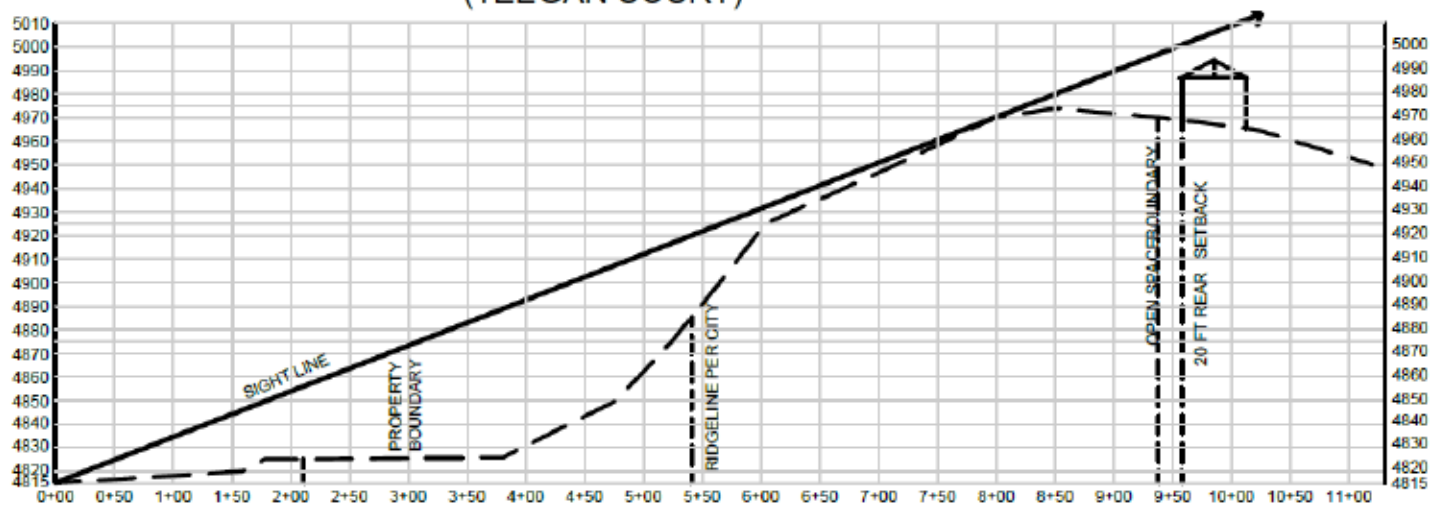
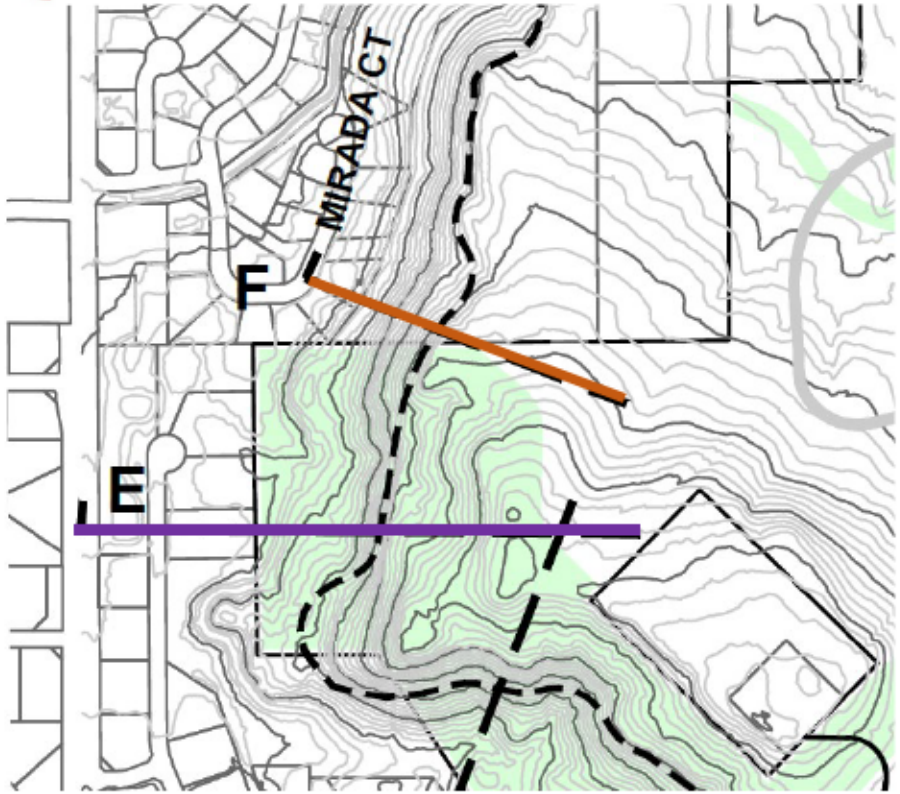


C
(TEEGAN COURT)



D
(TEEGAN COURT)

Exhibit 7:
Ridgelines & Sections



RIDGELINE MAP LEGEND

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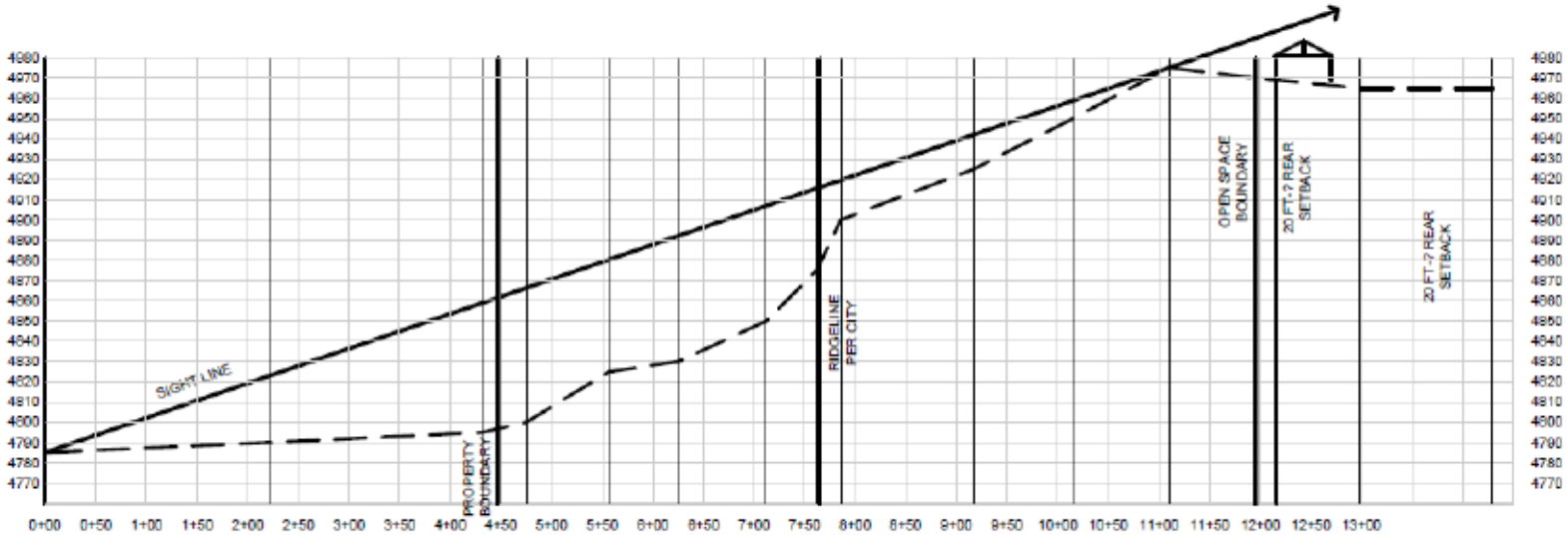
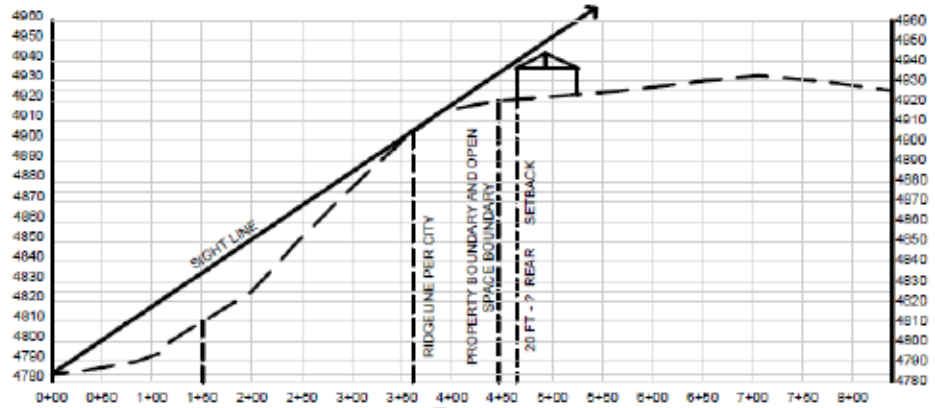


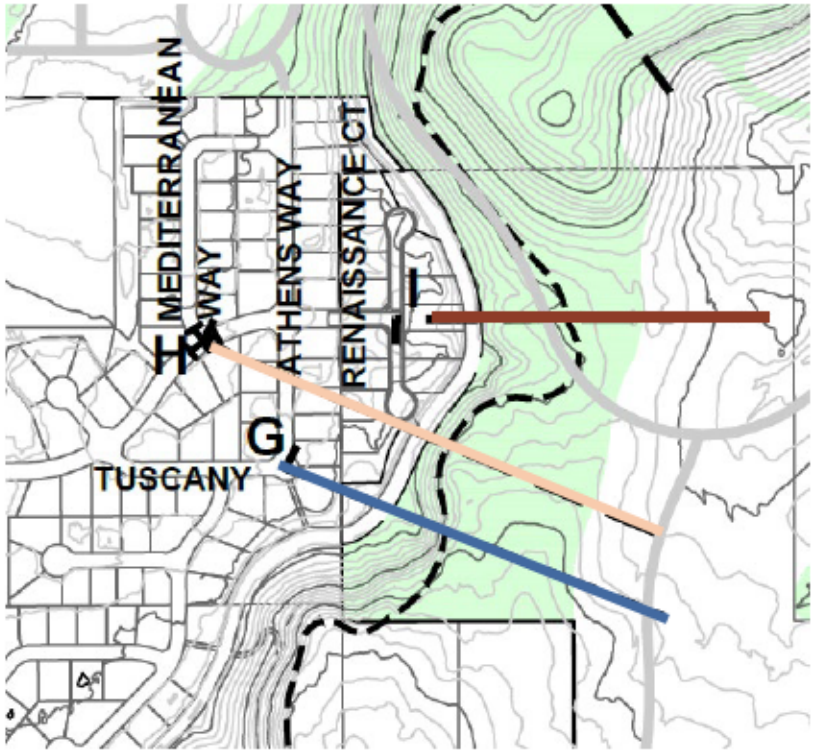
E
(SOUTH CAMP)



F
(MIRADA)

Exhibit 7:

Ridgelines & Sections



RIDGELINE MAP LEGEND

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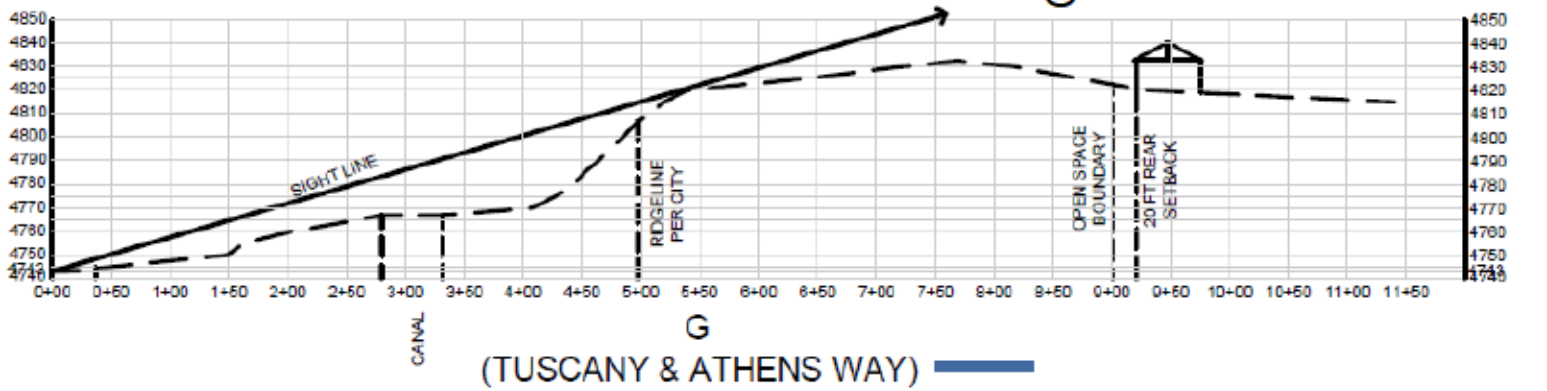
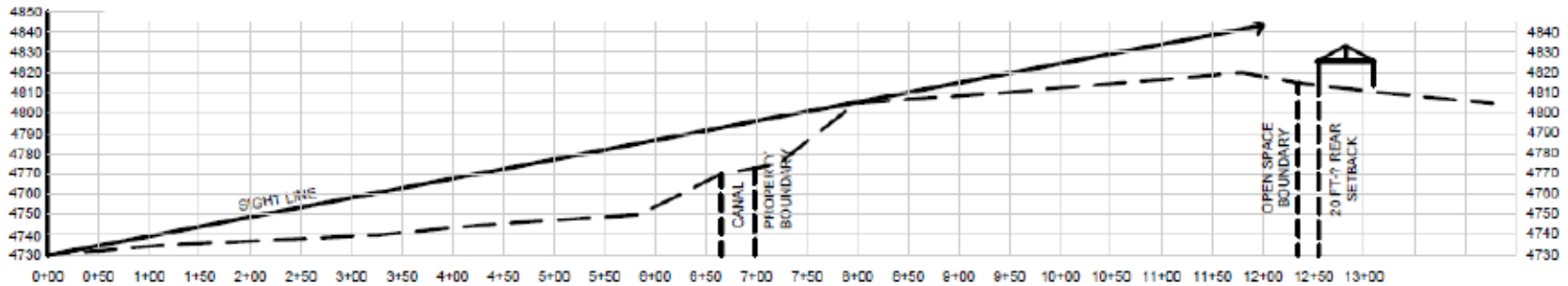


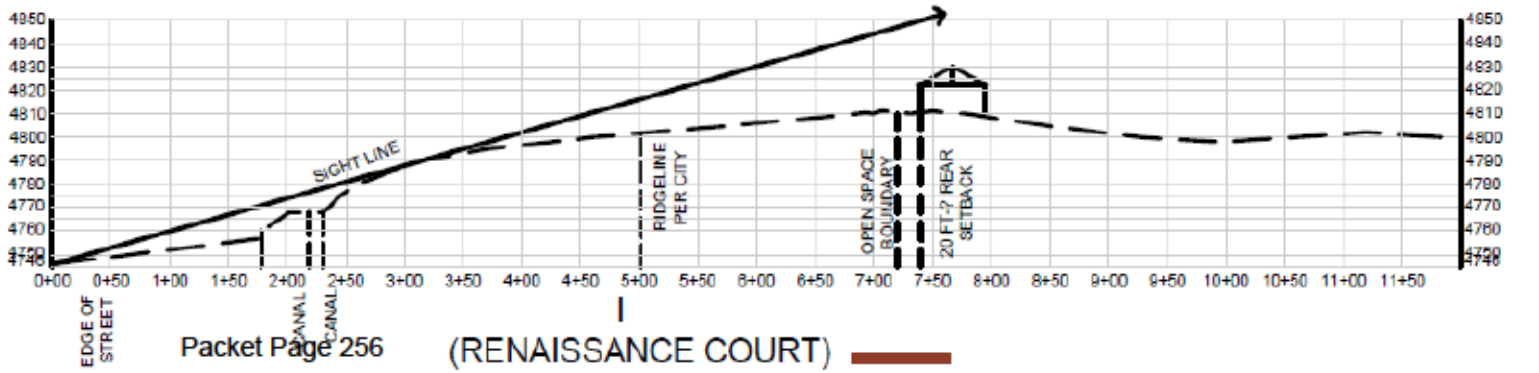
G

(TUSCANY & ATHENS WAY)



H

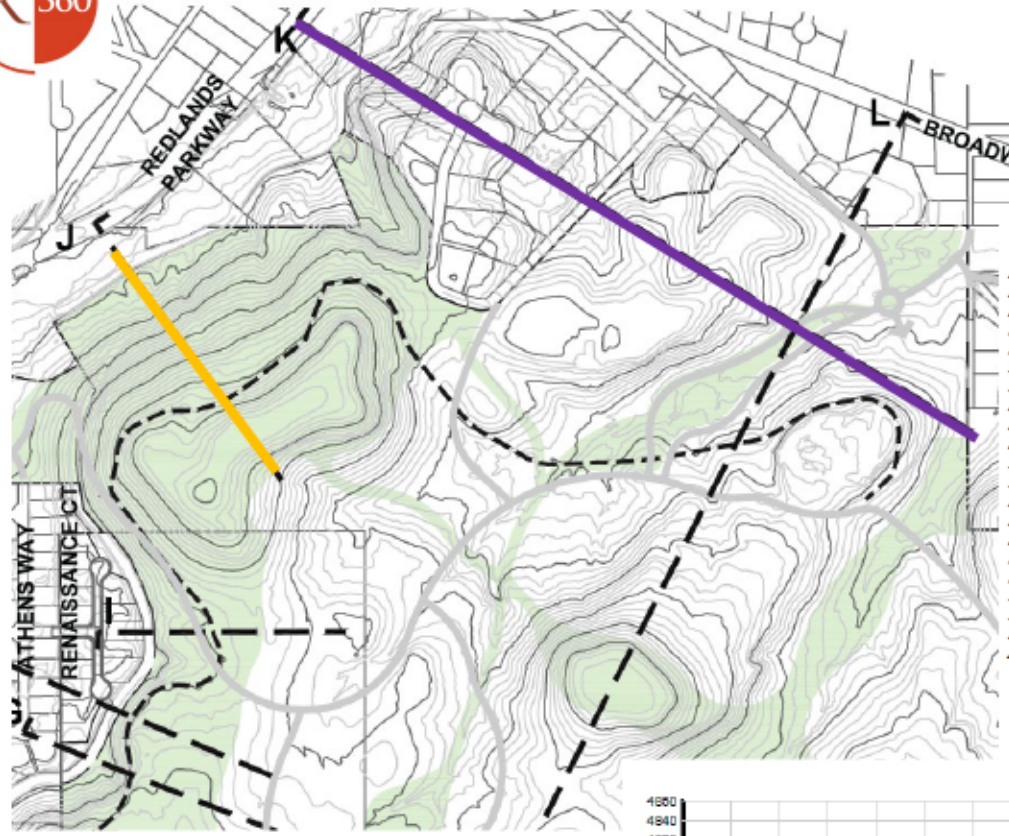
(MEDITERRANEAN WAY)

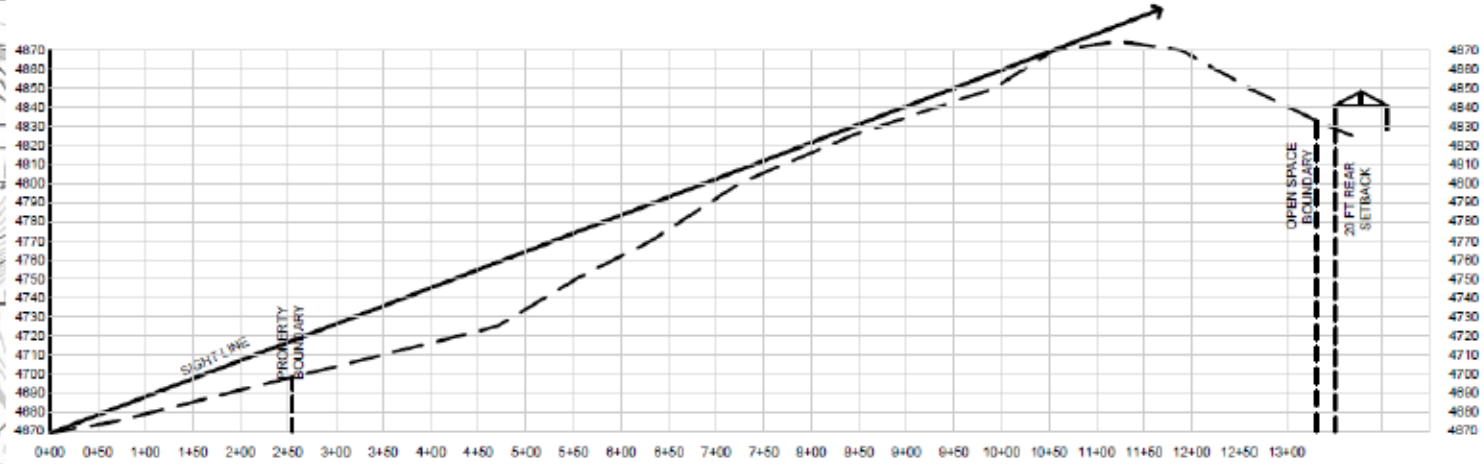


I

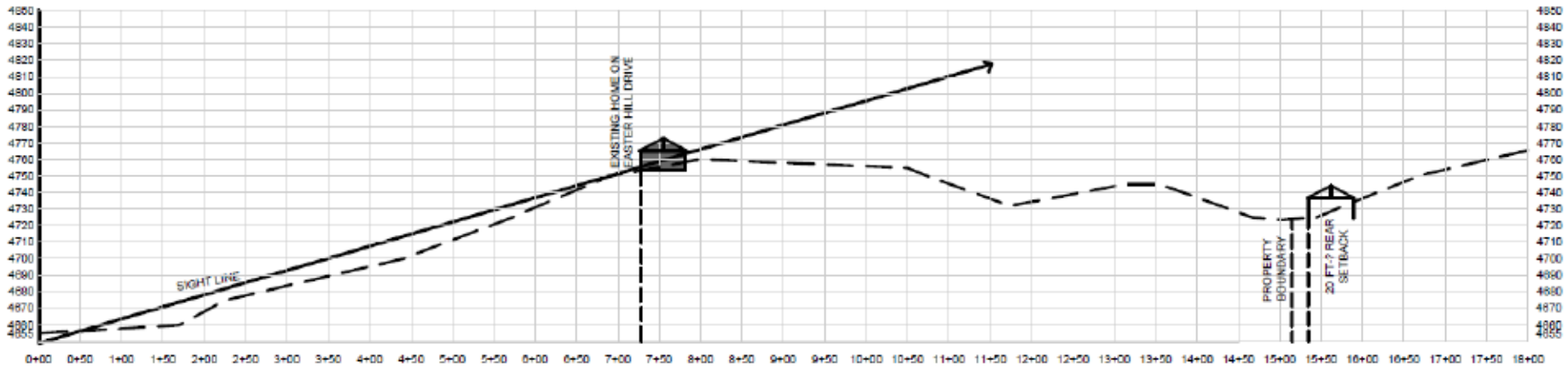
(RENAISSANCE COURT)

Exhibit 7:
Ridgelines & Sections





J
(REDLANDS PARKWAY-SOUTHWEST)



K
(REDLANDS PARKWAY-NORTHEAST)

RIDGELINE MAP LEGEND

- OPEN SPACE
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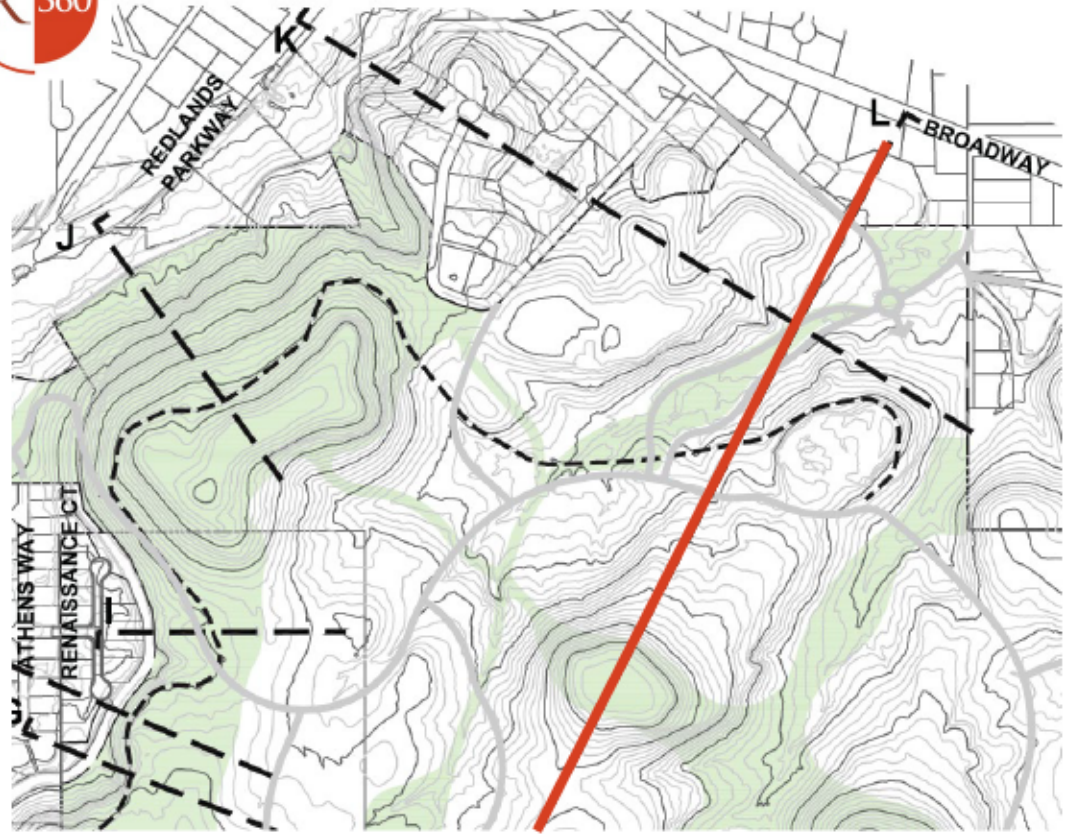
Exhibit 7:
Ridgelines & Sections



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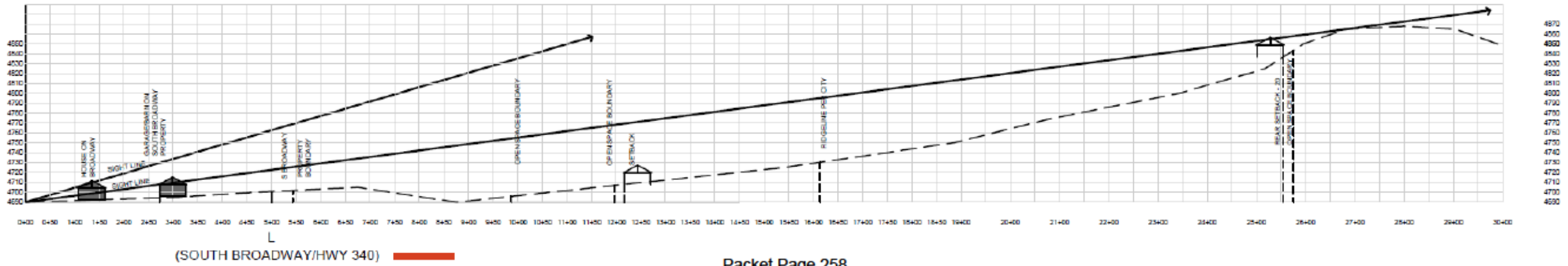


Summary

- Respectfully requesting the approval of the proposed Redlands 360 ODP and PD applications.
- A range of 1,300 to 1,750 residential units are planned with 5.5 acres of commercial/mixed use.
- The Vision for Redlands 360 consists of four key elements: The Land, The (Modern) History, The Views and The Amenities
- Redlands 360 will be a master-planned community unlike any other on the Western Slope focused on providing an outdoor lifestyle to its residents, integrating new parks, opens space and trails into the community and open for use by the public, becoming an important economic driver for the area and satisfying a much needed portion of the housing demand in the City of Grand Junction.

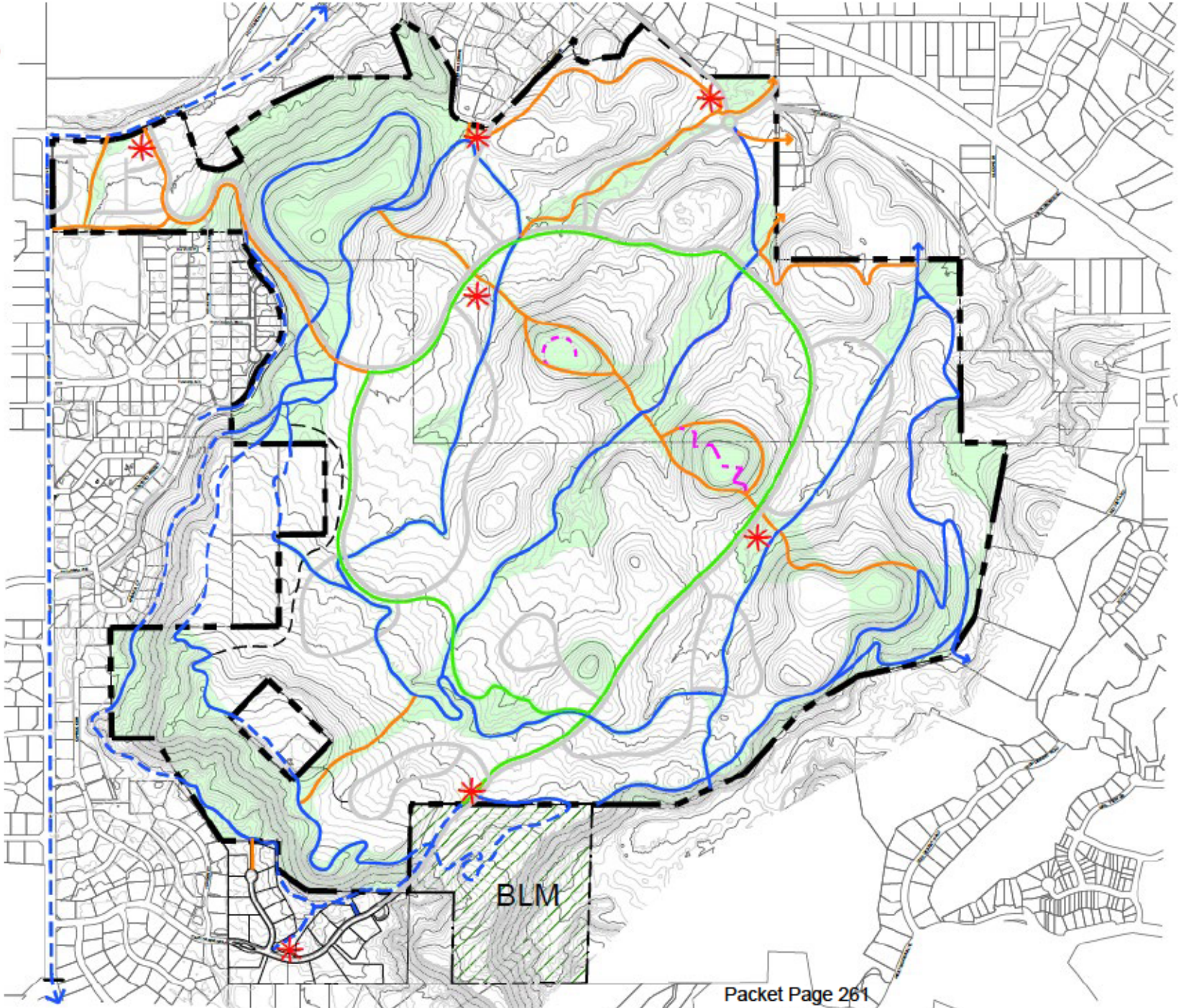


REDLANDS 360°

Thank You



Exhibit 1:
Trail Types

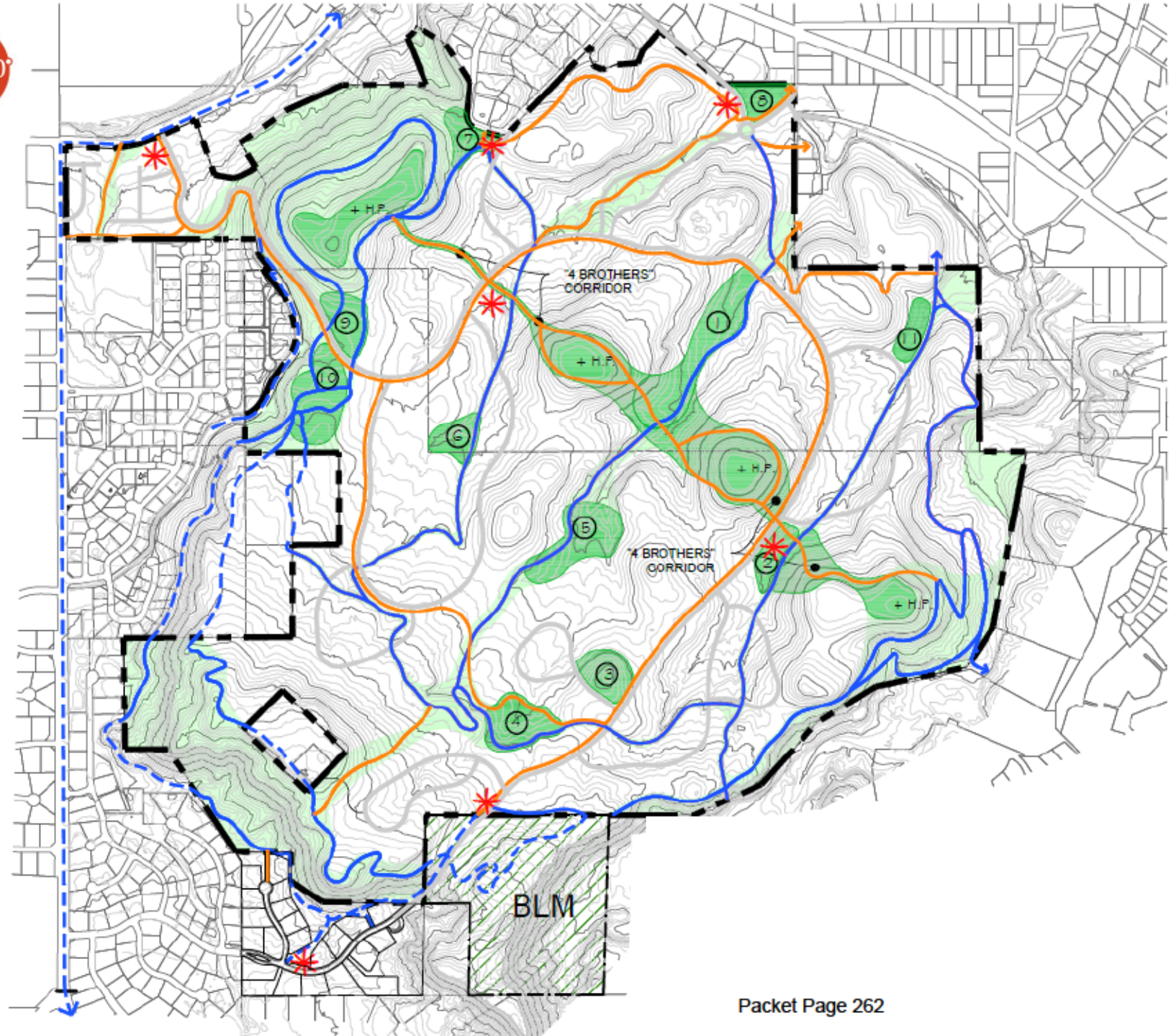


TRAILS LEGEND

- 8 FT DETACHED, PAVED LOOP MOSTLY FOLLOWING ROADS
- HISTORICAL ON-SITE
- HISTORICAL OFF-SITE
- NEW ON-SITE; SOFT SURFACE, 2 FT MIN. WIDTH
- SPECIAL - INCLINE OR OTHERWISE DIFFERENT FROM OTHERS
- BYPASS FOR HISTORICAL TRAIL - SINGLE TRACK (IF NEEDED)
- OPEN SPACE
- EXISTING BLM
- TRAILHEADS

NOTE: A NUMBER OF THE HISTORIC TRAILS ARE SHOWN AS 'REHABILITATED' ON THE PARK AREA PLAN.

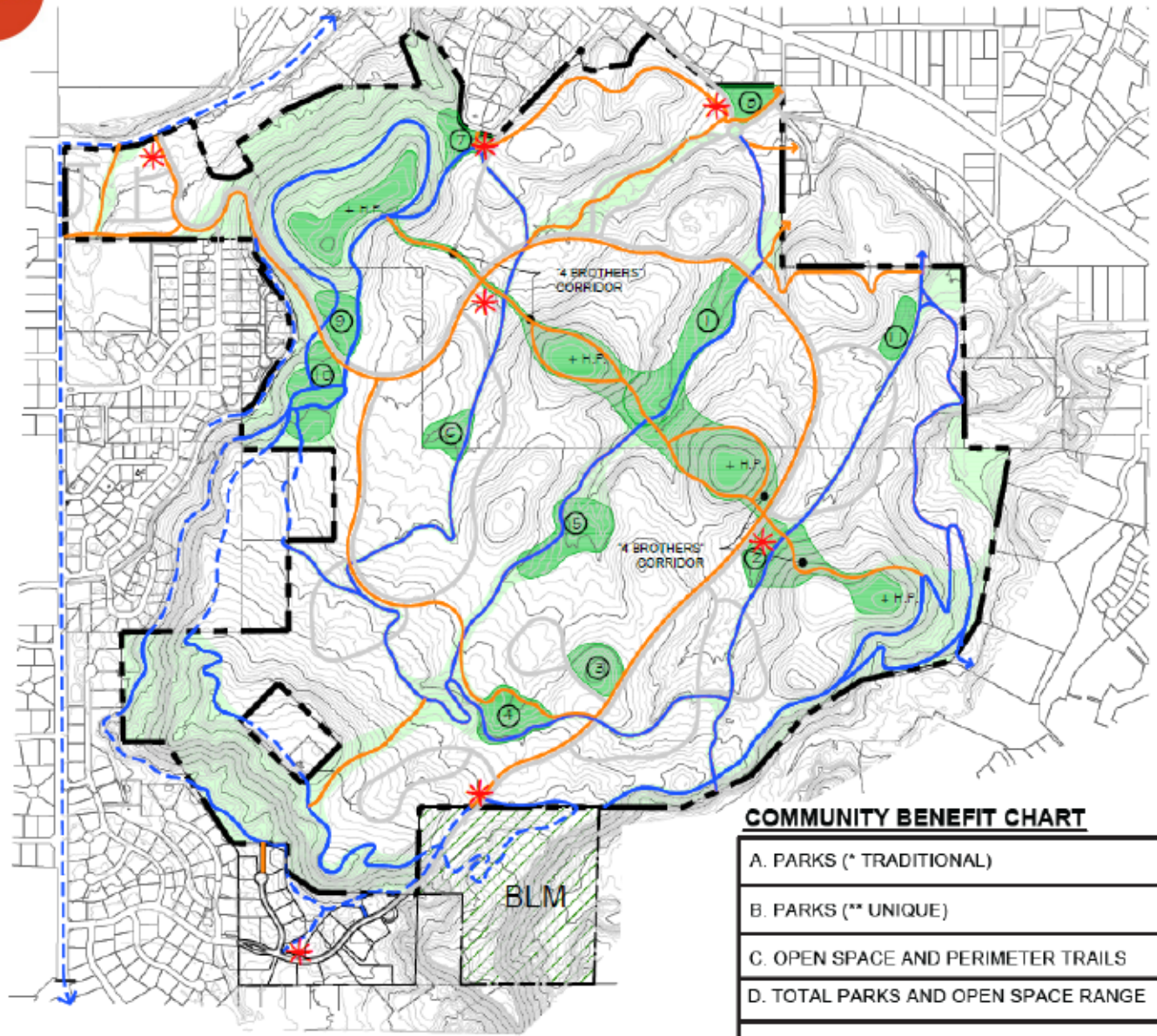
Exhibit 2:
Public Park Areas



LEGEND

- HISTORICAL ON-SITE TRAIL
- HISTORICAL OFF-SITE TRAIL
- NEW AND REHABILITATED TRAILS, WITHIN DEVELOPMENT AREA
- OPEN SPACE
- EXISTING BLM
- TRAILHEADS
- PARK AREA

Exhibit 2:
Public Park Areas



A. PARKS (TRADITIONAL)

①	7.4 ACRES
②	1.6 ACRES
③	2.4 ACRES
④	3.7 ACRES
⑤	5.0 ACRES
⑥	2.0 ACRES
⑦	2.0 ACRES
⑧	1.6 ACRES
⑨	2.5 ACRES
⑩	4.9 ACRES
⑪	1.9 ACRES
TOTALS	35 ACRES

B. PARKS (UNIQUE)

* THE 4 BROTHERS / 4 HIGH POINTS CORRIDOR	25-30 ACRES
* LINEAR PARKS WITHIN DEVELOPMENT AREA (NOT IN PERIMETER OR PARKS)	25-30 ACRES
TOTAL FOR UNIQUE PARKS	50-60 ACRES
C. REMAINING OPEN SPACE AND PRIMARY EXISTING RIM TRAILS	100-120 ACRES
D. TOTAL OPEN SPACE/PARKS RANGE (THE ODP PLAN SHALL INCLUDE NO LESS THAN 185 ACRES.)	185 - 225 ACRES

NOTE: PARK AREAS ARE SUBJECT TO SOME CHANGE; EXACT LOCATION TO BE DETERMINED CONCURRENT WITH EACH SUBDIVISION AND PROGRESSION PHASE.

COMMUNITY BENEFIT CHART

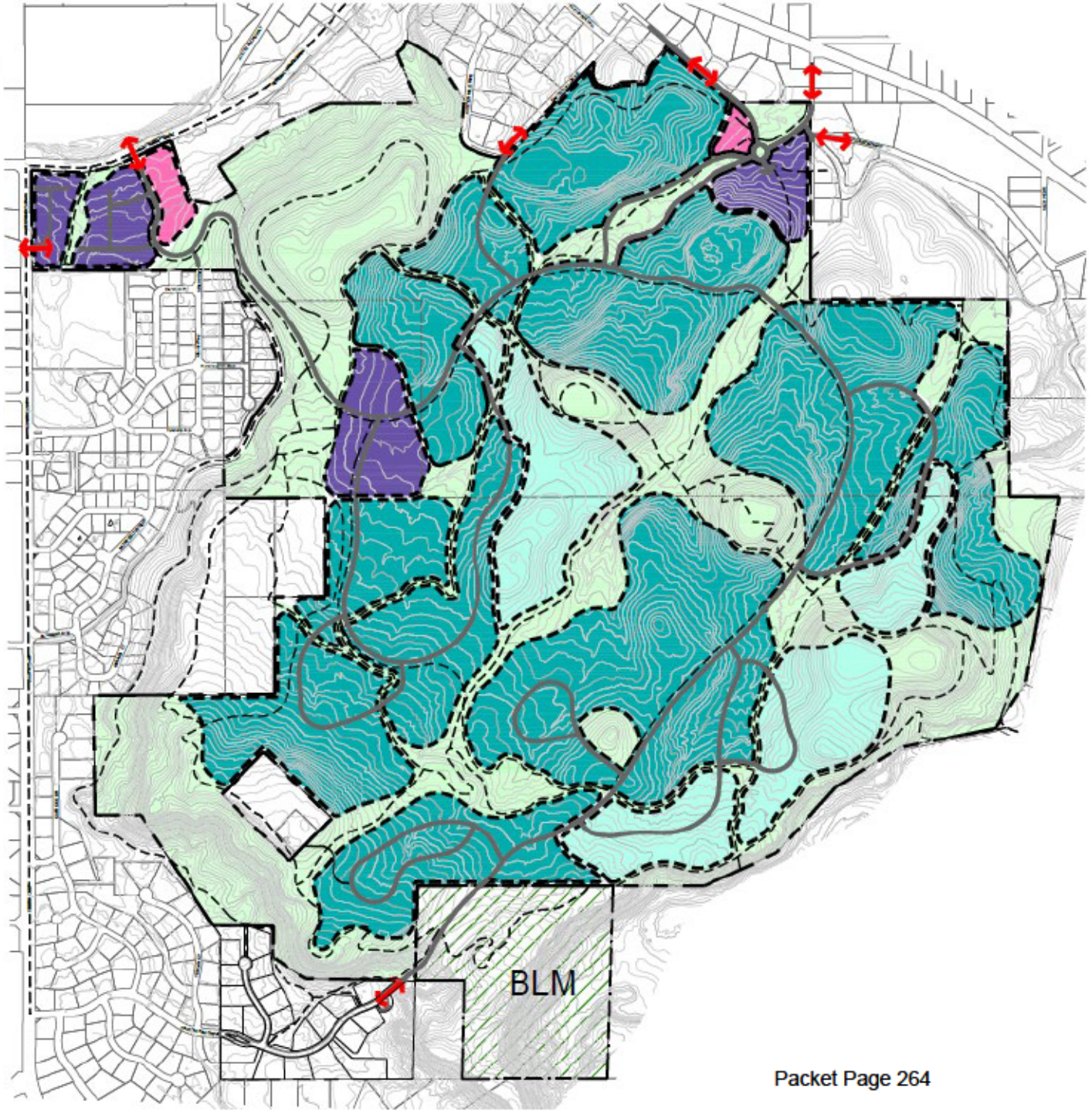
A. PARKS (* TRADITIONAL)	35 ACRES	6%
B. PARKS (** UNIQUE)	50-60 ACRES	8-10%
C. OPEN SPACE AND PERIMETER TRAILS	100-120 ACRES	17-20%
D. TOTAL PARKS AND OPEN SPACE RANGE	±185 - ±225 ACRES	±31 - ±38%
TOTAL PROPERTY	600 ACRES	100%

*FOR EXAMPLE: LAWN, PLAY EQUIPMENT, PICNIC, POTENTIALLY PARKING AND RESTROOMS.
**FOR EXAMPLE: INCLUDE/ADDRESS HIKING OR RUNNING, TRAIL CORRIDORS (ALL TYPES), CIRCUIT TRAINING/EVENTS, FRISBEE GOLF.

EXISTING SLOPE BREAKDOWN OF PARKS (TRADITIONAL)

0-10% SLOPE	18 ACRES	51%
10-20% SLOPE	13 ACRES	37%
20-30% SLOPE	3 ACRES	9%
>30% SLOPE	1 ACRES	3%
TOTAL	35 ACRES	100%

Exhibit 3:
Land Use & Default Zones



LAND USE PLAN LEGEND

- PROJECT BOUNDARY LINE
- LOW DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- MULTI-FAMILY/HIGH DENSITY
- COMMERCIAL
- OPEN SPACE
- ROAD NETWORK
- TRAILS
- ACCESS POINTS

Exhibit 3:
Land Use & Default Zones

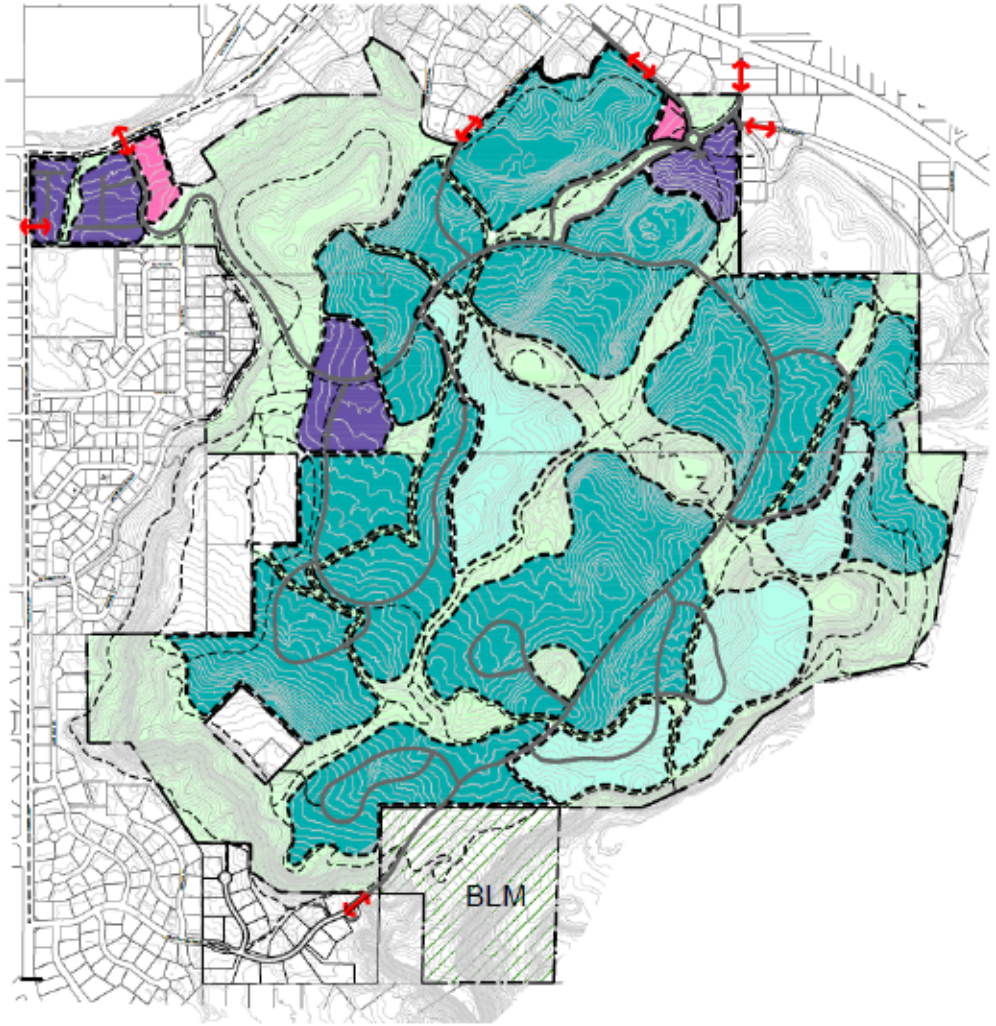


TABLE 1
DEFAULT STANDARDS

Dimensional Summary Table	Low Density Residential	Medium Density Residential	Multi Family & High Density	Commercial B-1	Open Space CSR
City Default Zone Criteria	R-4	R-12	R-16	B-1	CSR
Lot					
Area (min. ft.)	0	0	0	0	0
Width (min. ft.)	60	30	20	0	0
Frontage (min. ft.)	20	20	20	0	0
Frontage on cul-de-sac (min. ft.)	0	0	0	0	0
Setback					
Principal Structure					
Front (min. ft.)	20	20	20	0	15
Side (min. ft.)	5	5	5	5	0
Side - abutt residential (min. ft.)	0	0	0	10	10
Rear (min. ft.)	25	10	10	0	10
Accessory Structure					
Front (min. ft.)	20	25	25	25	15
Side (min. ft.)	3	3	3	0	0
Side - abutt residential (min. ft.)	0	0	0	0	5
Rear (min. ft.)	5	5	5	0	10
Bulk / Other Dimensional					
Lot coverage (max.)	50%	75%	75%	100%	100%
Height (max. ft.)	40	40	50	50	65
Density (min. units per acre)	0	2	5.5	0	0
Density (max. units per acre)	4	12	16	18	0
Cluster allowed	No	No	No		

Exhibit 3:
Land Use & Default Zones

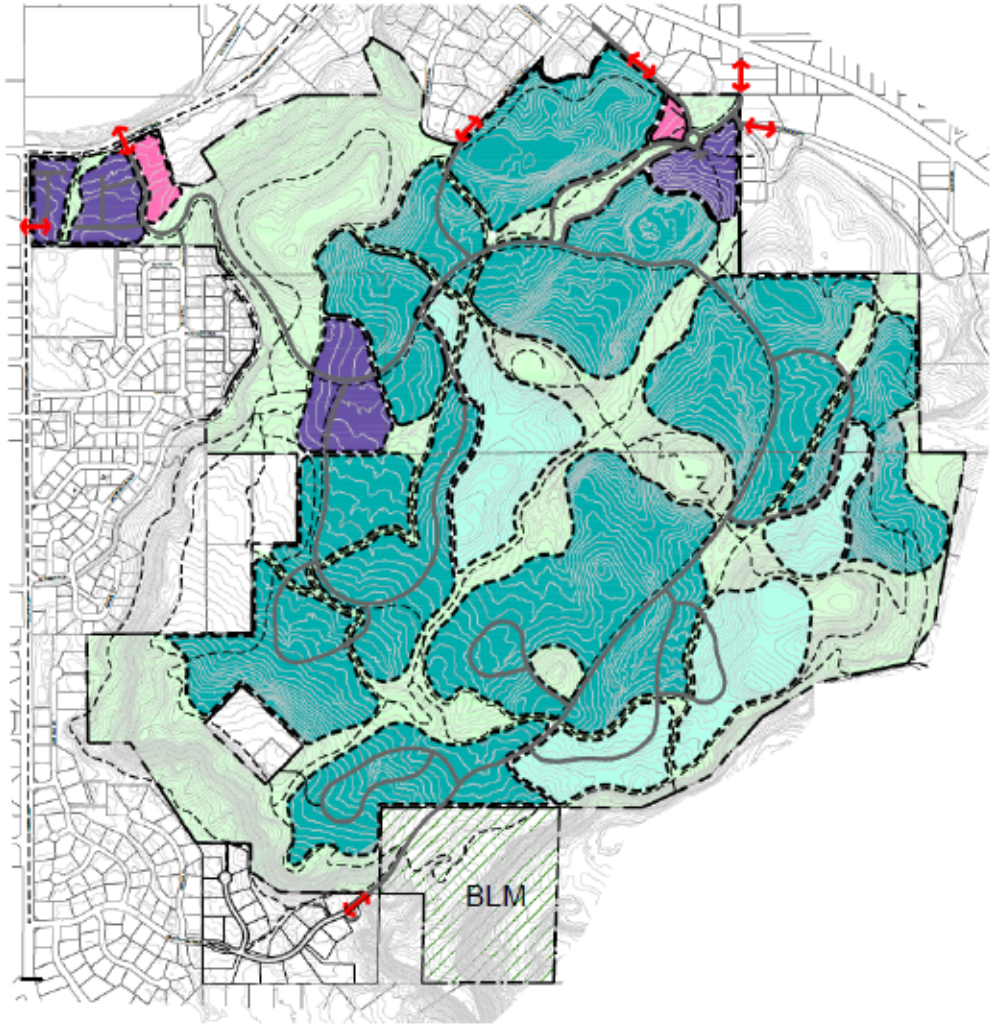


TABLE 2

LAND USE	AREA	MINIMUM DENSITY	MAXIMUM DENSITY
LOW DENSITY RESIDENTIAL	MIN 60 ACRES	60 UNITS	240 UNITS
MEDIUM DENSITY RESIDENTIAL	MIN 298 ACRES	596 UNITS	3576 UNITS
MULTI FAMILY/HIGH DENSITY	MAX 32 ACRES	384 UNITS	512 UNITS
COMMERCIAL / MIXED USE	UP TO 6 ACRES	0 UNITS	100 UNITS
OPEN SPACE/CSR	NO LESS THAN 185 ACRES	-----	-----
PLANNED DEVELOPMENT RANGE		1300 UNITS	1750 UNITS

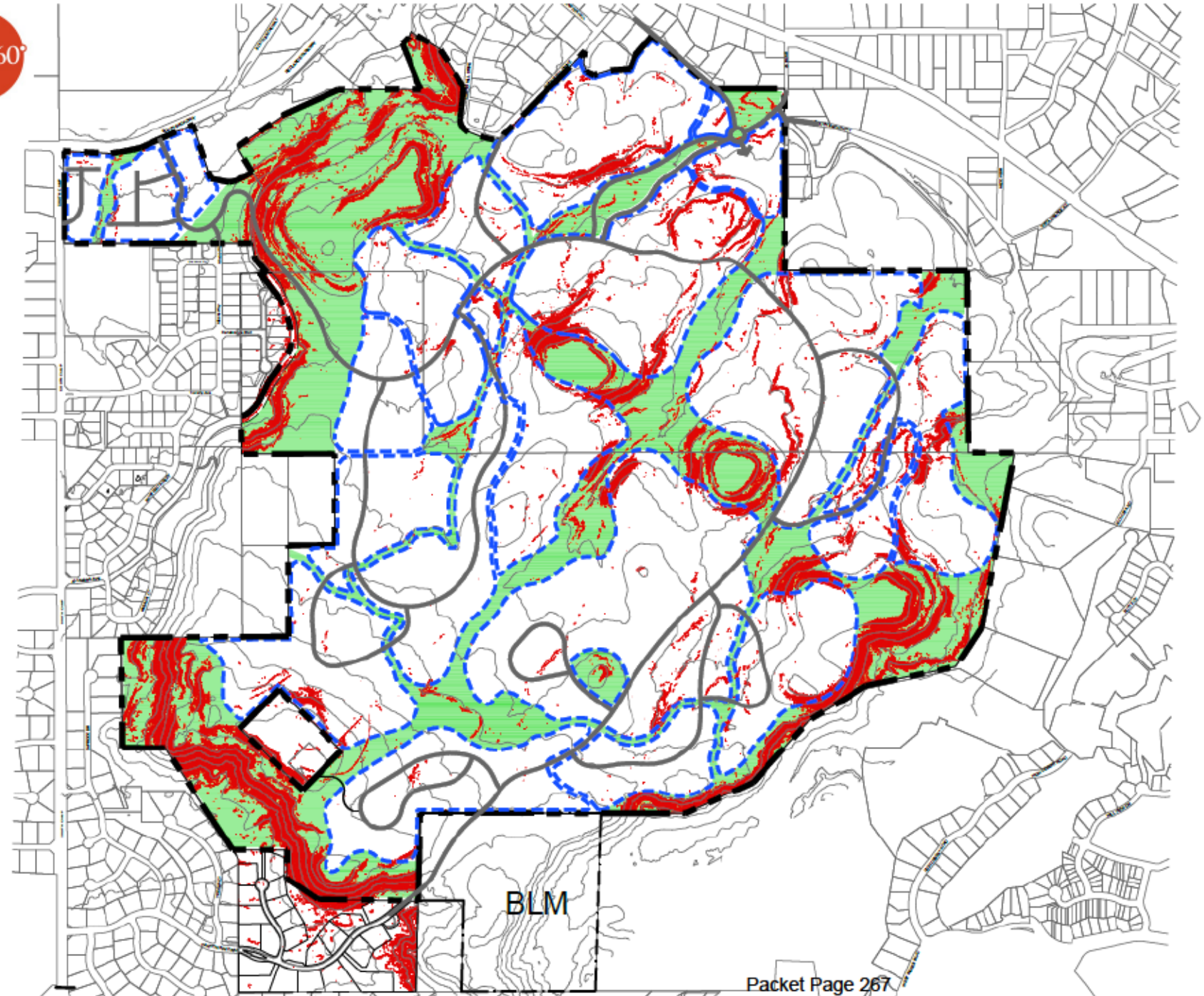
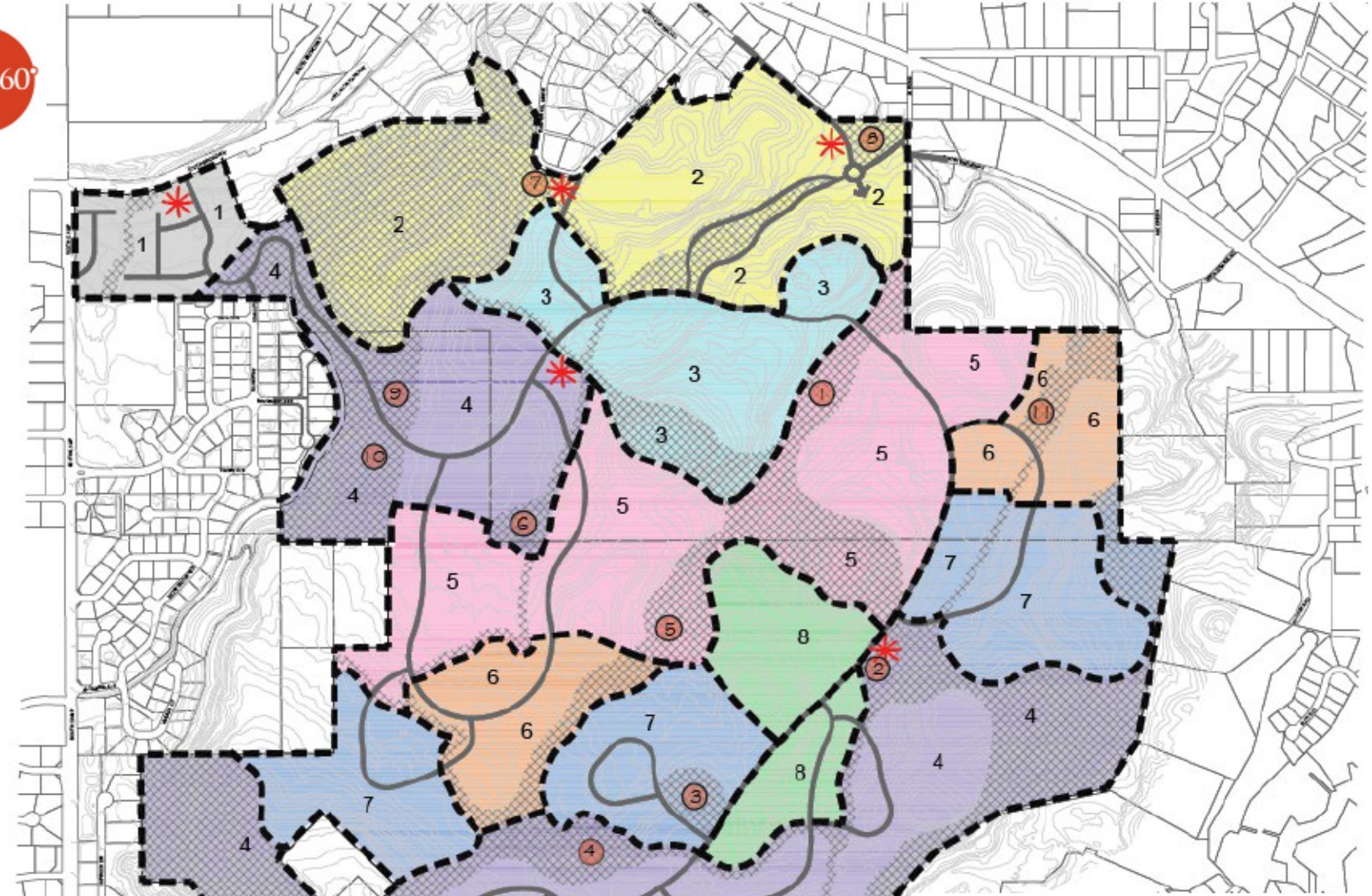


Exhibit 4:
Slope Analysis

SLOPE MAP LEGEND

- 30% OR GREATER SLOPES
- OPEN SPACE
- 25 FT CONTOURS
- PROPOSED ROADS
- ODP DEVELOPMENT 'BUBBLES'

Exhibit 5:
Development Progression Plan



DEVELOPMENT PROGRESSION SCHEDULE

- 1 - TARGETED START 2022
- 2 - TARGETED START 2025
- 3 - TARGETED START 2028
- 4 - TARGETED START 2031
- 5 - TARGETED START 2034
- 6 - TARGETED START 2037
- 7 - TARGETED START 2040
- 8 - TARGETED START 2043
- OPEN SPACE; SEE EXHIBIT 2
- TRADITIONAL PARK; SEE EXHIBIT 2
- TRAILHEAD - SEE EXHIBIT 2

CITY COUNCIL REPORT SCHEDULE

PHASE #	ESTIMATED DATE OF COMMENCEMENT	
PHASE 1	2022	
PHASES 2-7	UPDATE MEETINGS WITH CITY COUNCIL	2027 2032 2037 2042
PHASE 8	2043	

Disclaimer: This Progression Plan is conceptual in nature and is our best estimate at this point as to how the master plan will be developed into the future. Factors such as market trends, product mix, etc., will dictate future decisions on how the community will be developed with future phases.

RECEPTION#: 3021722
3/1/2022 2:20:58 PM, 1 of 17
Recording: $93.00,
Tina Peters, Mesa County, CC.
CLERK AND RECORDER

CITY OF GRAND JUNCTION, COLORADO

RESOLUTION NO. 19-22

A RESOLUTION ENTERING INTO AN AGREEMENT WITH THE REDLANDS 360 METROPOLITAN DISTRICTS NOS 1 THROUGH 9 REGARDING CONSTRUCTION AND ON-GOING MAINTENANCE OF IMPROVEMENTS ASSOCIATED WITH THE REDLANDS 360 AND CANYON RIM DEVELOPMENTS

Recitals:

In June 2020, City Council conditionally approved the Redlands 360 Metropolitan Districts Nos. 1 through 9 ("Districts") Service Plan. The conditions were 1) approval of a Development Plan as defined in the Service Plan; and 2) execution of an Intergovernmental Agreement (IGA) between the City and the District (Exhibit A). The first condition will be met upon favorable consideration of the Planned Development (PD) Outline Development Plan (ODP) (see previous agenda item) for the Redlands 360 development. The City's consideration and approval of the IGA will satisfy condition 2.

The purpose of this IGA is to set forth the obligations of and benefits to the Parties in relation to maintenance activities associated with Public Improvements located within the Service Area. The Parties recognize that the public rights-of-way and private property within the Boundaries of the Districts are also within the City. This IGA identifies the specific services and maintenance obligations within and adjacent to the Service Area that will be provided by the Districts.

A primary purpose of the Districts is to plan for, design, acquire, construct, install, relocate, redevelop, procure, contract for, operate, maintain, and finance certain Public Improvements. Approval of the Service Plan by the City Council constitutes the City's agreement that the Districts may perform the operation and maintenance functions described in this Agreement. Those services will be within a defined and described geographic boundary, which consists of the Service Area on the date of this Agreement.

Per the approved Service Plan, the Districts may impose mill levies on taxable property within its boundaries as a primary source of revenue for repayment of debt service, capital improvements, administrative expenses, and operations and maintenance of Public Improvements.

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT:

City Council hereby accepts the agreement and authorizes the City Manager to execute and enter into the Intergovernmental Agreement with the Redlands 360 Metropolitan Districts Nos. 1 through 9.

Passed and Approved this 2nd day of February 2022.

C.B. McDaniel
Mayor

ATTEST:

Laura Bauer
Interim City Clerk

MASTER INTERGOVERNMENTAL AGREEMENT

BETWEEN THE CITY OF GRAND JUNCTION, COLORADO AND REDLANDS 360 METROPOLITAN DISTRICT NO. 1

THIS AGREEMENT is made and entered into as of the 2 day of February 2022, by and between the CITY OF GRAND JUNCTION, a home-ruled municipal corporation of the State of Colorado (the "City"), and REDLANDS 360 METROPOLITAN DISTRICT NO. 1, a quasi-municipal corporation and political subdivision of the State of Colorado (the "District"). The City and the District are collectively referred to as the Parties.

RECITALS

The District was formed by order of the Mesa County District Court on December 8, 2020 in Case No. 20CV30190 and is operating under a single consolidated service plan for the Redlands 360 Metropolitan Districts 1 through 9 ("Districts.") The District(s) are or will be organized to provide services and to exercise powers as set forth in the Consolidated Service Plan for the Redlands 360 Metropolitan Districts Nos. 1-9 approved by the City on June 17, 2020 ("Consolidated Service Plan"). The Consolidated Service Plan calls for the execution of an intergovernmental agreement between the City and each district; the Parties have determined it to be in the best interests of their respective taxpayers, residents, and property owners to enter into this Intergovernmental Agreement (the "Agreement"). The District entering this Agreement is not responsible for the obligations owed to the City by any other District(s) unless expressly provided for in a separate written agreement. In some instances, Redlands Three Sixty, LLC (the "Developer") may be referred to in this Agreement but is not a party to this Agreement.

Districts will be formed for operation pursuant to the Consolidated Service Plan, and those Districts will be required, consistent with the terms of the City's approval of the Consolidated Service Plan, to enter into and join this Agreement.

Capitalized terms used and not defined in this Agreement shall have the meaning provided for in the Consolidated Service Plan. Consistent with the Consolidated Service Plan "Public Improvements" means "public sanitary sewer and wastewater systems, domestic water supply systems, storm drainage facilities, streets and roadways, traffic and safety facilities, landscaping and irrigation, trails, walls & fences, parks and recreation facilities and such other public improvements approved by the City for the development of the Project." As provided in this Agreement some Public Improvements will be dedicated to the City, or other appropriate jurisdiction, and others will be retained by the District(s).

NOW, THEREFORE, in consideration of the covenants and mutual agreements herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

COVENANTS AND AGREEMENTS

1. Dedication, Operations and Maintenance. To the extent that they are designed and constructed or financed by the District, and located within the District, the District or Developer shall dedicate the Public Improvements described in Exhibit A to the City or other appropriate jurisdiction in a manner consistent with the Consolidated Service Plan and other rules and regulations of the City and applicable provisions of the Grand Junction Municipal Code ("GJMC"). Until the dedication and final acceptance of the Public Improvements described in Exhibit A to the City or other appropriate jurisdiction, the District will be responsible for operation, maintenance, repair, improvement and/or replacement of the

Public Improvements described in Exhibit A. For any Public Improvements not dedicated and conveyed to the City or other appropriate jurisdiction, the District will use District revenue to pay the expenses of operations and maintenance of the Public Improvements from ad valorem tax revenues or from the assessment of rates, fees, tolls and charges imposed pursuant to the Colorado Special District Act. The District shall not have the obligation to pay the expenses of improving, replacing, or materially modifying the Public Improvements listed in Exhibit A after they have been dedicated and conveyed to the City or other appropriate jurisdiction and final acceptance has been issued.

The District will undertake all ownership, operations and maintenance responsibilities for Public Improvements described in Exhibit B that are located within the District, which will not be conveyed to the City and will do so either itself or by contract. The District shall have the obligation to pay the expenses of improving, replacing, and materially modifying Public Improvements described in Exhibit B that have either been dedicated to or retained by the District.

The District will be responsible for the expenses of operations and maintenance of the Public Improvements listed on Exhibit B and will use revenues generated from ad valorem tax revenues or from the assessment of rates, fees, tolls and charges imposed pursuant to the Colorado Special District Act. User fees for use of public facilities may be different for residents of the District than for outside users. Approval of the Consolidated Service Plan by the City constitutes the City's agreement that the District may perform these functions.

2. Acquisition of Land for Public Improvements and Easements. The District shall acquire by deed, or plat dedication from the Developer, on terms required by the City, all real property interests for construction of the Public Improvements to be located within the District or the Service Plan Boundaries that will be conveyed to the City, or other appropriate jurisdiction, by the District. Exceptions must be approved by the City in writing. Failure to comply with this provision shall be deemed a material modification of the Consolidated Service Plan. The District shall acquire all real property interests within the Service Plan Boundaries needed by the City for construction of the Public Improvements described in Exhibits A and D required by the City through dedication from the Developer. Exceptions must be approved by the City in writing. Failure to acquire all land within the District or the Service Plan Boundaries needed by the City for construction of the Public Improvements described in Exhibits A and D as required by this paragraph shall be deemed to be a material modification of the Consolidated Service Plan. To the extent such real property interests outside of the Service Plan Boundaries are required, the City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests, and easements necessary for the construction and operation of such transportation and drainage system improvements.

3. Construction Standards. The District will ensure that the Public Improvements described in Exhibits A and D are designed and constructed in accordance with City standards and specifications of governmental entities having jurisdiction and in accordance with the requirements of the Approved Development Plan. Prior to performing work, the District will obtain the City's approval of engineering plans and will obtain all applicable permits for construction and installation of Public Improvements.

4. Issuance of Privately Placed Debt. Prior to the issuance of any privately placed Debt, the District shall obtain the certification of an External Financial Advisor substantially as follows:

> *We are [I am] an External Financial Advisor within the meaning of the District's Consolidated Service Plan.*
>
> *We [I] certify that (1) the net effective interest rate (calculated as defined in § 32-1-103(12), C.R.S.) to be borne by [insert the designation of the Debt] does not exceed a reasonable current*

[tax- exempt] [taxable] interest rate, using criteria deemed appropriate by us [me] and based upon our [my] analysis of comparable high yield securities; and (2) the structure of [insert designation of the Debt], including maturities and early redemption provisions, is reasonable considering the financial circumstances of the District.

5. Inclusion. The Consolidated Service Plan allows for each of the Districts to include lands within the Consolidated Service Plan Boundaries (as defined in the Consolidated Service Plan) based on factors such as timing, rates of development absorption, and the ability to obtain Privately Placed Debt, and the legal description of the Districts and their respective boundaries may ultimately differ from that represented in the Consolidated Service Plan. The Districts are permitted under the Consolidated Service Plan to include any of the properties within the Consolidated Service Plan Boundaries without modifying the Consolidated Service Plan and without obtaining the consent of the City. The District shall not include within its boundaries any property outside the Consolidated Service Plan Boundaries without the prior written consent to the inclusion(s) by the Grand Junction City Council.

6. Monies from Other Governments/Sources. The District shall not apply for or accept Conservation Trust Funds, Great Outdoors Colorado Funds, Department of Local Affairs, or other funds available from or through governmental or non-profit entities that the City is eligible to apply for, except pursuant to an intergovernmental agreement with the City. This prohibition shall not apply to specific ownership taxes which shall be distributed to and a revenue source for the District without any limitation and shall also not apply to any funds accepted by the District expressly for those Public Improvements described in Exhibit B that will be dedicated to the District and with respect to which the District retains the obligation for ongoing maintenance, operations, and future improvement, replacement, and modification.

7. Total Debt Issuance. The District shall not issue Debt in excess of $60,000,000.00.

8. Consolidation. Except for the consolidation of any of the nine districts, the District shall not file a request with any Court to consolidate with any other Title 32 district without the prior written consent of the Grand Junction City.

9. Bankruptcy Limitation. The limitations contained in the Consolidated Service Plan, including, but not limited to, those pertaining to the Maximum Debt Mill Levy, have been established under the authority of the City to approve a service plan with conditions pursuant to § 32-1-204.5, C.R.S. It is expressly intended that such limitations:

(a) shall not be subject to set-aside for any reason or by any court of competent jurisdiction absent a Consolidated Service Plan Amendment; and

(b) are, together with other requirements of Colorado law, included in the "political or governmental powers" reserved to the State under the U.S. Bankruptcy Code (11 U.S.C.) § 903, and are included in the "regulatory or electoral approval necessary under applicable non-bankruptcy law" as required for confirmation of a Chapter 9 Bankruptcy Plan under Bankruptcy Code § 943(b)(6).

(c) any Debt issued with a pledge or which results in a pledge that exceeds Section Maximum Debt Mill Levy shall be deemed a material modification of this Consolidated Service Plan pursuant to § 32-1-207, C.R.S., and shall not be an authorized issuance of Debt unless and until such material modification has been approved by the City as part of a Consolidated Service Plan Amendment.

10. Dissolution. Upon an independent determination of the Grand Junction City Council that the purposes for which the District was created have been accomplished, the District agrees to file a petition in the appropriate district court for dissolution pursuant to the Special District Act. (C.R.S. Title

32, or as subsequently relocated) In no event shall dissolution occur until the District has provided for the payment or discharge of all of its outstanding indebtedness and other financial obligations as required pursuant to State Law.

11. Disclosure to Purchasers. The District will use reasonable efforts to assure that the Developer (and any other developers of property, if any) located within the District provide written notice to purchasers of property in the District regarding the Maximum Debt Mill Levy, as well as a general description of the District's authority to impose and collect rates, fees, tolls, and charges as required by law or in substantially the form set forth in the Consolidated Service Plan.

12. Consolidated Service Plan Amendment Requirement. Actions of the District which exceed either the limitations of the Consolidated Service Plan, or this Agreement, shall be deemed to be material modifications to the Consolidated Service Plan and a breach of this Agreement, and the City shall be entitled to all remedies available at law or in equity under state and local law.

13. Annual Report. The District shall be responsible for submitting an annual report to the City Attorney no later than August 1st of each year ("Annual Report"). The annual report shall include information as to all the following:

A. Boundary changes made or proposed to the District's boundary as of December 31st of the prior year;

B. Agreements with other governmental entities either entered or proposed as of December 31st of the prior year;

C. Audit of the District's financial statements for the year ending December 31st of the previous year prepared in accordance with generally accepted accounting principles or audit exemptions, if applicable;

D. Notice of continuing disclosure undertaking for events of default by the District, which continue beyond a ninety (90) day period, under any Debt instrument; and

E. Any inability of the District to pay its obligations as they come due in accordance with the term of any Debt instruments, which continue beyond a ninety (90) day period.

F. A list of all facilities and improvements constructed or acquired by the District and those that have been dedicated to and accepted by the City or other appropriate jurisdiction or governmental entity as of December 31st of the prior year.

14. Site Improvements, Off-Site Improvements; Impact Fees and Credits
This Agreement is and shall serve as the Credit Agreement for the District contemplated by Chapter 21.11.010(g)(3) of the GJMC, subject to submission and verification of the District's costs of design and construction for the Public Improvements defined by this Agreement as being eligible for credits. The District and City shall coordinate regarding the planning, design, acquisition, construction, installation, relocation and/or redevelopment of (i) the road improvements identified and described in Exhibit C which are located outside of the District and the Service Plan Boundaries; (ii) drainage improvements identified and described in Exhibit D which are located outside of the District and the Service Plan Boundaries; and (iii) the parks and recreation, trails, and open space improvements identified and described on Exhibits E and F that are located within the District and the Service Plan Boundaries. (collectively, "Regional Improvements.") Notwithstanding the foregoing, the District will retain final decision-making authority with respect to the type, amount, and other characteristics of parks and recreation, trails, and open space improvements beyond the descriptions in Exhibits E.

A. *Transportation Capacity Payments.* Transportation Capacity Payment for each dwelling unit and square footage of non-residential development shall be paid at the rate in effect at the time of planning clearance for construction of each individual dwelling unit. As provided in Exhibit C the District will be eligible for Transportation Capacity Payment credit as provided by Chapter 21.11 of GJMC for its construction of the Road Improvements located outside of both the District and the Service Area that are described as TIS Intersection Numbers 6 and 16 in Table 1 of Exhibit C, which are Capital Facilities as defined by Section 21.11.010(e) of GJMC. Consistent with Section 21.11.010(g)(2)(ii)(A) of GJMC, where the District has constructed the Capital Facilities described in the preceding sentence it may obtain credit against Transportation Capacity Payment for the following costs: the costs of construction or reconstruction, the costs of all labor and materials, financing charges, interest prior to and during construction and for one year after completion of construction, costs of design, plans and specifications, surveys of estimates of costs and of revenues, costs of professional services, and all other expenses necessary or incident to determining the feasibility or practicability of such construction or reconstruction, or any other additional costs permitted by the GJMC.

B. *Parks, Recreation, Trails and Open Space Impact Fees and Credits.* As provided in Exhibit E the District will be eligible for Parks and Recreation Impact Fee credit as provided by Chapter. 21.11 of Grand Junction Municipal Code for the associated costs for the parks and recreation, trails, and open space improvements that are to be constructed and maintained in perpetuity for public access which are Capital Facilities as defined by Section 21.11.010(e) of GJMC. Consistent with Section 21.11.010(g)(2)(ii)(A) of GJMC, where the District has constructed the Capital Facilities described in the preceding sentence it may obtain credit against Parks and Recreation Impact Fee for the following costs: the costs of construction or reconstruction, the costs of all labor and materials, financing charges, interest prior to and during construction and for one year following completion of construction, costs of design, plans and specifications, surveys of estimates of costs and of revenues, costs of professional services, and all other expenses necessary or incident to determining the feasibility or practicability of such construction or reconstruction, or any other additional costs permitted by the GJMC.

For other park facilities, no credits will be issued given the nature of these smaller facilities serving primarily the development. Developer's dedication of 120 acres or more of land within the Project to the District, and any additional Districts operating under the Consolidated Service Plan, for public parks, open space and trails within the Service Plan Boundaries to be operated consistent with this Agreement satisfies the open space dedication requirements of Chapters 21.06.020 and 21.05.04(g) of the GJMC as set forth in Ordinance No. 5051. Pursuant to Ordinance No. 5051establishing the Planned Development (PD) Outline Development Plan (ODP) for the Project the Developer will dedicate approximately 185 acres or more of land for public parks, open space and trails which exceed the requirements of the GJMC. The open space used to meet the 185 acres required by Ordinance No. 5051 may include the area open space dedicated as the "Four Brothers Corridor" as well as open space along and abutting trails.

C. *Other Impact Fees and Credits.* No other credits for impact fees shall be available to the Developer or the District; provided however, should the GJMC be revised to require an impact fee for other public improvements, such as for drainage or stormwater control, the District may seek available impact fee credits for its design, construction, installation, contribution and dedication to the City, or its financial contribution to, such Capital Facilities, including credit for previously completed improvements or Capital Facilities.

Impact fee credits shall be transferable by the District and may be used by the District, Developer, or any person owning real property within the Service Plan Boundaries of the Redlands 360 Planned Development that may be subject to the Development Impact Fee Chapter 21.11 of Grand Junction Municipal Code, as now exists or as amended in the future, regardless of whether the Capital Facility is

located within a particular District's boundaries.

15. Maximum Debt Mill Levy. The "Maximum Debt Mill Levy" shall be the maximum mill levy the District is permitted to impose upon the taxable property within the District for payment of Debt, and shall be determined as follows:

A. *Excess of 50% of Assessed Value.* For any portion of the District's aggregate Debt which exceeds fifty percent (50%) of the District's assessed valuation, the Maximum Debt Mill Levy for such portion of Debt shall be fifty (50) mills less the number of mills necessary to pay unlimited mill levy Debt described in section 15.B below, adjusted to account for change in the method of calculating assessed valuation or any constitutionally mandated tax credit, cut or abatement. The mill levy limitation applicable to such Debt may be increased or decreased to reflect such changes, such increases or decreases to be determined by the Board in good faith (such determination to be binding and final) so that, to the extent possible, the actual tax revenues generated by the mill levy, as adjusted for changes occurring after January 1, 2020, are neither diminished nor enhanced as a result of such changes. For purposes of the foregoing, a change in the ratio of actual valuation shall be deemed to be a change in the method of calculating assessed valuation.

B. *Debt Equal to or Less Than 50% of Assessed Value.* For any portion of a District's aggregate Debt which is equal to or less than fifty percent (50%) of the District's assessed valuation, either on the date of issuance or at any time thereafter, the mill levy to be imposed to repay such portion of Debt shall not be subject to the Maximum Debt Mill Levy and, as a result, the mill levy may be such amount as is necessary to pay the Debt service on such Debt, without limitation of rate.

C. *Pledge of Mill Levy.* For purposes of the foregoing, once Debt has been determined to within section 15.B. above so that a District is entitled to pledge to its payment an unlimited *ad valorem* mill levy, the District may provide that such Debt shall remain secured by such unlimited mill levy, notwithstanding any subsequent change in the District's Debt to assessed ratio. All Debt issued by the District must be issued in compliance with the requirements of Section 32-1-1101, C.R.S., and all other requirements of State law.

D. *Maximum Mill Levy for Payment of Debt.* The maximum mill levy a District can impose for payment of Debt shall be 50 mills; provided, however, that if the method of calculating assessed valuation is changed after the date of approval of this Consolidated Service Plan, the mill levy limitation may be increased or decreased to reflect such changes, such increases or decreases to be determined by the Board in good faith (such determination to be binding and final) so that to the extent possible, the actual tax revenues generated by the mill levy, as adjusted, are neither diminished nor enhanced as a result of such changes. For purposes of the foregoing, a change in the ratio of actual valuation to assessed valuation shall be deemed to be a change in the method of calculating assessed valuation.

E. *Payment of Interest to Developer.* The issuance of Debt to the Developer or its affiliates, as the organizer of the District, may permit interest to accrue on the total unpaid amount, such interest to be paid according to such terms as may be established but without compounding. An individual District shall not impose a levy for repayment of Debt (or use the proceeds of any mill levy for repayment of Debt) to the Organizers of the Districts or their affiliates, on any single property developed for residential uses which exceeds forty (40) years after the year of the initial imposition of such mill levy. Notwithstanding any other provision hereof, such Debt referred to in the preceding sentence shall be deemed to be discharged at such time as the mill levy is suspended at the end of the 40-year period.

16. Debt Instrument Disclosure Requirement. In the text of each Bond and any other instrument representing and constituting Debt, the District shall set forth a statement in substantially the following form:

By acceptance of this instrument, the owner of this Bond agrees and consents to all of the limitations in respect of the payment of the principal of and interest on this Bond contained herein, in the resolution of the District authorizing the issuance of this Bond and in the Consolidated Service Plan for creation of the District. Similar language describing the limitations in respect to the payment of the principal of and interest on Debt set forth in this Consolidated Service Plan shall be included in any document used for the offering of the Debt for sale to persons, including, but not limited to, a developer of property within the boundaries of the District.

17. Security for Debt. The District shall not pledge any revenue or property of the City as security for the indebtedness set forth in the Consolidated Service Plan. Approval of the Consolidated Service Plan and this Agreement shall not be construed as a guarantee by the City of payment of any of the District's obligations, nor shall anything in the Consolidated Service Plan or this Agreement be construed so as to create any responsibility or liability on the part of the City in the event of default by the District in the payment of any such obligation.

18. Notices. All notices, demands, requests or other communications to be sent by one party to the other shall be in writing and deemed to have been validly given or served by delivery of same in person to the address or by courier delivery, via Federal Express or other nationally recognized overnight air courier service, or by depositing same in the United States mail, postage prepaid, addressed as follows:

To the District:
Redlands 360 Metropolitan District No. 1
c/o John Justus
Hoskin Farina & Kampf, P.C.
P.O. Box 40
Grand Junction, Colorado 81502

To the City:
City of Grand Junction
c/o John Shaver, City Attorney
250 N. 5th Street
Grand Junction, CO 81501

To the Developer:
Redlands Three Sixty, LLC
c/o Donald Gravette
9540 Federal Drive, Suite 200
Colorado Springs, CO 80921

All notices, demands, requests or other communications shall be effective upon such personal delivery or one (1) business day after being deposited with Federal Express or other nationally recognized overnight air courier service or three (3) business days after deposit in the United States mail. By giving the other party at least ten (10) days advance written notice, the Parties shall have the right from time to time to change its address.

19. Amendment. This Agreement may be amended, modified, changed, or terminated in whole or in part only by a written agreement duly authorized and executed by the Parties and without amendment to the Consolidated Service Plan.

20. Assignment. Neither Party shall assign any of its rights nor delegate any of its duties to any person or entity without having first obtained the prior written consent of the other Party, which consent will not be unreasonably withheld. Any purported assignment or delegation in violation of these restrictions shall be void and of no effect.

21. Default/Remedies. In the event of a breach or default of this Agreement by a Party, the non-defaulting Party shall be entitled to exercise all remedies available at law or in equity, specifically including suits for specific performance and/or monetary damages. In the event of any proceeding to enforce this Agreement, the prevailing Party shall be entitled to obtain as part of its judgment or award its reasonable attorneys' fees and costs.

22. Governing Law and Venue. This Agreement shall be governed and construed under the laws of the State of Colorado, and as applicable the law of the City of Grand Junction, Colorado.

23. Inurement. Each of the terms, covenants and conditions of this Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.

24. Integration. This Agreement constitutes the entire agreement between the Parties with respect to the matters addressed herein. All prior discussions and negotiations regarding the subject matter hereof are merged herein.

25. Interested Parties. Nothing expressed or implied in this Agreement is intended or shall be construed to confer upon, or to give to, any person other than the District and the City any right, remedy, or claim under or by reason of this Agreement or any covenants, terms, conditions, or provisions thereof, and all the covenants, terms, conditions, and provisions in this Agreement by and on behalf of the District and the City shall be for the sole and exclusive benefit of the District and the City.

26. Severability. If any part of this Agreement shall, for any reason, be held invalid or unenforceable, the invalidity or unenforceability of such provision shall not affect any other provision contained herein, the intention being that such provisions are severable.

27. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall constitute an original and all of which shall constitute one and the same document.

28. Defined Terms. Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to them in the Consolidated Service Plan.

Dated effective the year and date first above written.

REDLANDS 360 METROPOLITAN DISTRICT No. 9

By: _____
President

Attest:

By: _____
Secretary

APPROVED AS TO FORM:

_____
Legal Counsel for District

CITY OF GRAND JUNCTION, COLORADO

By: _____
Mayor

Attest:

By: _____
~~City Clerk~~ Interim City Clerk

APPROVED AS TO FORM:

_____
City Attorney

EXHIBIT A –PUBLIC IMPROVEMENTS TO BE DEDICATED TO CITY OR OTHER APPROPRIATE JURISDICTIONS

The Dedicated Public Improvements shall include public sanitary sewer and wastewater systems, public domestic water supply systems, public storm drainage facilities, public streets and roadways, and public traffic and safety facilities, located within the District and approved by the City for the development of the Project. Dedicated Public Improvements may also include such other public improvements that the City or other authorized governmental or quasi-governmental entity expressly agrees in writing to accept dedication and ownership of that are required and approved by the City for the development of the Project, such as those described in Exhibit C of this Agreement. The City shall not be responsible for costs associated with the design and construction of such Public Improvements within the District. To the extent that the transportation and drainage system construction subject to this paragraph is outside of the Service Plan Boundaries, the City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests, and easements necessary for the construction and operation of such transportation system improvements.

Unless further indicated in the Agreement and Exhibits to the same, the Public Improvements described in this Exhibit A shall be dedicated to the City or other appropriate jurisdiction in a manner consistent with the Consolidated Service Plan and other rules and regulations of the City and applicable provisions of the GJMC.

EXHIBIT B – PUBLIC IMPROVEMENTS TO BE DEDICATED TO OR RETAINED BY THE DISTRICT

The Public Improvements consisting of landscaping and irrigation, trails (hard surface and soft surface), open space, parks, and the recreation facilities located within the District will be dedicated to and retained by the District. The District will be responsible for ownership, operations and maintenance, repair, and replacement of these Public Improvements. The parks, trails, and open space facilities shall be open to the public as further detailed in this Agreement and on Exhibit E.

EXHIBIT C – TRANSPORTATION

1. All transportation infrastructure internal to the Project shall be fully designed and constructed to City standards. All transportation infrastructure external to the Project shall be fully designed and constructed to City, Mesa County, and CDOT standards, as applicable.

2. The District, along with any additional Districts formed and operating pursuant to the Consolidated Service Plan, shall pay for and otherwise be responsible for costs of design and construction of off-site transportation system improvements located outside of the District, but adjacent to the Project, that are listed as TIS Item No. 15, 16, 6 and 8 in Table 1 below as required by and in accordance with the GJMC Chapter 21.06.01. District(s) shall pay for the design and construction costs of these off-site transportation improvements in accordance with the triggering event identified in Table 1 below. To the extent that the transportation system construction subject to this paragraph is outside of the Service Plan Boundaries, the City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests and easements necessary for the construction and operation of such transportation system improvements. Any cost for property and easement acquisition shall be a cost of the specific project.

3. The District, and any other participating District for the Project, shall be entitled to obtain impact fee credits for TIS Item Nos. 6 and 16 for such contribution or design and construction in accordance with Chapter 21.11 of GJMC as now exists or as amended in the future. The City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests, and easements necessary for the construction and operation of such transportation system improvements. Any cost for property and easement acquisition incurred by the District shall be a cost of the specific project that is eligible for impact fee credit.

Table 1
Off-Site Roadway Improvements

TIS Intersection	Location	Improvement	Developer/District Cost Obligation and Credit	Trigger Event
6	Broadway (SH-340) and Redlands Parkway	See Table 1 Addendum (1). below.	Developer to design and construct. See Table 1 Addendum.	See Table 1 Addendum.
8	Broadway (SH-340) and 23 Road	See Table 1 Addendum, (2).	Developer to design and construct one lane roundabout. TCP credit 0%. City or other will construct additional lanes or improvements if/when required.	200 DU

15	Redlands Parkway Access	See Table 1 Addendum, (3).	Developer to design and construct. TCP credit 0%	Commencement of Phase 1 Construction
16	South Broadway and Hwy 340 Intersection	See Table 1 Addendum, (4).	Developer to design and construct. TCP credit 100%.	200 DU

Table 1 is excerpted from Conclusions & Recommendations from Kimley-Horn Traffic Impact Study for Redlands 360, Grand Junction, Colorado, prepared for La Plata Communities, LLC, dated September 2021 ("Study".) The interpretation of the requirements of this Table 1 and the descriptions and specifications set forth below in the addendum are made by reference to the Study.

Table 1 Addendum

(1) An access permit may be required by CDOT for the Redlands Parkway and SH-340 intersection (TIS Item No. 6) because the traffic generated by the proposed project may result in a degradation of the level of service ("LOS") in the existing roundabout. If the LOS at this intersection is not addressed by the District and/or Developer, CDOT may object to further development or denying further access without mitigation of the project impacts. As stated in the Study, the extent of improvements necessitated by growth both due to and independent of the Project are:

(a) Conversion of both the southbound shared left turn/through lane to a southbound left turn lane, and the southbound right turn lane to a shared left turn/through lane at the time the Project reaches 800 DU. District(s) will receive 34.9% TCP credit for the eligible costs under paragraph 14.A of this Agreement for the construction and completion of these specific improvements.

(b) Addition of an eastbound right turn lane at the time the Project reaches 1550 DU. District(s) will receive 50% TCP credit for the eligible costs under paragraph 14.A of this Agreement for the construction and completion of these specific improvements.

(c) The Study recommended addition of a southbound right turn bypass lane; however, this is not a requirement necessitated by the Project and is not a required system improvement by this Agreement.

(2) An access permit will be required by CDOT for the 23 Road and SH-340 intersection (TIS Item No. 8) where the proposed project access will exist in association with future phases of the project. It is anticipated that this CDOT Access Permit will be needed once 23 Road is extended and access is provided for the Project. The Study proposes the intersection of Broadway (SH-340) and 23 Road (TIS Item No. 8) to be roundabout controlled. Single lane approaches should be implemented along Broadway (SH-340) in conjunction with this roundabout. District will receive 0% TCP credit for a single-lane roundabout, and the City will be responsible for additional lanes.

(3) One full movement public access roadway (TIS Item No. 15) is proposed along the south side of Redlands Parkway with the commencement of Phase One. The Redlands Parkway Access Roadway is recommended to operate with stop control with the installation of a R1-1 "STOP" sign for the northbound exiting approach to Redlands Parkway. A westbound left turn lane with 150 feet of length is recommended at the access along Redlands Parkway. The northbound exiting approach of this access intersection should provide separate left and right turn lanes.

(4) The South Broadway leg of the intersection with SH-340 (TIS Item No. 16) currently provides a tight angle skew with poor turning radii and sight visibility. Based on the roadway orientation and configuration of South Broadway at the intersection with SH-340, it is recommended that South Broadway be converted to one-way eastbound directional flow of travel at the intersection with SH-340. Likewise, the intersection of South Broadway and SH-340 should only provide right-in movements. It is recommended that a raised center median be constructed along SH-340 to restrict entering left turn movements at the intersection with South Broadway. The conversion to right-in movements only at the SH-340 and South Broadway intersection will require a CDOT access permit. If the intersection of SH-340 and South Broadway is restricted to right-in movements only, a R5-1 "Do Not Enter" sign should be installed on the west leg facing westbound drivers at the S Broadway and Easter Hill Drive intersection to prevent westbound travel on South Broadway. Further, striping should be oriented on the south and east legs of the South Broadway and Easter Hill Drive intersection to restrict movements from entering the west leg of this intersection. A R3-2 "No Left Turn" sign should be placed under the STOP sign on northbound approach of the South Broadway and Easter Hill Drive intersection while a R3-5 "Left Turn Only" sign should be installed on the northeast corner of the South Broadway and Easter Hill Drive intersection. Likewise, R6-1 "ONE WAY" signs could be installed on the west leg of the intersection if desired. District(s) will receive 100% TCP credit for the eligible costs under paragraph 14.A of this Agreement for the construction and completion of any of these specific improvements.

EXHIBIT D - DRAINAGE IMPROVEMENTS

The District shall design and construct stormwater infrastructure in accordance with Title 28 GJMC Stormwater Management Manual. Infrastructure within the District shall be designed and constructed to either achieve a runoff rate that can be accommodated by existing downstream facilities or provide improvements to existing facilities to accommodate allowable runoff.

Stormwater detention is required, consequently no drainage fee in lieu of detention, or other drainage fees which may subsequently be imposed by the City, will be required of the Project. No drainage facility improvements by the District will be required north of the north side of SH-340.

EXHIBIT E – PARKS, RECREATION, OPEN SPACE AND TRAILS

1. All parks, recreation, open space and trails as depicted on Redlands 360 Exhibit 1: Trail Types and Exhibit 2: Public Park Areas as included in Ordinance No. 5051 shall be dedicated to, improvements thereto constructed by, and ongoing maintenance provided by the District. The total parks, open space and recreation areas dedicated to Districts shall total approximately 185 acres of land within the Project and satisfies open space dedication requirements for the Project under the GJMC. In addition, all areas shall be platted and dedicated for the access, use and enjoyment of the general public. The "Parks (Traditional)" depicted on Exhibit 2, Legend Section A and the "Parks (Unique)" depicted on Exhibit 2 Legends B and C and more particularly described in paragraphs 2a-d below, shall be designed and constructed in accordance with Exhibit 3: Land Use and Default Zones and Exhibit 5: Development Progression Plan as included in Ordinance No. 5051, all in accordance with and pursuant to the GJMC.

2. The District shall be given 100% credit under Chapter 21.11.010(g) of the GJMC for the equivalent of the costs of construction or reconstruction, the costs of all labor and materials, financing charges, interest prior to and during construction and for one year after completion of construction costs of design, plans and specifications, surveys of estimates of costs and of revenues, costs of professional services, and all other expenses necessary or incident to determining the feasibility or practicability of such construction or reconstruction, or any other additional costs permitted by the GJMC which the District incurs, or to which the District contributes, regarding the following public parks, recreation, and open space Public Improvements for the Project when construction is complete of the following parks, recreation, open space and trails:

a. Trail refurbishments, stabilization, sustainability improvements, and relocation improvements for historical on-site trails.
b. Trailhead improvements (design & construction), including paved parking.

c. One "neighborhood park" of at least 2 acres in developed area size that would include landscaping, irrigation, restroom, level play field of approximately 50,000 square feet, play equipment (for children 2-5 years old and 5-12 years old), trail connections to trail network system, picnic/grill area, and parking.

d. New trail and park/recreation improvements associated with the 4 Brothers regional park improvements.

3. Only the parks, recreation and trail improvements described in 2a-d above (and notwithstanding Exhibits referenced in 1. above as contained within Ordinance No. 5051) will be eligible for Park Impact Fee credits.

4. The Districts shall strive to maintain parks, trails, and associated improvements at or better than City park maintenance standards. The City agrees to reasonably advise the Districts on best maintenance and operations practices.

RECEPTION#: 3021723
3/1/2022 2:20:58 PM, 1 of 17
Recording: $93.00,
Tina Peters, Mesa County, CO.
CLERK AND RECORDER

CITY OF GRAND JUNCTION, COLORADO

RESOLUTION NO. 19-22

A RESOLUTION ENTERING INTO AN AGREEMENT WITH THE REDLANDS 360 METROPOLITAN DISTRICTS NOS 1 THROUGH 9 REGARDING CONSTRUCTION AND ON-GOING MAINTENANCE OF IMPROVEMENTS ASSOCIATED WITH THE REDLANDS 360 AND CANYON RIM DEVELOPMENTS

Recitals:

In June 2020, City Council conditionally approved the Redlands 360 Metropolitan Districts Nos. 1 through 9 ("Districts") Service Plan. The conditions were 1) approval of a Development Plan as defined in the Service Plan; and 2) execution of an Intergovernmental Agreement (IGA) between the City and the District (Exhibit A). The first condition will be met upon favorable consideration of the Planned Development (PD) Outline Development Plan (ODP) (see previous agenda item) for the Redlands 360 development. The City's consideration and approval of the IGA will satisfy condition 2.

The purpose of this IGA is to set forth the obligations of and benefits to the Parties in relation to maintenance activities associated with Public Improvements located within the Service Area. The Parties recognize that the public rights-of-way and private property within the Boundaries of the Districts are also within the City. This IGA identifies the specific services and maintenance obligations within and adjacent to the Service Area that will be provided by the Districts.

A primary purpose of the Districts is to plan for, design, acquire, construct, install, relocate, redevelop, procure, contract for, operate, maintain, and finance certain Public Improvements. Approval of the Service Plan by the City Council constitutes the City's agreement that the Districts may perform the operation and maintenance functions described in this Agreement. Those services will be within a defined and described geographic boundary, which consists of the Service Area on the date of this Agreement.

Per the approved Service Plan, the Districts may impose mill levies on taxable property within its boundaries as a primary source of revenue for repayment of debt service, capital improvements, administrative expenses, and operations and maintenance of Public Improvements.

NOW, THEREFORE, BE IT HEREBY RESOLVED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT:

City Council hereby accepts the agreement and authorizes the City Manager to execute and enter into the Intergovernmental Agreement with the Redlands 360 Metropolitan Districts Nos. 1 through 9.

Passed and Approved this 2nd day of February 2022.

C.B. McDaniel
Mayor

ATTEST:

Laura Bauer
Interim City Clerk

MASTER INTERGOVERNMENTAL AGREEMENT

BETWEEN THE CITY OF GRAND JUNCTION, COLORADO AND REDLANDS 360 METROPOLITAN DISTRICT NO. 9

THIS AGREEMENT is made and entered into as of the 2 day of February 2022, by and between the CITY OF GRAND JUNCTION, a home-ruled municipal corporation of the State of Colorado (the "City"), and REDLANDS 360 METROPOLITAN DISTRICT NO. 9, a quasi-municipal corporation and political subdivision of the State of Colorado (the "District"). The City and the District are collectively referred to as the Parties.

RECITALS

The District was formed by order of the Mesa County District Court on December 8, 2020 in Case No. 20CV30189 and is operating under a single consolidated service plan for the Redlands 360 Metropolitan Districts 1 through 9 ("Districts.") The District(s) are or will be organized to provide services and to exercise powers as set forth in the Consolidated Service Plan for the Redlands 360 Metropolitan Districts Nos. 1-9 approved by the City on June 17, 2020 ("Consolidated Service Plan"). The Consolidated Service Plan calls for the execution of an intergovernmental agreement between the City and each district; the Parties have determined it to be in the best interests of their respective taxpayers, residents, and property owners to enter into this Intergovernmental Agreement (the "Agreement"). The District entering this Agreement is not responsible for the obligations owed to the City by any other District(s) unless expressly provided for in a separate written agreement. In some instances, Redlands Three Sixty, LLC (the "Developer") may be referred to in this Agreement but is not a party to this Agreement.

Districts will be formed for operation pursuant to the Consolidated Service Plan, and those Districts will be required, consistent with the terms of the City's approval of the Consolidated Service Plan, to enter into and join this Agreement.

Capitalized terms used and not defined in this Agreement shall have the meaning provided for in the Consolidated Service Plan. Consistent with the Consolidated Service Plan "Public Improvements" means "public sanitary sewer and wastewater systems, domestic water supply systems, storm drainage facilities, streets and roadways, traffic and safety facilities, landscaping and irrigation, trails, walls & fences, parks and recreation facilities and such other public improvements approved by the City for the development of the Project." As provided in this Agreement some Public Improvements will be dedicated to the City, or other appropriate jurisdiction, and others will be retained by the District(s).

NOW, THEREFORE, in consideration of the covenants and mutual agreements herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties agree as follows:

COVENANTS AND AGREEMENTS

1. Dedication, Operations and Maintenance. To the extent that they are designed and constructed or financed by the District, and located within the District, the District or Developer shall dedicate the Public Improvements described in Exhibit A to the City or other appropriate jurisdiction in a manner consistent with the Consolidated Service Plan and other rules and regulations of the City and applicable provisions of the Grand Junction Municipal Code ("GJMC"). Until the dedication and final acceptance of the Public Improvements described in Exhibit A to the City or other appropriate jurisdiction, the District will be responsible for operation, maintenance, repair, improvement and/or replacement of the

Public Improvements described in Exhibit A. For any Public Improvements not dedicated and conveyed to the City or other appropriate jurisdiction, the District will use District revenue to pay the expenses of operations and maintenance of the Public Improvements from ad valorem tax revenues or from the assessment of rates, fees, tolls and charges imposed pursuant to the Colorado Special District Act. The District shall not have the obligation to pay the expenses of improving, replacing, or materially modifying the Public Improvements listed in Exhibit A after they have been dedicated and conveyed to the City or other appropriate jurisdiction and final acceptance has been issued.

The District will undertake all ownership, operations and maintenance responsibilities for Public Improvements described in Exhibit B that are located within the District, which will not be conveyed to the City and will do so either itself or by contract. The District shall have the obligation to pay the expenses of improving, replacing, and materially modifying Public Improvements described in Exhibit B that have either been dedicated to or retained by the District.

The District will be responsible for the expenses of operations and maintenance of the Public Improvements listed on Exhibit B and will use revenues generated from ad valorem tax revenues or from the assessment of rates, fees, tolls and charges imposed pursuant to the Colorado Special District Act. User fees for use of public facilities may be different for residents of the District than for outside users. Approval of the Consolidated Service Plan by the City constitutes the City's agreement that the District may perform these functions.

2. Acquisition of Land for Public Improvements and Easements. The District shall acquire by deed, or plat dedication from the Developer, on terms required by the City, all real property interests for construction of the Public Improvements to be located within the District or the Service Plan Boundaries that will be conveyed to the City, or other appropriate jurisdiction, by the District. Exceptions must be approved by the City in writing. Failure to comply with this provision shall be deemed a material modification of the Consolidated Service Plan. The District shall acquire all real property interests within the Service Plan Boundaries needed by the City for construction of the Public Improvements described in Exhibits A and D required by the City through dedication from the Developer. Exceptions must be approved by the City in writing. Failure to acquire all land within the District or the Service Plan Boundaries needed by the City for construction of the Public Improvements described in Exhibits A and D as required by this paragraph shall be deemed to be a material modification of the Consolidated Service Plan. To the extent such real property interests outside of the Service Plan Boundaries are required, the City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests, and easements necessary for the construction and operation of such transportation and drainage system improvements.

3. Construction Standards. The District will ensure that the Public Improvements described in Exhibits A and D are designed and constructed in accordance with City standards and specifications of governmental entities having jurisdiction and in accordance with the requirements of the Approved Development Plan. Prior to performing work, the District will obtain the City's approval of engineering plans and will obtain all applicable permits for construction and installation of Public Improvements.

4. Issuance of Privately Placed Debt. Prior to the issuance of any privately placed Debt, the District shall obtain the certification of an External Financial Advisor substantially as follows:

> *We are [I am] an External Financial Advisor within the meaning of the District's Consolidated Service Plan.*
>
> *We [I] certify that (1) the net effective interest rate (calculated as defined in § 32-1-103(12), C.R.S.) to be borne by [insert the designation of the Debt] does not exceed a reasonable current*

[tax- exempt] [taxable] interest rate, using criteria deemed appropriate by us [me] and based upon our [my] analysis of comparable high yield securities; and (2) the structure of [insert designation of the Debt], including maturities and early redemption provisions, is reasonable considering the financial circumstances of the District.

5. Inclusion. The Consolidated Service Plan allows for each of the Districts to include lands within the Consolidated Service Plan Boundaries (as defined in the Consolidated Service Plan) based on factors such as timing, rates of development absorption, and the ability to obtain Privately Placed Debt, and the legal description of the Districts and their respective boundaries may ultimately differ from that represented in the Consolidated Service Plan. The Districts are permitted under the Consolidated Service Plan to include any of the properties within the Consolidated Service Plan Boundaries without modifying the Consolidated Service Plan and without obtaining the consent of the City. The District shall not include within its boundaries any property outside the Consolidated Service Plan Boundaries without the prior written consent to the inclusion(s) by the Grand Junction City Council.

6. Monies from Other Governments/Sources. The District shall not apply for or accept Conservation Trust Funds, Great Outdoors Colorado Funds, Department of Local Affairs, or other funds available from or through governmental or non-profit entities that the City is eligible to apply for, except pursuant to an intergovernmental agreement with the City. This prohibition shall not apply to specific ownership taxes which shall be distributed to and a revenue source for the District without any limitation and shall also not apply to any funds accepted by the District expressly for those Public Improvements described in Exhibit B that will be dedicated to the District and with respect to which the District retains the obligation for ongoing maintenance, operations, and future improvement, replacement, and modification.

7. Total Debt Issuance. The District shall not issue Debt in excess of $60,000,000.00.

8. Consolidation. Except for the consolidation of any of the nine districts, the District shall not file a request with any Court to consolidate with any other Title 32 district without the prior written consent of the Grand Junction City.

9. Bankruptcy Limitation. The limitations contained in the Consolidated Service Plan, including, but not limited to, those pertaining to the Maximum Debt Mill Levy, have been established under the authority of the City to approve a service plan with conditions pursuant to § 32-1-204.5, C.R.S. It is expressly intended that such limitations:

(a) shall not be subject to set-aside for any reason or by any court of competent jurisdiction absent a Consolidated Service Plan Amendment; and

(b) are, together with other requirements of Colorado law, included in the "political or governmental powers" reserved to the State under the U.S. Bankruptcy Code (11 U.S.C.) § 903, and are included in the "regulatory or electoral approval necessary under applicable non-bankruptcy law" as required for confirmation of a Chapter 9 Bankruptcy Plan under Bankruptcy Code § 943(b)(6).

(c) any Debt issued with a pledge or which results in a pledge that exceeds Section Maximum Debt Mill Levy shall be deemed a material modification of this Consolidated Service Plan pursuant to § 32-1-207, C.R.S., and shall not be an authorized issuance of Debt unless and until such material modification has been approved by the City as part of a Consolidated Service Plan Amendment.

10. Dissolution. Upon an independent determination of the Grand Junction City Council that the purposes for which the District was created have been accomplished, the District agrees to file a petition in the appropriate district court for dissolution pursuant to the Special District Act. (C.R.S. Title

32, or as subsequently relocated) In no event shall dissolution occur until the District has provided for the payment or discharge of all of its outstanding indebtedness and other financial obligations as required pursuant to State Law.

11. Disclosure to Purchasers. The District will use reasonable efforts to assure that the Developer (and any other developers of property, if any) located within the District provide written notice to purchasers of property in the District regarding the Maximum Debt Mill Levy, as well as a general description of the District's authority to impose and collect rates, fees, tolls, and charges as required by law or in substantially the form set forth in the Consolidated Service Plan.

12. Consolidated Service Plan Amendment Requirement. Actions of the District which exceed either the limitations of the Consolidated Service Plan, or this Agreement, shall be deemed to be material modifications to the Consolidated Service Plan and a breach of this Agreement, and the City shall be entitled to all remedies available at law or in equity under state and local law.

13. Annual Report. The District shall be responsible for submitting an annual report to the City Attorney no later than August 1st of each year ("Annual Report"). The annual report shall include information as to all the following:

A. Boundary changes made or proposed to the District's boundary as of December 31st of the prior year;

B. Agreements with other governmental entities either entered or proposed as of December 31st of the prior year;

C. Audit of the District's financial statements for the year ending December 31st of the previous year prepared in accordance with generally accepted accounting principles or audit exemptions, if applicable;

D. Notice of continuing disclosure undertaking for events of default by the District, which continue beyond a ninety (90) day period, under any Debt instrument; and

E. Any inability of the District to pay its obligations as they come due in accordance with the term of any Debt instruments, which continue beyond a ninety (90) day period.

F. A list of all facilities and improvements constructed or acquired by the District and those that have been dedicated to and accepted by the City or other appropriate jurisdiction or governmental entity as of December 31st of the prior year.

14. Site Improvements, Off-Site Improvements; Impact Fees and Credits
This Agreement is and shall serve as the Credit Agreement for the District contemplated by Chapter 21.11.010(g)(3) of the GJMC, subject to submission and verification of the District's costs of design and construction for the Public Improvements defined by this Agreement as being eligible for credits. The District and City shall coordinate regarding the planning, design, acquisition, construction, installation, relocation and/or redevelopment of (i) the road improvements identified and described in Exhibit C which are located outside of the District and the Service Plan Boundaries; (ii) drainage improvements identified and described in Exhibit D which are located outside of the District and the Service Plan Boundaries; and (iii) the parks and recreation, trails, and open space improvements identified and described on Exhibits E and F that are located within the District and the Service Plan Boundaries. (collectively, "Regional Improvements.") Notwithstanding the foregoing, the District will retain final decision-making authority with respect to the type, amount, and other characteristics of parks and recreation, trails, and open space improvements beyond the descriptions in Exhibits E.

A. *Transportation Capacity Payments.* Transportation Capacity Payment for each dwelling unit and square footage of non-residential development shall be paid at the rate in effect at the time of planning clearance for construction of each individual dwelling unit. As provided in Exhibit C the District will be eligible for Transportation Capacity Payment credit as provided by Chapter 21.11 of GJMC for its construction of the Road Improvements located outside of both the District and the Service Area that are described as TIS Intersection Numbers 6 and 16 in Table 1 of Exhibit C, which are Capital Facilities as defined by Section 21.11.010(e) of GJMC. Consistent with Section 21.11.010(g)(2)(ii)(A) of GJMC, where the District has constructed the Capital Facilities described in the preceding sentence it may obtain credit against Transportation Capacity Payment for the following costs: the costs of construction or reconstruction, the costs of all labor and materials, financing charges, interest prior to and during construction and for one year after completion of construction, costs of design, plans and specifications, surveys of estimates of costs and of revenues, costs of professional services, and all other expenses necessary or incident to determining the feasibility or practicability of such construction or reconstruction, or any other additional costs permitted by the GJMC.

B. *Parks, Recreation, Trails and Open Space Impact Fees and Credits.* As provided in Exhibit E the District will be eligible for Parks and Recreation Impact Fee credit as provided by Chapter. 21.11 of Grand Junction Municipal Code for the associated costs for the parks and recreation, trails, and open space improvements that are to be constructed and maintained in perpetuity for public access which are Capital Facilities as defined by Section 21.11.010(e) of GJMC. Consistent with Section 21.11.010(g)(2)(ii)(A) of GJMC, where the District has constructed the Capital Facilities described in the preceding sentence it may obtain credit against Parks and Recreation Impact Fee for the following costs: the costs of construction or reconstruction, the costs of all labor and materials, financing charges, interest prior to and during construction and for one year following completion of construction, costs of design, plans and specifications, surveys of estimates of costs and of revenues, costs of professional services, and all other expenses necessary or incident to determining the feasibility or practicability of such construction or reconstruction, or any other additional costs permitted by the GJMC.

For other park facilities, no credits will be issued given the nature of these smaller facilities serving primarily the development. Developer's dedication of 120 acres or more of land within the Project to the District, and any additional Districts operating under the Consolidated Service Plan, for public parks, open space and trails within the Service Plan Boundaries to be operated consistent with this Agreement satisfies the open space dedication requirements of Chapters 21.06.020 and 21.05.04(g) of the GJMC as set forth in Ordinance No. 5051. Pursuant to Ordinance No. 5051establishing the Planned Development (PD) Outline Development Plan (ODP) for the Project the Developer will dedicate approximately 185 acres or more of land for public parks, open space and trails which exceed the requirements of the GJMC. The open space used to meet the 185 acres required by Ordinance No. 5051 may include the area open space dedicated as the "Four Brothers Corridor" as well as open space along and abutting trails.

C. *Other Impact Fees and Credits.* No other credits for impact fees shall be available to the Developer or the District; provided however, should the GJMC be revised to require an impact fee for other public improvements, such as for drainage or stormwater control, the District may seek available impact fee credits for its design, construction, installation, contribution and dedication to the City, or its financial contribution to, such Capital Facilities, including credit for previously completed improvements or Capital Facilities.

Impact fee credits shall be transferable by the District and may be used by the District, Developer, or any person owning real property within the Service Plan Boundaries of the Redlands 360 Planned Development that may be subject to the Development Impact Fee Chapter 21.11 of Grand Junction Municipal Code, as now exists or as amended in the future, regardless of whether the Capital Facility is

located within a particular District's boundaries.

15. Maximum Debt Mill Levy. The "Maximum Debt Mill Levy" shall be the maximum mill levy the District is permitted to impose upon the taxable property within the District for payment of Debt, and shall be determined as follows:

A. *Excess of 50% of Assessed Value.* For any portion of the District's aggregate Debt which exceeds fifty percent (50%) of the District's assessed valuation, the Maximum Debt Mill Levy for such portion of Debt shall be fifty (50) mills less the number of mills necessary to pay unlimited mill levy Debt described in section 15.B below, adjusted to account for change in the method of calculating assessed valuation or any constitutionally mandated tax credit, cut or abatement. The mill levy limitation applicable to such Debt may be increased or decreased to reflect such changes, such increases or decreases to be determined by the Board in good faith (such determination to be binding and final) so that, to the extent possible, the actual tax revenues generated by the mill levy, as adjusted for changes occurring after January 1, 2020, are neither diminished nor enhanced as a result of such changes. For purposes of the foregoing, a change in the ratio of actual valuation shall be deemed to be a change in the method of calculating assessed valuation.

B. *Debt Equal to or Less Than 50% of Assessed Value.* For any portion of a District's aggregate Debt which is equal to or less than fifty percent (50%) of the District's assessed valuation, either on the date of issuance or at any time thereafter, the mill levy to be imposed to repay such portion of Debt shall not be subject to the Maximum Debt Mill Levy and, as a result, the mill levy may be such amount as is necessary to pay the Debt service on such Debt, without limitation of rate.

C. *Pledge of Mill Levy.* For purposes of the foregoing, once Debt has been determined to within section 15.B. above so that a District is entitled to pledge to its payment an unlimited *ad valorem* mill levy, the District may provide that such Debt shall remain secured by such unlimited mill levy, notwithstanding any subsequent change in the District's Debt to assessed ratio. All Debt issued by the District must be issued in compliance with the requirements of Section 32-1-1101, C.R.S., and all other requirements of State law.

D. *Maximum Mill Levy for Payment of Debt.* The maximum mill levy a District can impose for payment of Debt shall be 50 mills; provided, however, that if the method of calculating assessed valuation is changed after the date of approval of this Consolidated Service Plan, the mill levy limitation may be increased or decreased to reflect such changes, such increases or decreases to be determined by the Board in good faith (such determination to be binding and final) so that to the extent possible, the actual tax revenues generated by the mill levy, as adjusted, are neither diminished nor enhanced as a result of such changes. For purposes of the foregoing, a change in the ratio of actual valuation to assessed valuation shall be deemed to be a change in the method of calculating assessed valuation.

E. *Payment of Interest to Developer.* The issuance of Debt to the Developer or its affiliates, as the organizer of the District, may permit interest to accrue on the total unpaid amount, such interest to be paid according to such terms as may be established but without compounding. An individual District shall not impose a levy for repayment of Debt (or use the proceeds of any mill levy for repayment of Debt) to the Organizers of the Districts or their affiliates, on any single property developed for residential uses which exceeds forty (40) years after the year of the initial imposition of such mill levy. Notwithstanding any other provision hereof, such Debt referred to in the preceding sentence shall be deemed to be discharged at such time as the mill levy is suspended at the end of the 40-year period.

16. Debt Instrument Disclosure Requirement. In the text of each Bond and any other instrument representing and constituting Debt, the District shall set forth a statement in substantially the following form:

By acceptance of this instrument, the owner of this Bond agrees and consents to all of the limitations in respect of the payment of the principal of and interest on this Bond contained herein, in the resolution of the District authorizing the issuance of this Bond and in the Consolidated Service Plan for creation of the District. Similar language describing the limitations in respect to the payment of the principal of and interest on Debt set forth in this Consolidated Service Plan shall be included in any document used for the offering of the Debt for sale to persons, including, but not limited to, a developer of property within the boundaries of the District.

17. Security for Debt. The District shall not pledge any revenue or property of the City as security for the indebtedness set forth in the Consolidated Service Plan. Approval of the Consolidated Service Plan and this Agreement shall not be construed as a guarantee by the City of payment of any of the District's obligations, nor shall anything in the Consolidated Service Plan or this Agreement be construed so as to create any responsibility or liability on the part of the City in the event of default by the District in the payment of any such obligation.

18. Notices. All notices, demands, requests or other communications to be sent by one party to the other shall be in writing and deemed to have been validly given or served by delivery of same in person to the address or by courier delivery, via Federal Express or other nationally recognized overnight air courier service, or by depositing same in the United States mail, postage prepaid, addressed as follows:

To the District:
Redlands 360 Metropolitan District No. 9
c/o John Justus
Hoskin Farina & Kampf, P.C.
P.O. Box 40
Grand Junction, Colorado 81502

To the City:
City of Grand Junction
c/o John Shaver, City Attorney
250 N. 5th Street
Grand Junction, CO 81501

To the Developer:
Redlands Three Sixty, LLC
c/o Donald Gravette
9540 Federal Drive, Suite 200
Colorado Springs, CO 80921

All notices, demands, requests or other communications shall be effective upon such personal delivery or one (1) business day after being deposited with Federal Express or other nationally recognized overnight air courier service or three (3) business days after deposit in the United States mail. By giving the other party at least ten (10) days advance written notice, the Parties shall have the right from time to time to change its address.

19. Amendment. This Agreement may be amended, modified, changed, or terminated in whole or in part only by a written agreement duly authorized and executed by the Parties and without amendment to the Consolidated Service Plan.

20. Assignment. Neither Party shall assign any of its rights nor delegate any of its duties to any person or entity without having first obtained the prior written consent of the other Party, which consent will not be unreasonably withheld. Any purported assignment or delegation in violation of these restrictions shall be void and of no effect.

21. Default/Remedies. In the event of a breach or default of this Agreement by a Party, the non-defaulting Party shall be entitled to exercise all remedies available at law or in equity, specifically including suits for specific performance and/or monetary damages. In the event of any proceeding to enforce this Agreement, the prevailing Party shall be entitled to obtain as part of its judgment or award its reasonable attorneys' fees and costs.

22. Governing Law and Venue. This Agreement shall be governed and construed under the laws of the State of Colorado, and as applicable the law of the City of Grand Junction, Colorado.

23. Inurement. Each of the terms, covenants and conditions of this Agreement shall be binding upon and inure to the benefit of the Parties and their respective successors and assigns.

24. Integration. This Agreement constitutes the entire agreement between the Parties with respect to the matters addressed herein. All prior discussions and negotiations regarding the subject matter hereof are merged herein.

25. Interested Parties. Nothing expressed or implied in this Agreement is intended or shall be construed to confer upon, or to give to, any person other than the District and the City any right, remedy, or claim under or by reason of this Agreement or any covenants, terms, conditions, or provisions thereof, and all the covenants, terms, conditions, and provisions in this Agreement by and on behalf of the District and the City shall be for the sole and exclusive benefit of the District and the City.

26. Severability. If any part of this Agreement shall, for any reason, be held invalid or unenforceable, the invalidity or unenforceability of such provision shall not affect any other provision contained herein, the intention being that such provisions are severable.

27. Counterparts. This Agreement may be executed in one or more counterparts, each of which shall constitute an original and all of which shall constitute one and the same document.

28. Defined Terms. Capitalized terms used herein and not otherwise defined shall have the meanings ascribed to them in the Consolidated Service Plan.

Dated effective the year and date first above written.

REDLANDS 360 METROPOLITAN DISTRICT No. 1

By: _____
President

Attest:

By: _____
Secretary

APPROVED AS TO FORM:

_____
Legal Counsel for District

CITY OF GRAND JUNCTION, COLORADO

By: _____
Mayor

Attest:

By: _____
~~City Clerk~~ Interim City Clerk

APPROVED AS TO FORM:

_____
City Attorney

EXHIBIT A –PUBLIC IMPROVEMENTS TO BE DEDICATED TO CITY OR OTHER APPROPRIATE JURISDICTIONS

The Dedicated Public Improvements shall include public sanitary sewer and wastewater systems, public domestic water supply systems, public storm drainage facilities, public streets and roadways, and public traffic and safety facilities, located within the District and approved by the City for the development of the Project. Dedicated Public Improvements may also include such other public improvements that the City or other authorized governmental or quasi-governmental entity expressly agrees in writing to accept dedication and ownership of that are required and approved by the City for the development of the Project, such as those described in Exhibit C of this Agreement. The City shall not be responsible for costs associated with the design and construction of such Public Improvements within the District. To the extent that the transportation and drainage system construction subject to this paragraph is outside of the Service Plan Boundaries, the City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests, and easements necessary for the construction and operation of such transportation system improvements.

Unless further indicated in the Agreement and Exhibits to the same, the Public Improvements described in this Exhibit A shall be dedicated to the City or other appropriate jurisdiction in a manner consistent with the Consolidated Service Plan and other rules and regulations of the City and applicable provisions of the GJMC.

EXHIBIT B – PUBLIC IMPROVEMENTS TO BE DEDICATED TO OR RETAINED BY THE DISTRICT

The Public Improvements consisting of landscaping and irrigation, trails (hard surface and soft surface), open space, parks, and the recreation facilities located within the District will be dedicated to and retained by the District. The District will be responsible for ownership, operations and maintenance, repair, and replacement of these Public Improvements. The parks, trails, and open space facilities shall be open to the public as further detailed in this Agreement and on Exhibit E.

EXHIBIT C – TRANSPORTATION

1. All transportation infrastructure internal to the Project shall be fully designed and constructed to City standards. All transportation infrastructure external to the Project shall be fully designed and constructed to City, Mesa County, and CDOT standards, as applicable.

2. The District, along with any additional Districts formed and operating pursuant to the Consolidated Service Plan, shall pay for and otherwise be responsible for costs of design and construction of off-site transportation system improvements located outside of the District, but adjacent to the Project, that are listed as TIS Item No. 15, 16, 6 and 8 in Table 1 below as required by and in accordance with the GJMC Chapter 21.06.01. District(s) shall pay for the design and construction costs of these off-site transportation improvements in accordance with the triggering event identified in Table 1 below. To the extent that the transportation system construction subject to this paragraph is outside of the Service Plan Boundaries, the City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests and easements necessary for the construction and operation of such transportation system improvements. Any cost for property and easement acquisition shall be a cost of the specific project.

3. The District, and any other participating District for the Project, shall be entitled to obtain impact fee credits for TIS Item Nos. 6 and 16 for such contribution or design and construction in accordance with Chapter 21.11 of GJMC as now exists or as amended in the future. The City, or other appropriate jurisdiction, shall in cooperation with the District(s) and the Developer, determine how the City or other appropriate jurisdiction will obtain the required property interests, and easements necessary for the construction and operation of such transportation system improvements. Any cost for property and easement acquisition incurred by the District shall be a cost of the specific project that is eligible for impact fee credit.

Table 1
Off-Site Roadway Improvements

TIS Intersection	Location	Improvement	Developer/District Cost Obligation and Credit	Trigger Event
6	Broadway (SH-340) and Redlands Parkway	See Table 1 Addendum (1). below.	Developer to design and construct. See Table 1 Addendum.	See Table 1 Addendum.
8	Broadway (SH-340) and 23 Road	See Table 1 Addendum, (2).	Developer to design and construct one lane roundabout. TCP credit 0%. City or other will construct additional lanes or improvements if/when required.	200 DU

15	Redlands Parkway Access	See Table 1 Addendum, (3).	Developer to design and construct. TCP credit 0%	Commencement of Phase 1 Construction
16	South Broadway and Hwy 340 Intersection	See Table 1 Addendum, (4).	Developer to design and construct. TCP credit 100%.	200 DU

Table 1 is excerpted from Conclusions & Recommendations from Kimley-Horn Traffic Impact Study for Redlands 360, Grand Junction, Colorado, prepared for La Plata Communities, LLC, dated September 2021 ("Study".) The interpretation of the requirements of this Table 1 and the descriptions and specifications set forth below in the addendum are made by reference to the Study.

Table 1 Addendum

(1) An access permit may be required by CDOT for the Redlands Parkway and SH-340 intersection (TIS Item No. 6) because the traffic generated by the proposed project may result in a degradation of the level of service ("LOS") in the existing roundabout. If the LOS at this intersection is not addressed by the District and/or Developer, CDOT may object to further development or denying further access without mitigation of the project impacts. As stated in the Study, the extent of improvements necessitated by growth both due to and independent of the Project are:

(a) Conversion of both the southbound shared left turn/through lane to a southbound left turn lane, and the southbound right turn lane to a shared left turn/through lane at the time the Project reaches 800 DU. District(s) will receive 34.9% TCP credit for the eligible costs under paragraph 14.A of this Agreement for the construction and completion of these specific improvements.

(b) Addition of an eastbound right turn lane at the time the Project reaches 1550 DU. District(s) will receive 50% TCP credit for the eligible costs under paragraph 14.A of this Agreement for the construction and completion of these specific improvements.

(c) The Study recommended addition of a southbound right turn bypass lane; however, this is not a requirement necessitated by the Project and is not a required system improvement by this Agreement.

(2) An access permit will be required by CDOT for the 23 Road and SH-340 intersection (TIS Item No. 8) where the proposed project access will exist in association with future phases of the project. It is anticipated that this CDOT Access Permit will be needed once 23 Road is extended and access is provided for the Project. The Study proposes the intersection of Broadway (SH-340) and 23 Road (TIS Item No. 8) to be roundabout controlled. Single lane approaches should be implemented along Broadway (SH-340) in conjunction with this roundabout. District will receive 0% TCP credit for a single-lane roundabout, and the City will be responsible for additional lanes.

(3) One full movement public access roadway (TIS Item No. 15) is proposed along the south side of Redlands Parkway with the commencement of Phase One. The Redlands Parkway Access Roadway is recommended to operate with stop control with the installation of a R1-1 "STOP" sign for the northbound exiting approach to Redlands Parkway. A westbound left turn lane with 150 feet of length is recommended at the access along Redlands Parkway. The northbound exiting approach of this access intersection should provide separate left and right turn lanes.

(4) The South Broadway leg of the intersection with SH-340 (TIS Item No. 16) currently provides a tight angle skew with poor turning radii and sight visibility. Based on the roadway orientation and configuration of South Broadway at the intersection with SH-340, it is recommended that South Broadway be converted to one-way eastbound directional flow of travel at the intersection with SH-340. Likewise, the intersection of South Broadway and SH-340 should only provide right-in movements. It is recommended that a raised center median be constructed along SH-340 to restrict entering left turn movements at the intersection with South Broadway. The conversion to right-in movements only at the SH-340 and South Broadway intersection will require a CDOT access permit. If the intersection of SH-340 and South Broadway is restricted to right-in movements only, a R5-1 "Do Not Enter" sign should be installed on the west leg facing westbound drivers at the S Broadway and Easter Hill Drive intersection to prevent westbound travel on South Broadway. Further, striping should be oriented on the south and east legs of the South Broadway and Easter Hill Drive intersection to restrict movements from entering the west leg of this intersection. A R3-2 "No Left Turn" sign should be placed under the STOP sign on northbound approach of the South Broadway and Easter Hill Drive intersection while a R3-5 "Left Turn Only" sign should be installed on the northeast corner of the South Broadway and Easter Hill Drive intersection. Likewise, R6-1 "ONE WAY" signs could be installed on the west leg of the intersection if desired. District(s) will receive 100% TCP credit for the eligible costs under paragraph 14.A of this Agreement for the construction and completion of any of these specific improvements.

EXHIBIT D - DRAINAGE IMPROVEMENTS

The District shall design and construct stormwater infrastructure in accordance with Title 28 GJMC Stormwater Management Manual. Infrastructure within the District shall be designed and constructed to either achieve a runoff rate that can be accommodated by existing downstream facilities or provide improvements to existing facilities to accommodate allowable runoff.

Stormwater detention is required, consequently no drainage fee in lieu of detention, or other drainage fees which may subsequently be imposed by the City, will be required of the Project. No drainage facility improvements by the District will be required north of the north side of SH-340.

EXHIBIT E – PARKS, RECREATION, OPEN SPACE AND TRAILS

1. All parks, recreation, open space and trails as depicted on Redlands 360 Exhibit 1: Trail Types and Exhibit 2: Public Park Areas as included in Ordinance No. 5051 shall be dedicated to, improvements thereto constructed by, and ongoing maintenance provided by the District. The total parks, open space and recreation areas dedicated to Districts shall total approximately 185 acres of land within the Project and satisfies open space dedication requirements for the Project under the GJMC. In addition, all areas shall be platted and dedicated for the access, use and enjoyment of the general public. The "Parks (Traditional)" depicted on Exhibit 2, Legend Section A and the "Parks (Unique)" depicted on Exhibit 2 Legends B and C and more particularly described in paragraphs 2a-d below, shall be designed and constructed in accordance with Exhibit 3: Land Use and Default Zones and Exhibit 5: Development Progression Plan as included in Ordinance No. 5051, all in accordance with and pursuant to the GJMC.

2. The District shall be given 100% credit under Chapter 21.11.010(g) of the GJMC for the equivalent of the costs of construction or reconstruction, the costs of all labor and materials, financing charges, interest prior to and during construction and for one year after completion of construction costs of design, plans and specifications, surveys of estimates of costs and of revenues, costs of professional services, and all other expenses necessary or incident to determining the feasibility or practicability of such construction or reconstruction, or any other additional costs permitted by the GJMC which the District incurs, or to which the District contributes, regarding the following public parks, recreation, and open space Public Improvements for the Project when construction is complete of the following parks, recreation, open space and trails:

a. Trail refurbishments, stabilization, sustainability improvements, and relocation improvements for historical on-site trails.
b. Trailhead improvements (design & construction), including paved parking.

c. One "neighborhood park" of at least 2 acres in developed area size that would include landscaping, irrigation, restroom, level play field of approximately 50,000 square feet, play equipment (for children 2-5 years old and 5-12 years old), trail connections to trail network system, picnic/grill area, and parking.

d. New trail and park/recreation improvements associated with the 4 Brothers regional park improvements.

3. Only the parks, recreation and trail improvements described in 2a-d above (and notwithstanding Exhibits referenced in 1. above as contained within Ordinance No. 5051) will be eligible for Park Impact Fee credits.

4. The Districts shall strive to maintain parks, trails, and associated improvements at or better than City park maintenance standards. The City agrees to reasonably advise the Districts on best maintenance and operations practices.

RECEPTION#: 3021721
3/1/2022 2:20:58 PM, 1 of 13
Recording: $73.00,
Tina Peters, Mesa County, CO.
CLERK AND RECORDER

CITY OF GRAND JUNCTION, COLORADO

ORDINANCE NO. 5051

AN ORDINANCE ZONING THE REDLANDS 360 ANNEXATION, AMENDING THE COMPREHENSIVE PLAN, REZONING A PORTION OF THE PROPOSED REDLANDS 360 DEVELOPMENT AND ESTABLISHING PLANNED DEVELOPMENT (PD) OUTLINE DEVELOPMENT PLAN (ODP) FOR THE ENTIRE REDLANDS 360 DEVELOPMENT GENERALLY LOCATED SOUTH OF THE REDLANDS PARKWAY AND HIGHWAY 340 INTERSECTION

Recitals:

Grand Junction Land Company LLC (GJLC) and Redlands Three Sixty LLC (360) (collectively Owners), in conjunction with La Plata Communities LLC (Applicant), are proposing a planned development (Project or PD) known as Redlands 360. The Project is to be constructed on 600 acres of land with a boundary generally south of the Redlands Parkway and Highway 340 intersection, east of South Camp Road, west of Highway 340, and north of the Ridges/Redlands Mesa development, in the City.

The proposed PD will zone a portion of the property that was recently annexed to the City, rezone a portion of the property from R-4 to PD, amend the Comprehensive Plan to relocate a small portion of Commercial land use within the site, and establish an overall PD ODP for the entire property. It is anticipated that the Development will occur over a 25-year timeframe.

After public notice and public hearing as required by the Grand Junction Zoning and Development Code, (Code) the Planning Commission conducted a hearing and at the conclusion thereof recommended approval of the proposed PD. Because of the size and complexity of the Planned Development the Applicant has submitted for approval an Outline Development Plan, (ODP), which conforms with the *2020 One Grand Junction Comprehensive Plan Principles and Strategies,* the land use designation of Residential Low, the Comprehensive Plan Amendment criteria, the rezone criteria and the PD ODP criteria of the Code.

After public notice and public hearing, the Grand Junction City Council finds for the reasons stated in the record that the PD ODP zone district conforms with all applicable *Principles and Strategies,* the Residential Low land use designation, the Comprehensive Plan amendment criteria, the rezone criteria and the PD ODP criteria.

BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF GRAND JUNCTION THAT IN CONSIDERATION OF THE FOREGOING RECITALS AND THE RECORD OF THE ACTION OF THE PLANNING COMMISSION AND THE CITY COUNCIL, THE COMPREHENSIVE PLAN IS AMENDED AND THE PROPERTY DESCRIBED BELOW IS HEREBY ZONED PLANNED DEVELOPMENT (PD) AND THE OUTLINE DEVELOPMENT PLAN (ODP) ALL AS ESTABLISHED, DEPICTED AND DESCRIBED IN EXHIBITS 1 THROUGH 7b ATTACHED

HERETO DATED JANUARY 4, 2022, AND FOUND IN CITY COMMUNITY DEVELOPMENT DEPARTMENT FILE PLD-2020-698 IS ADOPTED WITH THE EXHIBITS BEING INCORPORATED BY THIS REFERENCE AND ADOPTED, MADE EFFECTIVE AND ENFORCEABLE IN ACCORDANCE WITH APPLICABLE LAWS, RULES AND REGULATIONS AS IF FULLY SET FORTH, ALL OF WHICH ARE APPROVED FOR THE FOLLOWING DESCRIBED PROPERTY.

That property located in a portion of Section 17, a portion of Section 18, a portion of Section 19, and a portion of Section 20 Township 1 South, Range 1 West of the Ute Meridian in Mesa County, Colorado and being more particularly described as follows:

Commencing at the Northwest corner of Section 19, T1S, R1W of the Ute Meridian from whence the West Quarter corner of said Section 19 bears South 00°04'39" West, a distance of 2573.69 feet for a basis of bearings, with all bearings contained herein relative thereto; thence North 89°39'47" East, a distance of 450.11 feet to the POINT OF BEGINNING; thence North 89°39'47" East, a distance of 868.47 feet, along the North line of the Northwest Quarter (NW¼) of said Section 19 to the Southwest corner of said SE¼ SW¼ said Section 18; thence North 89°29'43" East, a distance of 329.77 feet, along the South line of said SE¼ SW¼ Section 18; thence North 00°15'59" West, a distance of 662.03 feet; thence North 89°41'59" East, a distance of 329.40 feet; thence North 00°16'28" West, a distance of 660.27 feet, to a point on the North line of the SE¼ SW¼ Section 18, being the South line of Lot 100, Renaissance 360 Subdivision as shown on plat recorded at Reception 2946938, Mesa County records; thence South 89°46'40" West, a distance of 658.33 feet, along said North line of the SE¼ SW¼ Section 18 and the South line of said Lot 100, to a point on the West line of said Lot 100; thence along said West line of said Lot 100 the following twelve (12) courses: (1) North 00°24'51" West, a distance of 285.96 feet; (2) with a non-tangent curve turning to the left, having a delta angle of 30°52'17", a radius of 77.50 feet, an arc length of 41.76 feet, and a chord length of 41.25 feet, with a chord bearing of North 69°39'40" East; (3) with a compound curve turning to the left, having a delta angle of 30°08'20", a radius of 290.00 feet, an arc length of 152.55 feet, and a chord length of 150.79 feet, with a chord bearing of North 39°09'21" East; (4) North 24°05'11" East, a distance of 130.34 feet; (5) North 34°48'45" East, a distance of 110.25 feet; (6) North 37°36'44" East, a distance of 114.02 feet; (7) with a curve turning to the left, having a delta angle of 40°09'23", a radius of 170.00 feet, an arc length of 119.15 feet, and a chord length of 116.72 feet, with a chord bearing of North 17°32'03" East; (8) North 02°32'39" West, a distance of 52.29 feet; (9) with a curve turning to the left, having a delta angle of 19°47'40", a radius of 370.00 feet, an arc length of 127.83 feet, and a chord length of 127.19 feet, with a chord bearing of North 12°26'29" West; (10) North 22°20'19" West, a distance of 187.87 feet; (11) North 36°43'30" West, a distance of 67.29 feet; (12) North 39°27'10" West, a distance of 114.39 feet, to a point on the North line of said Lot 100; thence North 89°52'08" East, a distance of 38.92 feet, along the North line of said Lot 100, the North line of the NE¼ SW¼ Section 18 to a point on the East line of Renaissance in the Redlands Filing Two, per plat recorded at Reception 2039893; thence along said boundary the following two (2) courses: (1) North 39°27'43" West, a distance of 133.53 feet; (2) North 09°06'43" West, a distance of 113.12 feet, to the Southeast corner of Lot 2, Pumphouse Subdivision, per plat recorded at Reception

1782382; thence around the boundary of said Lot 2 the following ten (10) courses: (1) South 89°52'09" West, a distance of 1361.48 feet; (2) North 00°16'59" West, a distance of 667.90 feet; (3) South 87°06'34" East, a distance of 333.05 feet; (4) with a curve turning to the left having a delta angle of 26°51'09", a radius of 490.00 feet, an arc length of 229.65 feet, and a chord length of 227.55 feet, with a chord bearing of North 79°27'52" East; (5) North 66°02'18" East, a distance of 414.13 feet; (6) South 18°14'16" East, a distance of 415.79 feet; (7) South 79°14'55" East, a distance of 131.06 feet; (8) North 79°00'50" East, a distance of 57.12 feet; (9) North 62°45'41" East, a distance of 89.59 feet; (10) North 56°56'28" East, a distance of 42.67 feet; thence North 31°31'43" West, a distance of 209.49 feet; thence North 55°01'17" East, a distance of 403.97 feet; thence North 65°29'17" East, a distance of 441.63 feet; thence North 89°41'30" East, a distance of 598.76 feet; thence North 22°25'30" West, a distance of 361.81 feet, to a point on the Southeasterly line of Ed Case Subdivision per plat recorded at Reception 2388150; thence around the boundary of said subdivision the following two (2) courses: (1) North 48°35'22" East, a distance of 56.08 feet; (2) North 24°41'25" East, a distance of 55.53 feet, to the Southwesterly corner of South Easter Hill Subdivision per plat recorded at Reception 739054; thence around the boundary of said subdivision the following eight (8) courses: (1) South 58°30'37" East, a distance of 245.49 feet; (2) South 32°21'14" East, a distance of 329.00 feet; (3) South 05°17'46" West, a distance of 68.10 feet; (4) South 06°47'46" West, a distance of 230.30 feet; (5) South 68°22'14" East, a distance of 165.00 feet; (6) South 74°40'14" East, a distance of 130.10 feet; (7) North 44°01'46" East, a distance of 866.20 feet; (8) North 40°25'46" East, a distance of 38.18 feet; thence South 07°38'46" West, a distance of 85.86 feet; thence South 23°05'14" East, a distance of 64.50 feet; thence South 67°04'14" East, a distance of 64.03 feet; thence North 72°42'46" East, a distance of 112.51 feet; thence North 85°44'46" East, a distance of 152.14 feet; thence North 21°20'46" East, a distance of 102.82 feet; thence North 40°25'46" East, a distance of 185.00 feet, to the Southerly right-of-way line for South Broadway; thence South 49°34'14" East, a distance of 593.16 feet, along said Southerly right-of-way line to a point of intersection with the North line of the South Half of the Northeast Quarter (S½ NE¼) said Section 18; thence North 89°54'46" East, a distance of 511.24 feet, along said North line of said S½ NE¼ said Section 18; thence South 00°02'28" East, a distance of 236.55 feet, along the East line of said S½ NE¼ said Section 18; thence North 80°35'59" West, a distance of 25.34 feet, to the Westerly right-of-way line of 23 Road per Reception 978831; thence along said Westerly right-of-way line of 23 Road the following four (4) courses: (1) South 00°02'28" East, a distance of 466.74 feet; (2) with a non-tangent curve turning to the left, having a delta angle of 119°52'19", a radius of 50.00 feet, an arc length of 104.61 feet, and a chord length of 86.55 feet, with a chord bearing of South 00°02'28" East; (3) South 00°02'28" East, a distance of 6.73 feet; (4) North 89°57'32" East, a distance of 25.00 feet and returning to said East line of said S½ NE¼ Section 18; thence South 00°02'28" East, a distance of 527.44 feet, along said East line of said S½ NE¼ Section 18; thence North 89°54'40" East, a distance of 1322.02 feet, along the North line of the Northwest Quarter of the Southwest Quarter (NW¼ SW¼) of Section 17; thence South 00°22'09" East, a distance of 1321.29 feet, along the East line of said NW¼ SW¼ of Section 17; thence South 89°39'32" East, a distance of 335.37 feet; thence South 10°24'29" West, a distance of 1286.90 feet,; South 34°09'59" West, a distance of 342.69 feet, along the North line of the SE¼ SW¼ Section 17 to a point on the Westerly line of

Redlands Mesa Filing One Replat, as described in plat recorded at Reception 2103247; thence along said Westerly and the most Westerly North line of said Redlands Mesa Filing One Replat the following seven (5) courses: (1 South 78°09'38" West, a distance of 666.98 feet; (2) South 58°17'54" West, a distance of 495.65 feet; (3) South 41°56'09" West, a distance of 592.59 feet; (4) South 65°22'56" West, a distance of 535.66 feet; (5) South 89°53'20" West, a distance of 613.10 feet; thence South 89°53'07" West, a distance of 1310.96 feet, along the North line of the SW¼ NE¼ said Section 19; thence South 01°18'39" West, a distance of 637.61 feet, along the West line of the SW¼ NE¼ said Section 19 to the Southeast corner of Lot 100, CANYON RIM 360 FILING NUMBER ONE SUBDIVISION; thence along the South boundary of said Lot 100, CANYON RIM 360 FILING NUMBER ONE SUBDIVISION the following four (4) courses: (1) North 88°41'10" West, a distance of 732.73 feet; (2) North 55°30'27" West, a distance of 261.30 feet; (3) North 00°08'05" West, a distance of 207.47 feet; (4) North 90°00'00" West, a distance of 400.00 feet to a point on the Easterly boundary of Canyon Rim Phase 4, as per recorded plat at Reception 2149975; thence North 33°18'34" West, a distance of 890.33 feet; along the Easterly boundary of said Canyon Rim Phase 4 and the Easterly boundary of Canyon Rim Phase 3, as per recorded plat at Reception 2098545; thence South 89°36'16" West, a distance of 300.81 feet, continuing along the Easterly boundary of Canyon Rim Phase 3; thence North 00°20'39" West, a distance of 799.28 feet, continuing along the Easterly boundary of Canyon Rim Phase 3 to the POINT OF BEGINNING.

Said property containing an area of 605.61 acres, as herein described EXCEPT those parcels as described in Reception 1228040, and Book 862, Page 307 and Book 864, Page 194, Mesa County records containing a total 5.84 acres Ute Water parcels), leaving an overall parcel area of 599.77 acres, subject to the amended Comprehensive Plan, the Planned Development (PD) zoning and the Outline Development Plan (ODP) all as established, depicted and described in exhibits 1 through 7b attached hereto dated January 4, 2022, and found in City Community Development Department file PLD-2020-698 is adopted with the exhibits being incorporated by this reference and adopted, made effective and enforceable in accordance with applicable laws, rules and regulations as if fully set forth, all of which are approved for the following described property.

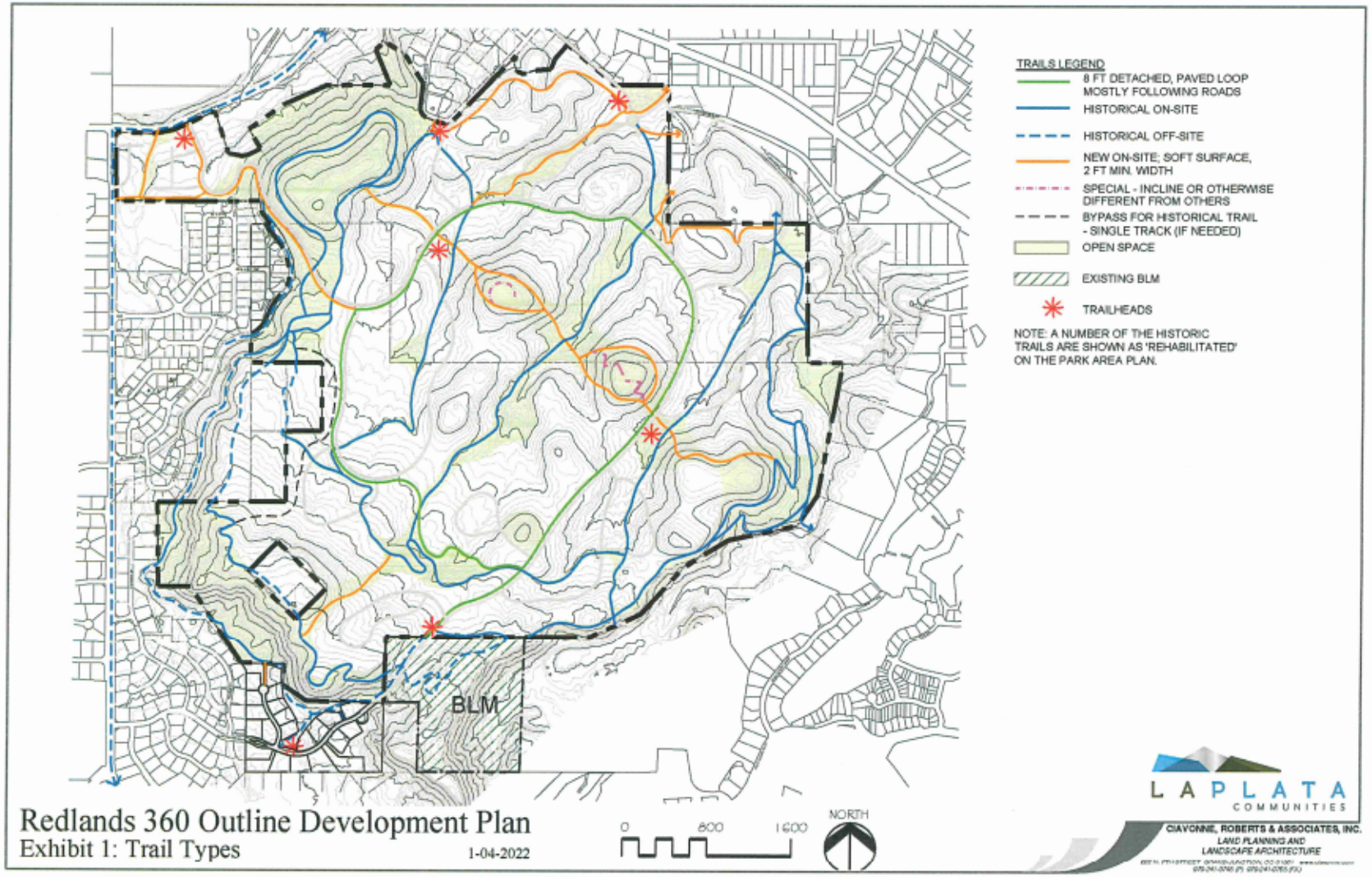
INTRODUCED on first reading this 19th day of January 2022 and ordered published in pamphlet form.

ADOPTED on second reading this 2nd day of February 2022 and ordered published in pamphlet form.

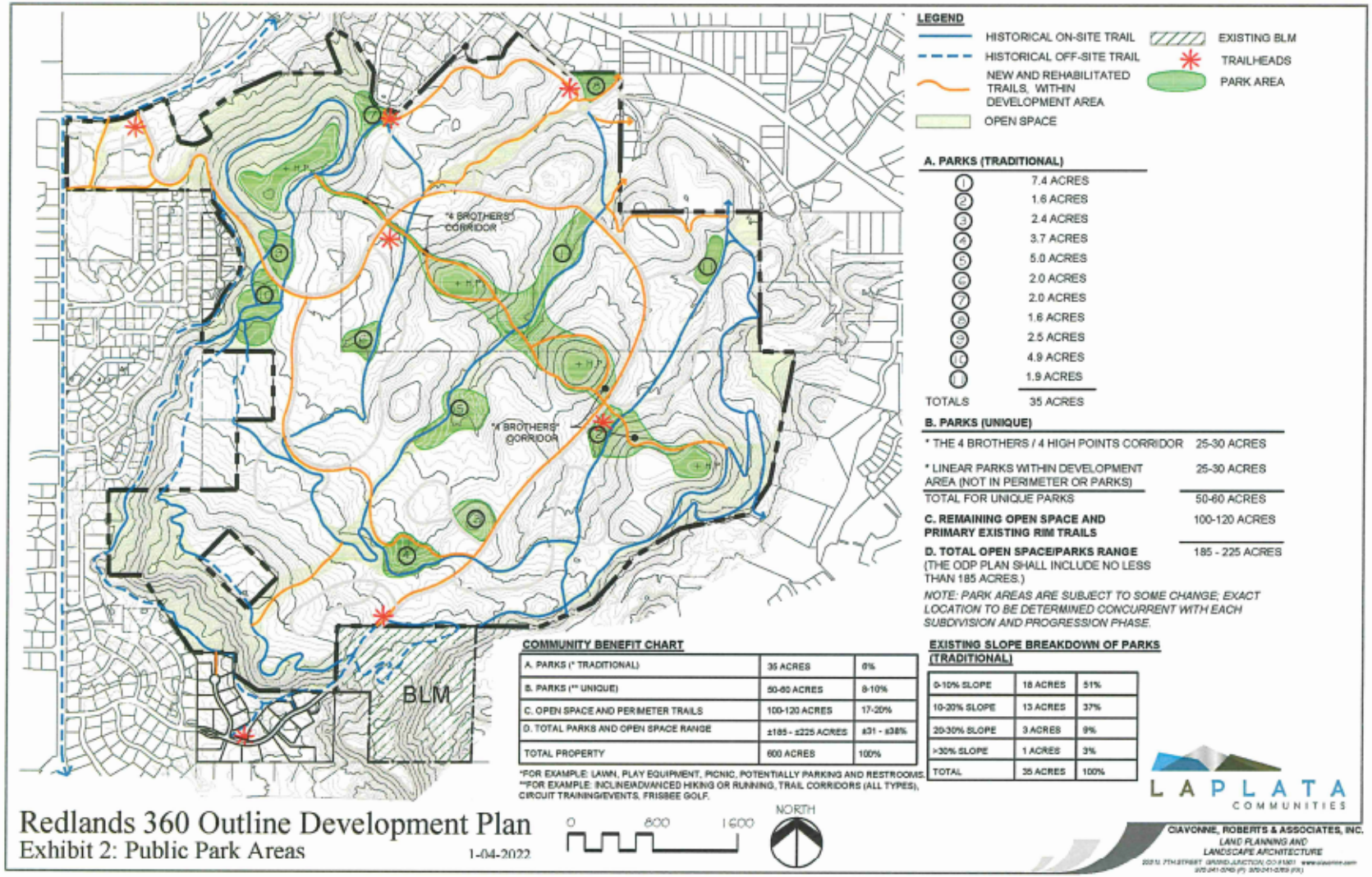
C.B. McDaniel
President of the Council

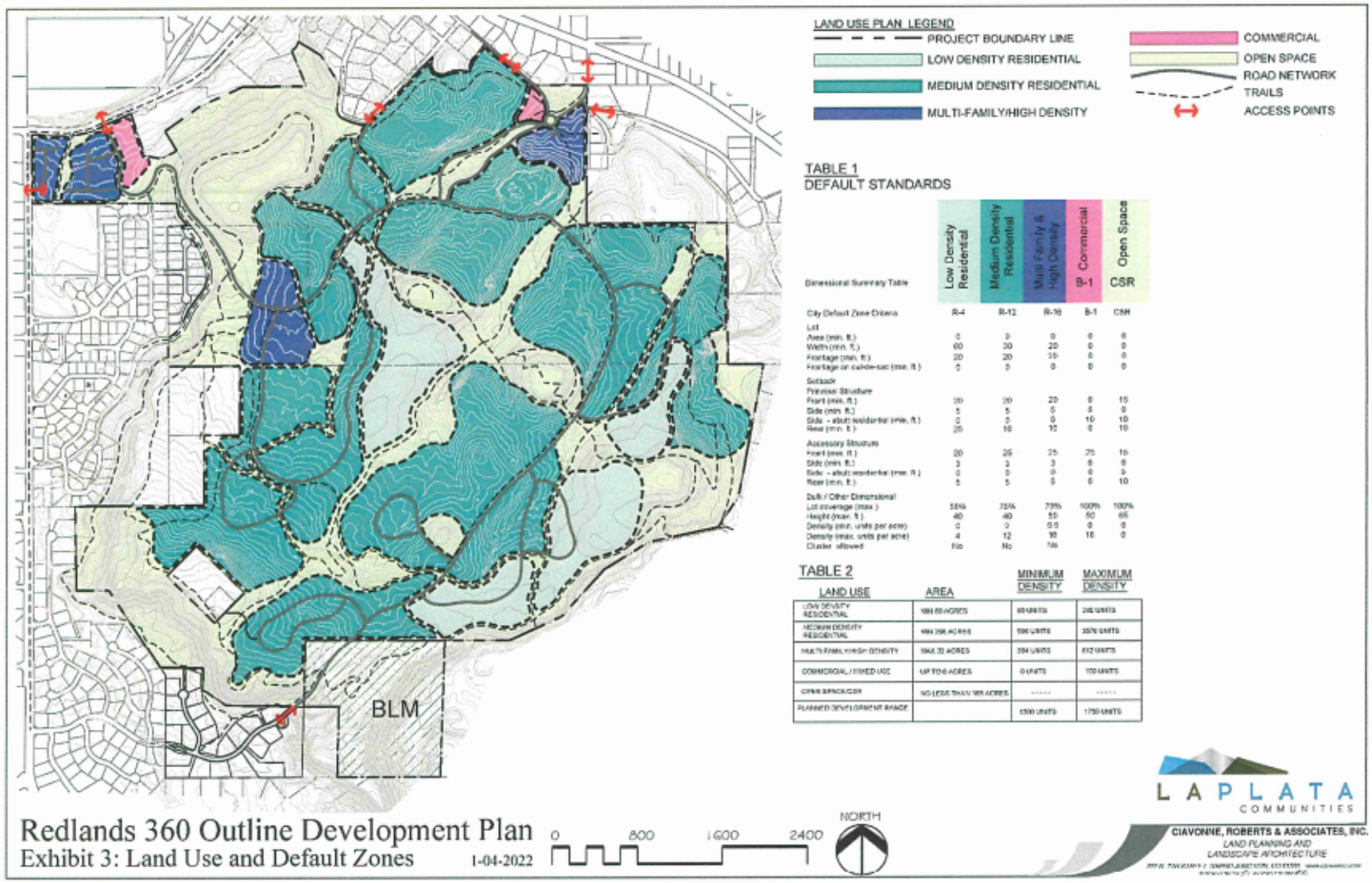
ATTEST:

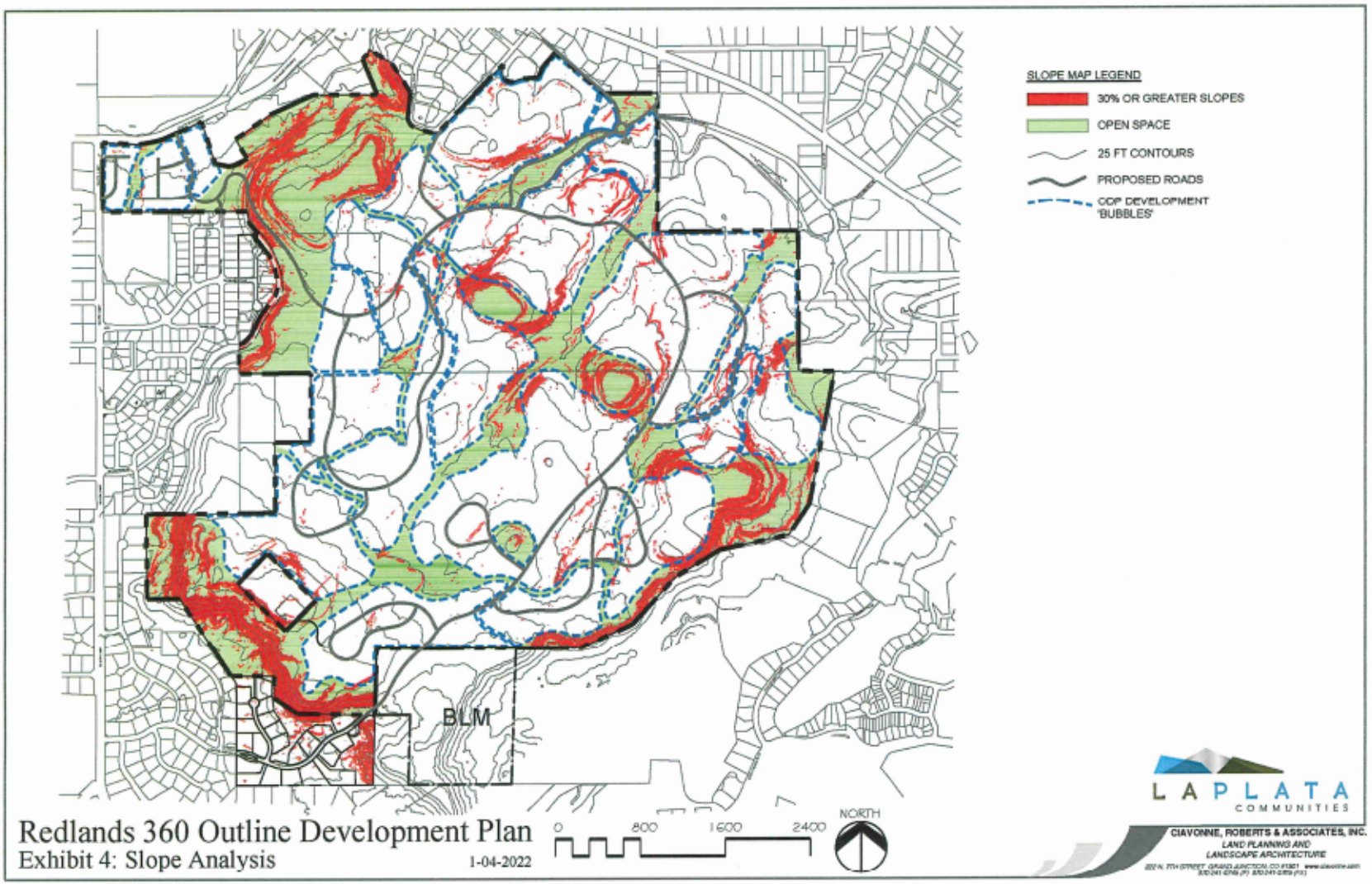
Laura Bauer
Interim City Clerk

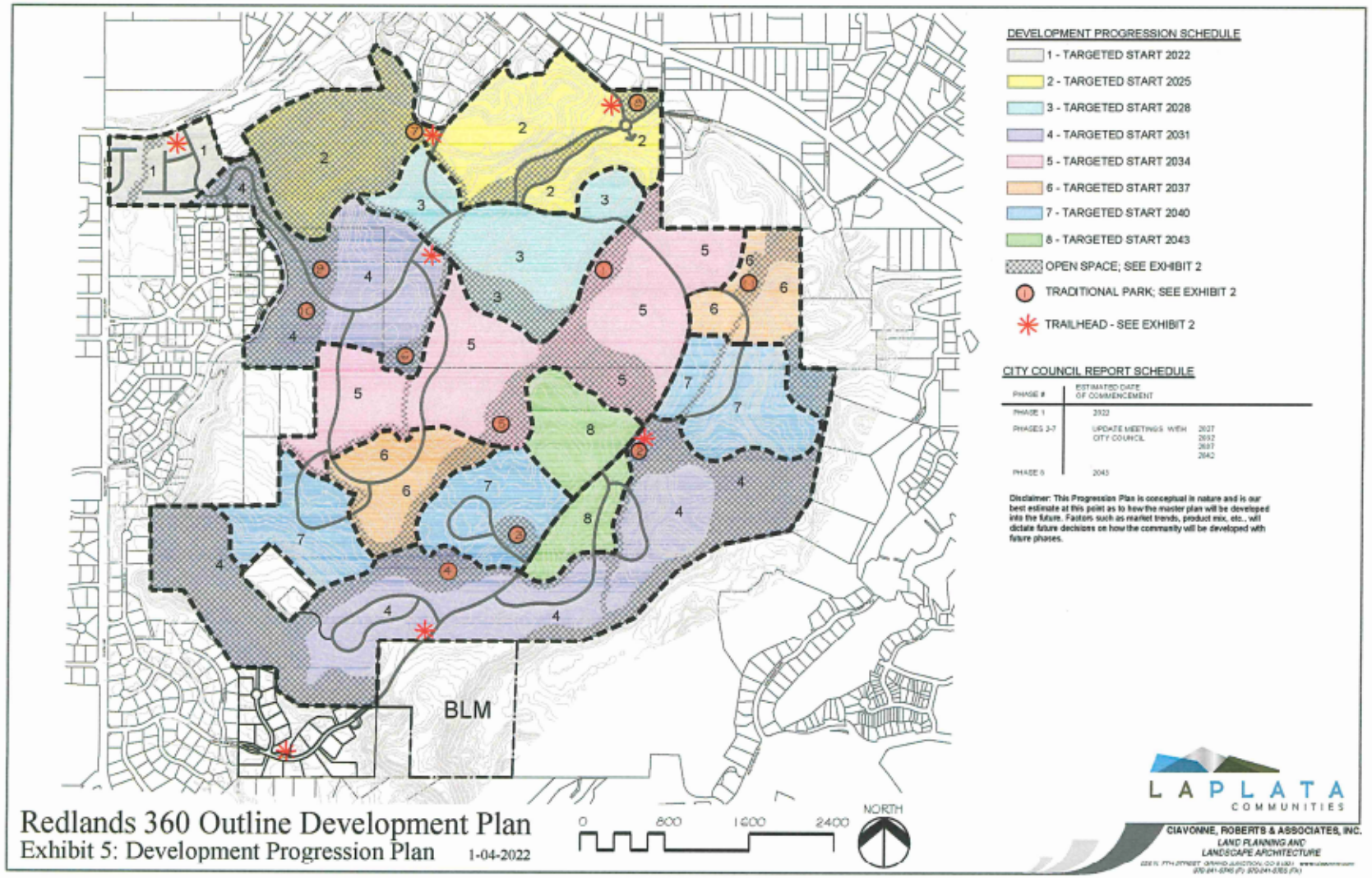


Redlands 360 Outline Development Plan
Exhibit 1: Trail Types
1-04-2022


"4 BROTHERS" CORRIDOR
"4 BROTHERS" CORRIDOR
BLM
LEGEND
HISTORICAL ON-SITE TRAIL
HISTORICAL OFF-SITE TRAIL
NEW AND REHABILITATED TRAILS, WITHIN DEVELOPMENT AREA
OPEN SPACE
EXISTING BLM
TRAILHEADS
PARK AREA
A. PARKS (TRADITIONAL)
1 7.4 ACRES
2 1.6 ACRES
3 2.4 ACRES
4 3.7 ACRES
5 5.0 ACRES
6 2.0 ACRES
7 2.0 ACRES
8 1.6 ACRES
9 2.5 ACRES
10 4.9 ACRES
11 1.9 ACRES
TOTALS 35 ACRES
B. PARKS (UNIQUE)
* THE 4 BROTHERS / 4 HIGH POINTS CORRIDOR 25-30 ACRES
* LINEAR PARKS WITHIN DEVELOPMENT AREA (NOT IN PERIMETER OR PARKS) 25-30 ACRES
TOTAL FOR UNIQUE PARKS 50-60 ACRES
C. REMAINING OPEN SPACE AND PRIMARY EXISTING RIM TRAILS 100-120 ACRES
D. TOTAL OPEN SPACE/PARKS RANGE 185 - 225 ACRES
(THE ODP PLAN SHALL INCLUDE NO LESS THAN 185 ACRES.)
NOTE: PARK AREAS ARE SUBJECT TO SOME CHANGE; EXACT LOCATION TO BE DETERMINED CONCURRENT WITH EACH SUBDIVISION AND PROGRESSION PHASE.
COMMUNITY BENEFIT CHART
A. PARKS (* TRADITIONAL) 35 ACRES 6%
B. PARKS (** UNIQUE) 50-60 ACRES 8-10%
C. OPEN SPACE AND PERIMETER TRAILS 100-120 ACRES 17-20%
D. TOTAL PARKS AND OPEN SPACE RANGE ±185 - ±225 ACRES ±31 - ±38%
TOTAL PROPERTY 600 ACRES 100%
*FOR EXAMPLE: LAWN, PLAY EQUIPMENT, PICNIC, POTENTIALLY PARKING AND RESTROOMS.
**FOR EXAMPLE: INCLINE/ADVANCED HIKING OR RUNNING, TRAIL CORRIDORS (ALL TYPES), CIRCUIT TRAINING/EVENTS, FRISBEE GOLF.
EXISTING SLOPE BREAKDOWN OF PARKS (TRADITIONAL)
0-10% SLOPE 18 ACRES 51%
10-20% SLOPE 13 ACRES 37%
20-30% SLOPE 3 ACRES 9%
>30% SLOPE 1 ACRES 3%
TOTAL 35 ACRES 100%
Redlands 360 Outline Development Plan
Exhibit 2: Public Park Areas
1-04-2022
0 800 1600
NORTH
LA PLATA COMMUNITIES
CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE


LAND USE PLAN LEGEND
PROJECT BOUNDARY LINE
LOW DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
MULTI-FAMILY/HIGH DENSITY
COMMERCIAL
OPEN SPACE
ROAD NETWORK
TRAILS
ACCESS POINTS
BLM
TABLE 1
DEFAULT STANDARDS
Dimensional Summary Table
Low Density Residential
Medium Density Residential
Multi Family & High Density
B-1 Commercial
Open Space
CSR
City Default Zone Districts
R-4
R-12
R-16
B-1
CSR
Lot
Area (min. ft.) 0 0 0 0 0
Width (min. ft.) 60 30 20 0 0
Frontage (min. ft.) 20 20 20 0 0
Frontage on cul-de-sac (min. ft.) 0 0 0 0 0
Setback
Principal Structure
Front (min. ft.) 20 20 20 0 15
Side (min. ft.) 5 5 5 0 0
Side - abutt residential (min. ft.) 0 0 0 10 10
Rear (min. ft.) 25 10 10 0 10
Accessory Structure
Front (min. ft.) 20 25 25 25 15
Side (min. ft.) 3 3 3 0 0
Side - abutt residential (min. ft.) 0 0 0 0 5
Rear (min. ft.) 5 5 5 0 10
Bulk / Other Dimensional
Lot coverage (max.) 55% 75% 75% 100% 100%
Height (max. ft.) 40 40 55 50 65
Density (min. units per acre) 0 0 0 0 0
Density (max. units per acre) 4 12 16 16 0
Cluster allowed No No No
TABLE 2
LAND USE
AREA
MINIMUM DENSITY
MAXIMUM DENSITY
LOW DENSITY RESIDENTIAL
MEDIUM DENSITY RESIDENTIAL
MULTI FAMILY/HIGH DENSITY
MAX 33 ACRES
384 UNITS
612 UNITS
COMMERCIAL / MIXED USE
UP TO 6 ACRES
0 UNITS
100 UNITS
OPEN SPACE/CSR
NO LESS THAN 165 ACRES
PLANNED DEVELOPMENT RANGE
1300 UNITS
1750 UNITS
Redlands 360 Outline Development Plan
Exhibit 3: Land Use and Default Zones
1-04-2022
0
800
1600
2400
NORTH
LA PLATA COMMUNITIES
CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE


SLOPE MAP LEGEND
30% OR GREATER SLOPES
OPEN SPACE
25 FT CONTOURS
PROPOSED ROADS
COP DEVELOPMENT 'BUBBLES'
BLM
Redlands 360 Outline Development Plan
Exhibit 4: Slope Analysis
1-04-2022
0
800
1600
2400
NORTH
LAPLATA COMMUNITIES
CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND
LANDSCAPE ARCHITECTURE



Redlands 360 Outline Development Plan

Exhibit 5: Development Progression Plan 1-04-2022

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
RESIDENTIAL						
Household Living – residential occupancy of a dwelling unit by a 'household'	Business Residence				A	A
	Two Family Dwelling	A	A		A	
	Single Family Detached	A	A		A	A
	Multifamily		A	A	A	
	Accessory Dwelling Unit	A	A			
	Agricultural Labor Housing					A
	Manufactured Housing Park		A			
	All Other Household Living		A			
Home Occupation	Home Occupation	A	A	A	A	
Group Living – residential occupancy of a structure by a group of people who do not 'meet the definition of 'Household Living'	Small Group Living Facility	A	A	A	A	
	Large Group Living Facility		A	A	A	A
	Unlimited Group Living Facility		A	A	A	
	Fraternities/Sororities	A1	A1	A1		
	Rooming/Boarding House		A	A	A	
	Other Group Living (e.g. Sorority Style living)		A	A	A	A
INSTITUTIONAL AND CIVIC						
Colleges and Vocational Schools – colleges and institutions of higher learning	Colleges and Universities					A
	Vocational, Technical and Trade Schools				A	A
Community Service – uses providing a local service to the community	Community Activity Building	A	A	A	A	A
	All Other Community Service	A	A	A	A	A
Cultural – establishments that document the social and cultural grass structures and intellectual and artistic manifestations that characterize a society	Museums, Art Galleries, Opera Houses, Libraries		A	A	A	A
Day Care – care, protection and supervision for children or adults on a regular basis away from their primary residence for less than 24 hours per day	Home Based Day Care (1 - 12)	A	A	A	A	
	Center Day Care	C	A	A	A	
Detention Facilities – facilities for the detention or incarceration of people.	Jails, Honor Camps, Reformatories					C
	Correctional Corrections Facility				C	C
	Law Enforcement Rehabilitation Centers				C	C

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
treatment or surgical care to patients	Physical and Mental Rehabilitation (Resident)				C	C
	All Other					
Parks and Open Space – natural areas consisting mostly of vegetative landscaping or outdoor recreation, community gardens, etc.	Cemetery	C	C	C	C	C
	Golf Course	C	C	C	C	C
	Golf Driving Ranges	C	C	C	C	C
	Parks, Lakes, Reservoirs, Other Open Space	A	A	A	A	A
Religious Assembly – meeting area for religious activities	All	A	A	A	A	C
Funeral Home/Mortuary	All				A	
Crematory	All					
Safety Services – public safety and emergency response services	All	A	A	A	A	C
Schools – schools at the primary, elementary, middle, junior high or high school level	Boarding Schools		A	A	A	C
	Elementary Schools	A	A	A	A	C
	Secondary Schools	A	A	A	A	C
Utility, Basic – infrastructure services that need to be located in or near the area where the service is provided	Utility Service Facilities (Underground)	A	A	A	A	A
	All Other Utility, Basic	C	C	C	A	A
Utility, Corridor – passageways for bulk transmitting or transporting of electricity, gas, oil, communication signals, or other similar services	Transmission Lines (Above Ground)	C	C	C	C	
	Transmission Lines (Underground)	C	C	C	C	
	Utility Treatment, Production or Service Facility					
	All Other	C	C	C	C	
COMMERCIAL						
Entertainment Event, Major – activities and structures that draw large numbers of people to specific events or shows	Indoor Facilities					C
	Outdoor Facilities					C
Lodging – hotels, motels, short-term rentals and similar establishments	Hotels and Motels					
	Short-Term Rentals	A	A	A	A	
Office – activities conducted in an office setting and generally focusing on business, government, professional, or financial services	General Offices				A	C
	Office with Drive-Through				A	C
Parking, Commercial – parking that is not necessary to serve a specific use and for which fees may be charged	All				A	C

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
Recreation and Entertainment, Outdoor – large, generally commercial uses that provide continuous recreation or entertainment-oriented activities	Campgrounds					C
	Resort Cabins and Lodges					C
	Swimming Pools, Community	A	A	A	A	C
	Shooting Ranges, Outdoor					C
	Amusement Park, Miniature Golf					C
	Riding Academy, Roping or Equestrian Area					C
	Zoo					C
	All Other Outdoor Recreation					C
Recreation and Entertainment, Indoor – large, generally commercial uses that provide indoor recreation or entertainment-oriented activities including health clubs, movie theaters, skating rinks, arcades	Health Club				A	A
	Movie Theater, Skating Rink, Arcade				A	C
	Shooting Ranges, Indoor					C
	All Other Indoor Recreation				C	C
Retail Sales and Service – firms involved in the sale, lease or rental of new or used products to the general public. They may also provide personal services or entertainment, or provide product repair or services for consumer and business goods.	Adult Entertainment					
	Alcohol Beverage Production				C	
	Animal Care/Boarding/Sales, Indoor				A	
	Animal Care/Boarding/Sales, Outdoor					
	Delivery and Dispatch Services (Vehicles On-Site)					
	Drinking Establishment				C	
	Drive-Through Uses (Restaurants)					
	Food Service, Catering				A	
	Food Service, Restaurant (including Alcohol Sales)				A	C
	Farm Implement/Equipment Sales/Service					
	Farmers' Market					
	Flea Market					
	Feed Store					
	Fuel Sales, Automotive/Appliance				C	
	Fuel Sales, Heavy Vehicle					
	General Retail Sales, Indoor Operations, Display and Storage				A	
	General Retail Sales, Outdoor Operations, Display or Storage					
	Landscaping Materials Sale/Greenhouse/Nursery					C
	Manufactured Building Sales and Service					
	Marijuana Related Business					

LEGEND
A ALLOWED USE
C CONDITIONAL USE

Redlands 360 Outline Development Plan
Exhibit 6A: Use Table

1-04-2022

LA PLATA COMMUNITIES

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
	Mobile Food Vendor				A	
	Mobile Food Vendor Court				A	
	Produce Stands	A	A	A	A	
	Rental Service, Indoor Display/Storage					
	Rental Service, Outdoor Display/Storage					
	Repair: Small Appliance				A	
	Repair: Large Appliance					
	Personal Services				A	
	All Other Retail Sales and Services				A	
Self-Service Storage	Mini-Warehouse			C	C	
Vehicle Repair – repair service to passenger vehicles, light and medium trucks and other consumer motor vehicles	Auto and Light Truck Mechanical Repair					
	Body Shop					
	Truck Stop/Travel Plaza					
	Tire Recapping and Storage					
	All Other Vehicle Repair					
Vehicle Service, Limited – direct services to motor vehicles where the driver or passengers generally wait in the car or nearby while the service is performed	Car Wash, Gasoline Service Station, Quick Lube				A	
	All Other Vehicle Service, Limited					
INDUSTRIAL						
Manufacturing and Production – firms involved in the manufacturing, processing, fabrication, packaging, or assembly of goods	Indoor Operations and Storage					
	Assembly					
	Food Products					
	Manufacturing/Processing					
	Marijuana Related Business					
	Indoor Operations with Outdoor Storage					
	Assembly					
	Food Products					
	Manufacturing/Processing					
	Marijuana Related Business					
	Outdoor Operations and Storage					
	Assembly					
	Food Products					
	Manufacturing/Processing					
	Marijuana Related Business					
	All Other Industrial Service, including any Hazardous Occupancy per the International Fire Code or International Building Code					

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
Industrial Services, Contractors and Trade Shops, Oil and Gas Support Operations without Hazardous materials	Indoor Operations and Storage					
	Indoor Operations and Outdoor Storage (excluding Heavy Vehicles)					
	Outdoor Storage And Operations					
	Research, Testing and Laboratory Facilities – Indoors (Includes Marijuana Testing Facilities)					
Junk Yard	Junk Yard					
Impound Lot	Impound Lot					
Heavy Equipment Storage/Pipe Storage	All					
Warehouse and Freight Movement – firms involved in the storage or movement of freight	Indoor Operations, Storage and Loading					
	Indoor Storage with Outdoor Loading Docks					
	Outdoor Storage or Loading					
	Gas or Petroleum Storage					
	Sand or Gravel Storage					
	All Other					
Waste-Related Use – uses that receive solid or liquid wastes from others, uses that collect sanitary wastes or uses that manufacture or produce goods or energy from the composting of organic material	Non-Hazardous Waste Transfer Station					
	Medical/Hazardous Waste Transfer Station					
	Solid Waste Disposal Sites					
	Recycling Collection Point				C	
	All Other Waste-Related					
Wholesale Sales – firms involved in the sale, lease or rental of products primarily intended for industrial, institutional or commercial businesses	Wholesale Business (No Highly Flammable Materials/Liquids)					
	Agricultural Products					
	All Other Wholesale Uses					
Agricultural	Animal Confinement					
	Dairy					
	Confined Animal Feeding Operation, Feedlot					
	Forestry, Commercial					
	Marijuana Related Business					
	Pasture, Commercial					
	Winery					
	All Other Agriculture					
Aviation or Surface Passenger Terminal – facilities for the landing and takeoff of flying vehicles or stations for ground-based vehicles, including loading and unloading areas	Airports/Heliports					
	Bus/Commuter Stops	A	A	A	A	
	Bus/Railroad Depot					
	Helipads					
	All Other Aviation or Surface Passenger Terminal					

USE CATEGORY	PRINCIPAL USE	R-4	R-12	R-16	B-1	CSR
Mining – mining or extraction of mineral or aggregate resources from the ground for off-site use	Oil or Gas Drilling					
	Sand or Gravel Extraction or Processing					
	All Other Mining					
Telecommunications Facilities – devices and supporting elements necessary to produce nonionizing electromagnetic radiation operating to produce a signal	Facilities on Wireless Master Plan Priority Site When Developed in Accordance with Wireless Master Plan Site-Specific Requirements	A	A	A	A	C
	Temporary PWSF (e.g., COW)	A	A	A	A	
	Co-Location	A	A	A	A	
	Tower Replacement	A	A	A	A	
	Dual Purpose Facility	A	A	A	A	
	DAS and Small Cell Facilities	A	A	A	A	
	Base Station with Concealed Attached Antennas	A**	A**	A**	A**	
	Base Station with Non-Concealed Attached Antennas	C**	C**	C**	C**	
	Tower, Concealed	C**	C	C	C	
	Tower, Non-Concealed					
	Broadcast Tower					

NOTES:
* Refer to Chapter 5.15 GJMC.
** Except NOT allowed on structures the principal use of which is single- or two-family residential, group living, or day care, or on multifamily structures of fewer than three stories.
*** Except NOT allowed on any site or lot where the principal use is single- or two-family residential.

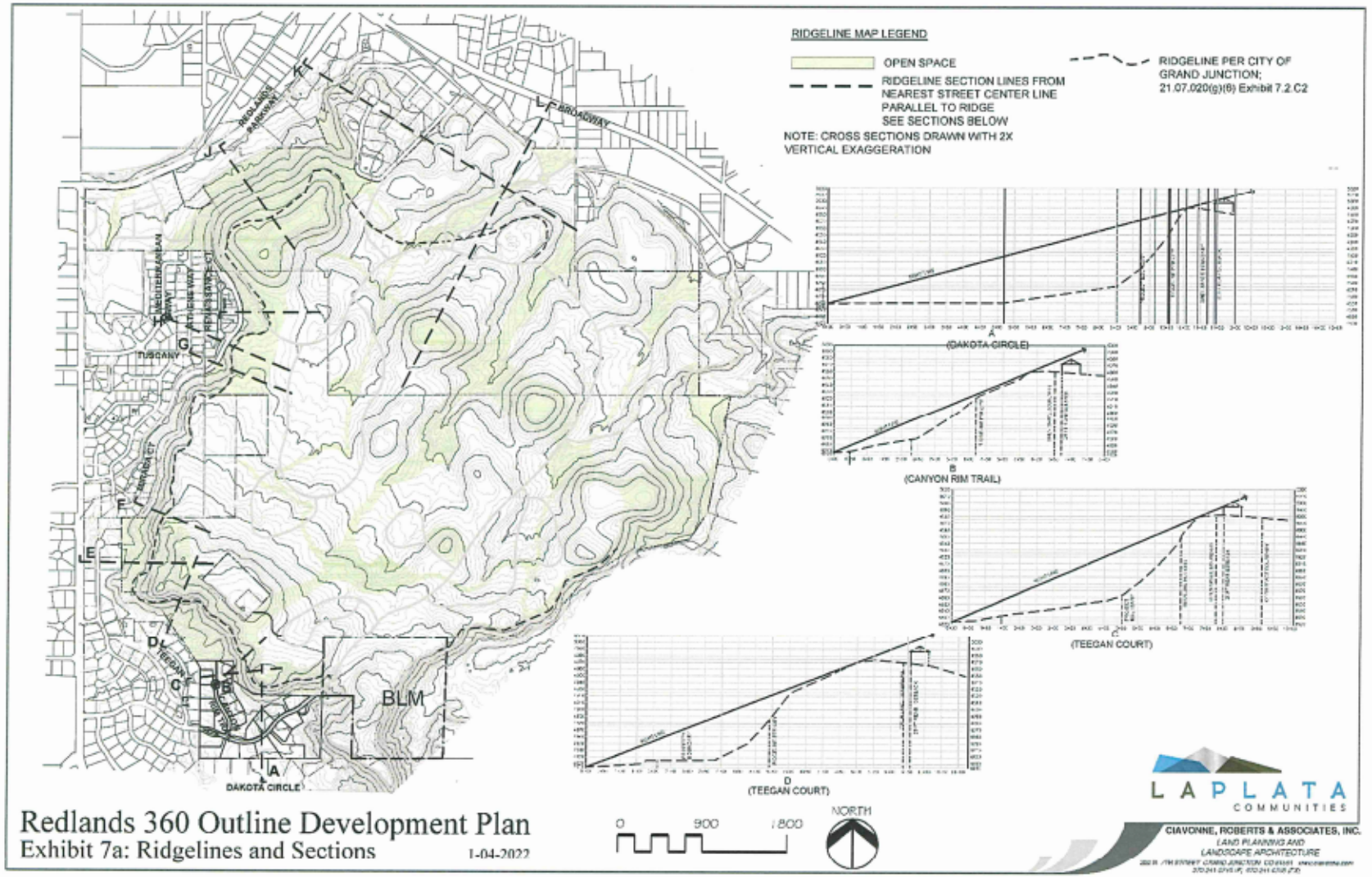
LEGEND
A ALLOWED USE
C CONDITIONAL USE

Redlands 360 Outline Development Plan
Exhibit 6B: Use Table

1-04-2022

LA PLATA COMMUNITIES

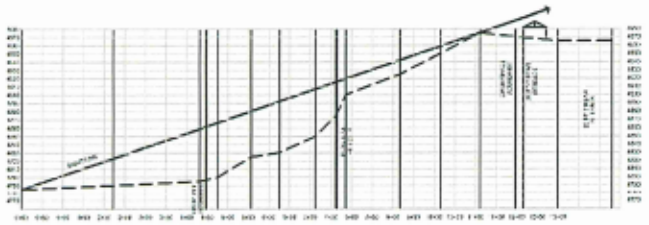
CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND LANDSCAPE ARCHITECTURE



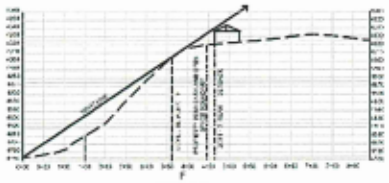
Redlands 360 Outline Development Plan

Exhibit 7a: Ridgelines and Sections

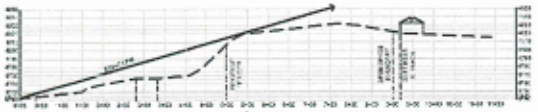
1-04-2022



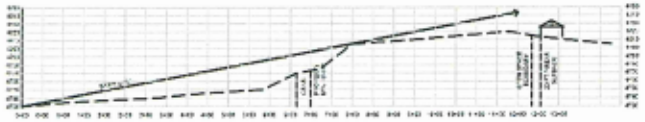
E
(SOUTH CAMP)



F
(MIRADA)



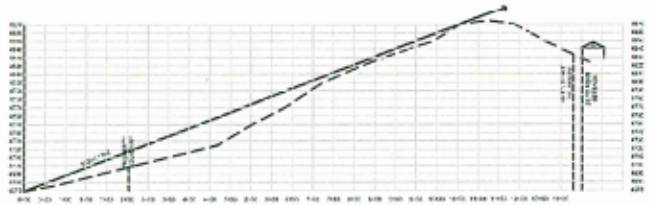
G
(TUSCANY & ATHENS WAY)



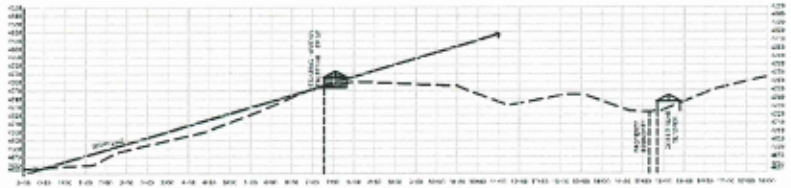
H
(MEDITERRANEAN WAY)



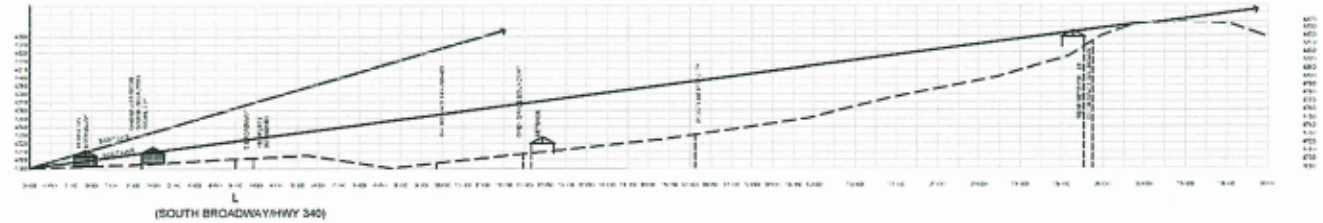
I
(RENAISSANCE COURT)



J
(REDLANDS PARKWAY-SOUTHWEST)



K
(REDLANDS PARKWAY-NORTHEAST)



L
(SOUTH BROADWAY/HWY 340)

Redlands 360 Outline Development Plan

Exhibit 7b: Ridgelines and Sections

1-04-2022

LA PLATA COMMUNITIES

CIAVONNE, ROBERTS & ASSOCIATES, INC.
LAND PLANNING AND
LANDSCAPE ARCHITECTURE

REDLANDS 360°

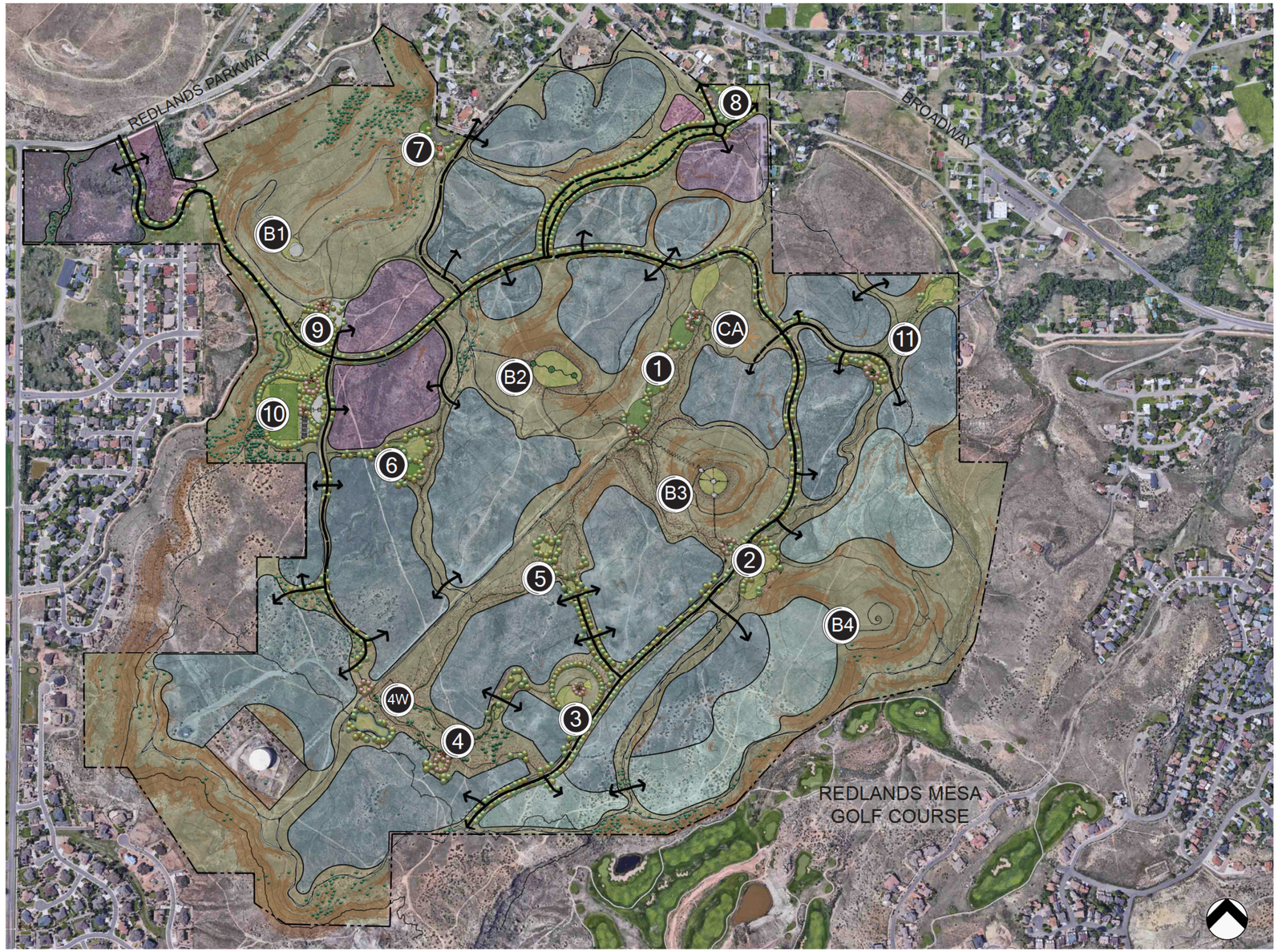
Park and Open Space Master Plan



MAY | 2023

LA PLATA COMMUNITIES

CONSILIUM DESIGN



PARK 1

- ACTIVE AREA WITH LAWN
- PRESERVED TRAIL
- TRADITIONAL PLAYGROUND & PICNIC SHELTER
- TRAIL CONNECTION*
- FRISBEE GOLF COURSE

PARK 2

- TRAILHEAD*
- RESTROOMS & WATER FOUNTAIN
- TRAIL CONNECTION*
- NATIVE GRASS PASTURE
- INTERPRETIVE TRAIL
- TRAIL TO BROTHER 4

PARK 3

- PICNIC SHELTER
- SLOPE PLAY
- NATIVE GRASS LAWN
- WATER QUALITY & DETENTION

PARK 4

- FRISBEE GOLF
- DOG PARK
- TRAIL CONNECTION*
- PICNIC SHELTER
- ACTIVE LAWN AREA

PARK 4 WEST (4W)

- FRISBEE GOLF
- TRAIL CONNECTION*
- DOG PARK
- IRRIGATION POND

PARK 5

- FRISBEE GOLF
- NATURAL PLAY FEATURE*
- WATER QUALITY & DETENTION POND

PARK 6

- NATURAL PLAY FEATURE*
- SEASONAL RUNOFF FEATURE
- TRAIL CONNECTION*

PARK 7

- TRAILHEAD*
- KIOSK WITH TRAIL MAP
- SHADE STRUCTURE
- PARKING
- ACTIVE LAWN AREA

PARK 8

- TRAILHEAD*
- KIOSK WITH TRAIL MAP
- WATER QUALITY & DETENTION POND
- PARKING

PARK 9

- PICNIC SHELTER WITH RESTROOM
- INFORMAL AMPHITHEATER
- NATIVE GRASS LAWN
- PARKING
- TRAIL TO BROTHER 1

PARK 10

- CITY PARK DEDICATION**
- PROGRAMMED FIELD SPACE
- PARKING
- COMMUNITY PAVILION/ GATHERING SPACE*
- TRADITIONAL PLAY STRUCTURE
- WATER QUALITY & DETENTION
- PICKLEBALL
- RESTROOMS & WATER FOUNTAIN
- DOG PARK

PARK 11

- TRAIL CONNECTION*
- NATURAL PLAY FEATURE*
- MOUNTAIN BIKE SKILLS COURSE
- WATER QUALITY & DETENTION

BROTHER 1 (B1)

- "EASTER HILL" SUNRISE PARK
- TRAIL CONNECTION*
- COMMUNITY GATHERING SPACE*
- SUNRISE CELEBRATION ELEMENT

BROTHER 2 (B2)

- "EARTH"
- INCLINE STEPS
- GEOLOGY WALK & INTERPRETIVE SIGNAGE
- BOULDER SCRAMBLE
- FITNESS CIRCUIT FROM BROTHER 2 TO BROTHER 3*

BROTHER 3 (B3)

- "HORIZON"
- INCLINE STEPS
- SUNDIAL WITH INTERPRETIVE SIGNAGE
- EXERCISE AREA
- BOULDER SCRAMBLE
- FITNESS CIRCUIT FROM BROTHER 2 TO BROTHER 3*

BROTHER 4 (B4)

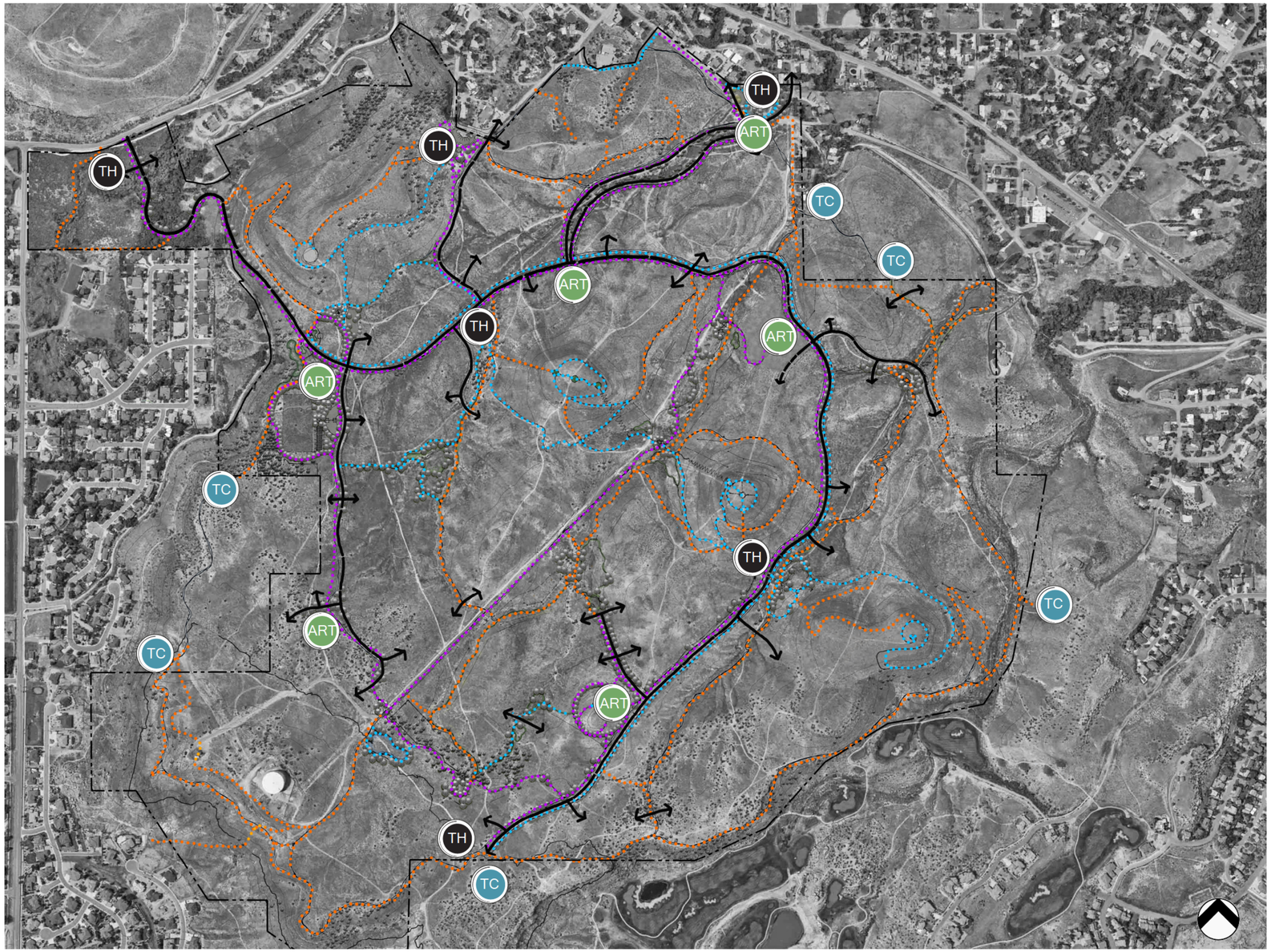
- "NATURE" SUNSET PARK
- BENCHES
- NATURE BLIND
- INTERPRETIVE TRAIL ABOUT FLORA & FAUNA
- TRAIL CONNECTION*

COMMUNITY AMENITY (CA)

* INDICATES TOP 10 AMENITIES WANTED FOR NEW DEVELOPMENTS IN THE PARKS & RECREATION PROS SURVEY
** MEETS IGA REQUIREMENTS

In homage to the City of Grand Junction Three Sisters Park, the four prominent mesas that bisect the Redlands 360 site are referred to as "The Four Brothers". They are the backbone of the Redlands 360 parks and open space master plan. Each of the Four Brothers and their unique personalities will connect the Redlands 360 community to the land it sits upon. See more in depth descriptions on the individual Brothers' pages.

CONCEPT ONLY, NOT FOR CONSTRUCTION

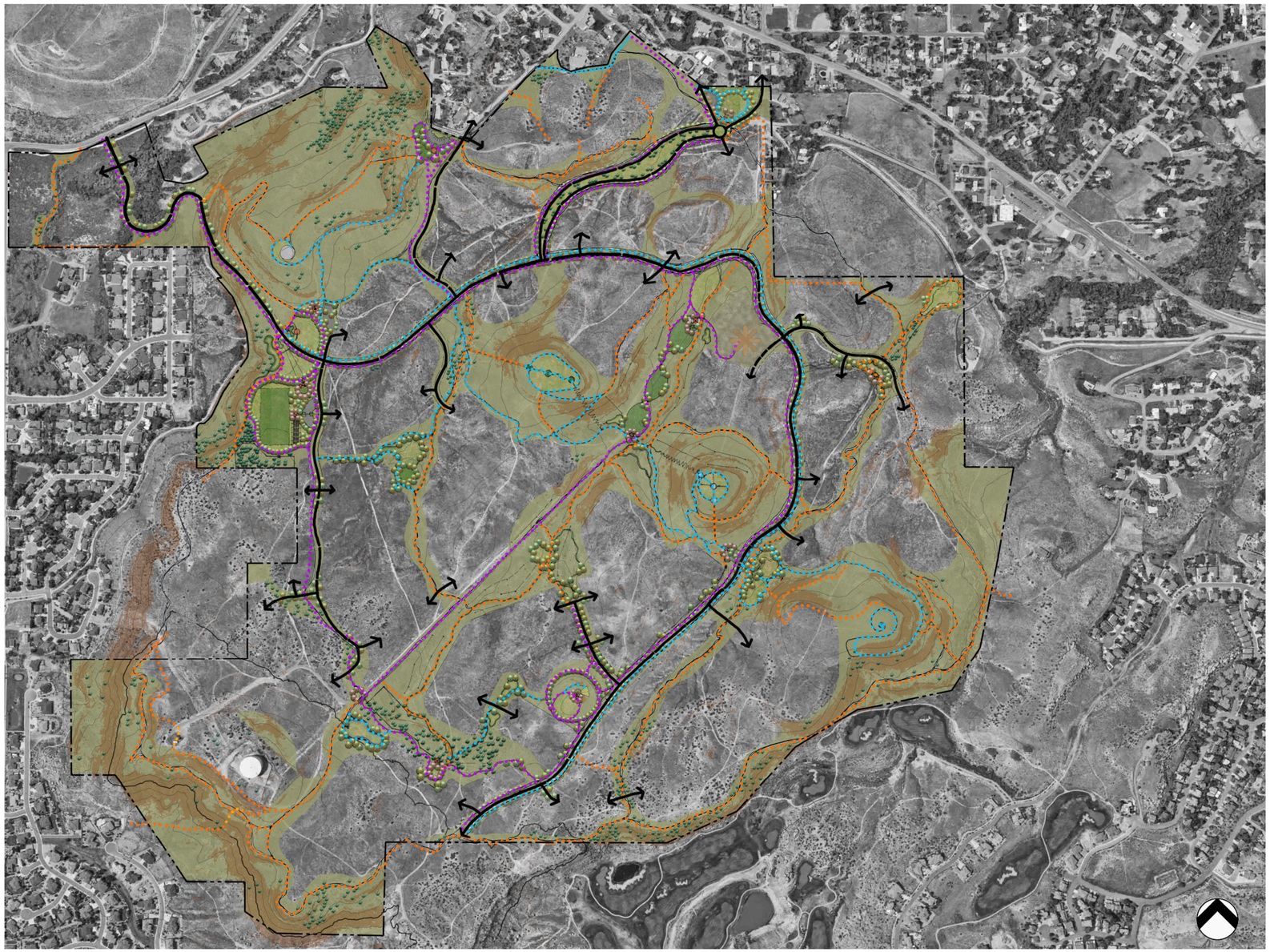


TRAIL SYSTEM

- Multi-use paved trail
- Soft surface improved trail
- Single track trail
- Trailhead
- Art feature
  Art locations and quantity are subject to change
- Trail connection
  Access to adjoining property trails
- Neighborhood Entrance

The open space between Brother 2 & 3 is bisected by the southwest to northeast running corridor that spans Redlands 360 from the top of the site to the planned community amenity at the northern end of the space. All trail corridors converge on this place. Trailheads anchor each end of the Brothers' open space at the main loop road. Redlands 360 also connects to adjacent property trails, including Colorado West Land Trust Conservation Easement and Bureau of Land Management properties.

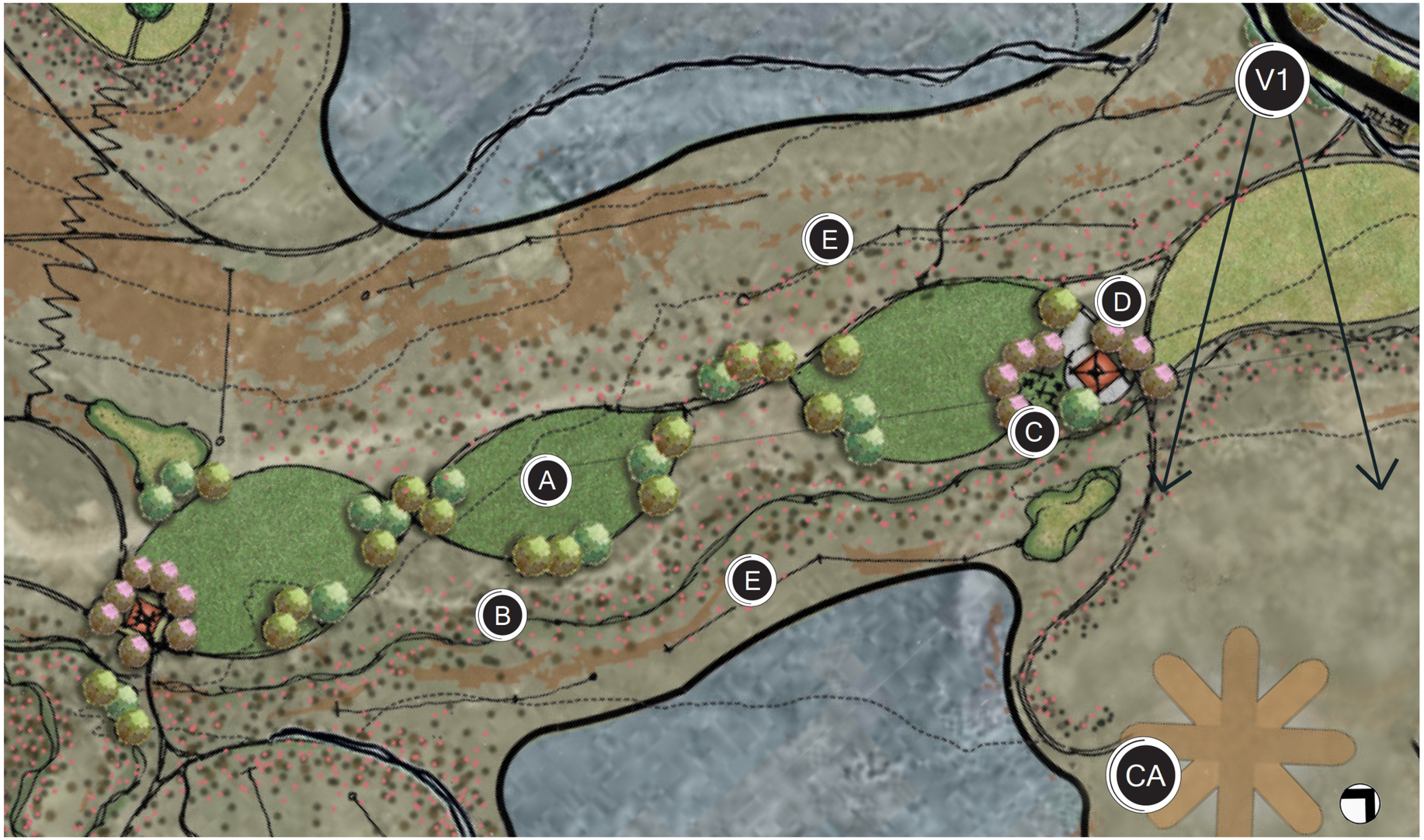
CONCEPT ONLY, NOT FOR CONSTRUCTION



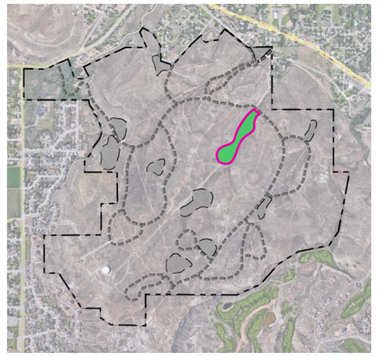
PARKS, OPEN SPACE, AND TRAIL SYSTEM

- Multi-use paved trail
- Soft surface improved trail
- Single track trail
- Open space

CONCEPT ONLY, NOT FOR CONSTRUCTION



KEY MAP



PARK 1

- A — Active area with lawn
- B — Preserved trail
- C — Traditional playground & picnic shelter
- D — Trail connection
- E — Frisbee golf course
- V1 — View from the crest of the hill
- CA — Community amenity

A



B



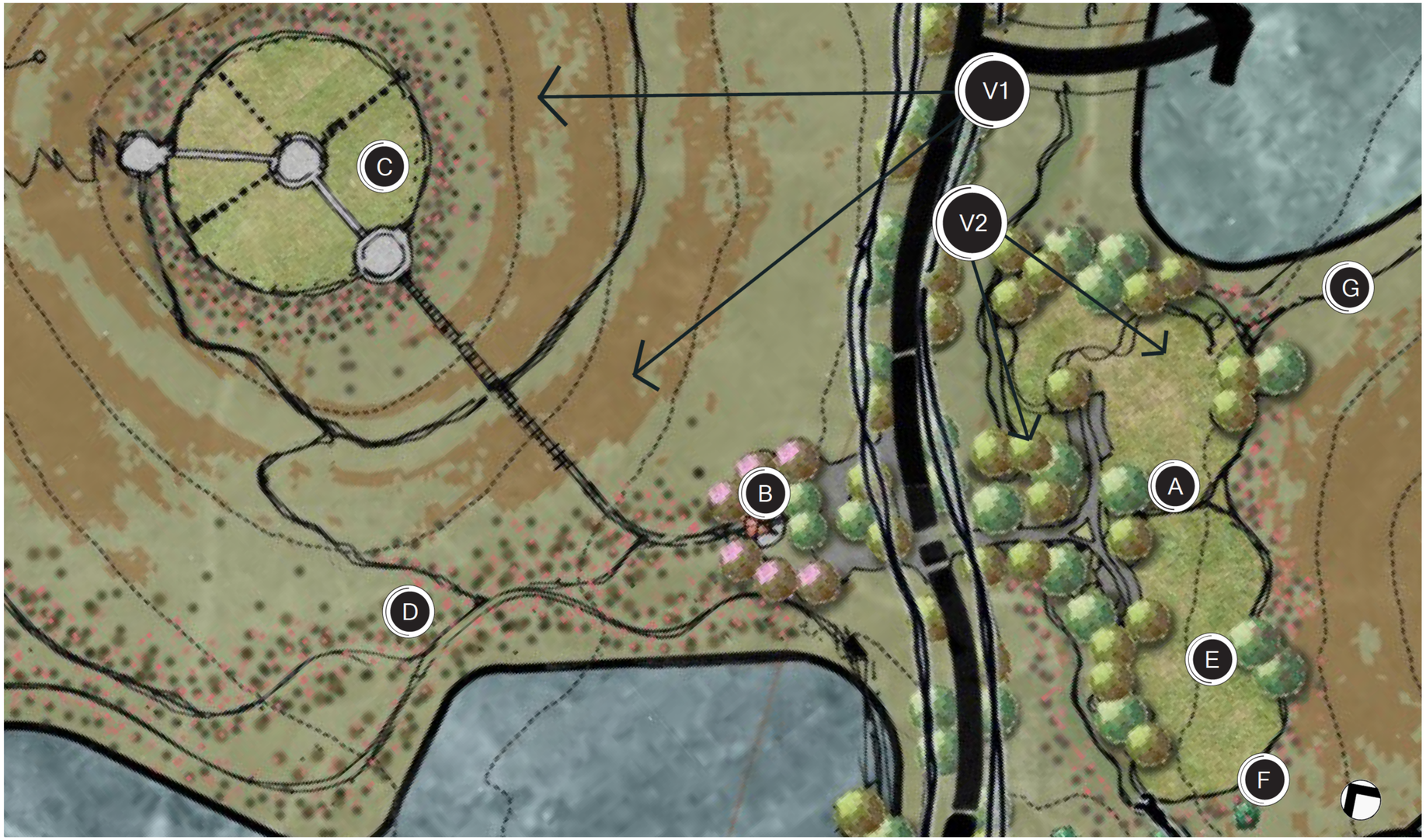
C



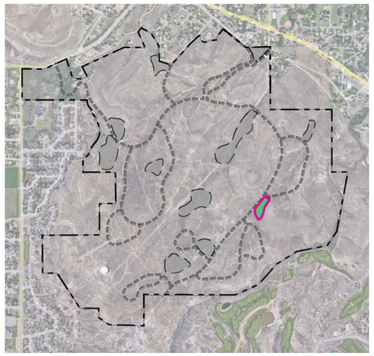
E



CONCEPT ONLY, NOT FOR CONSTRUCTION



KEY MAP



PARK 2

- A — Trailhead
- B — Restroom & water fountain
- C — Brother 3
- D — Trail connection
- E — Native grass pasture
- F — Interpretive trail
- G — Trail to Brother 4
- V1 — View to Brother 3 from community loop road
- V2 — View to Park 2 from communtiy loop road

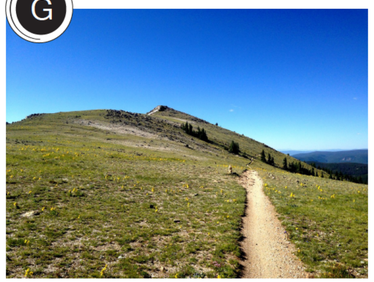
B



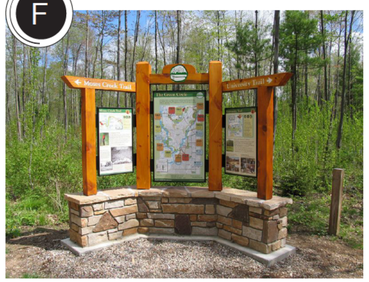
E



G



F



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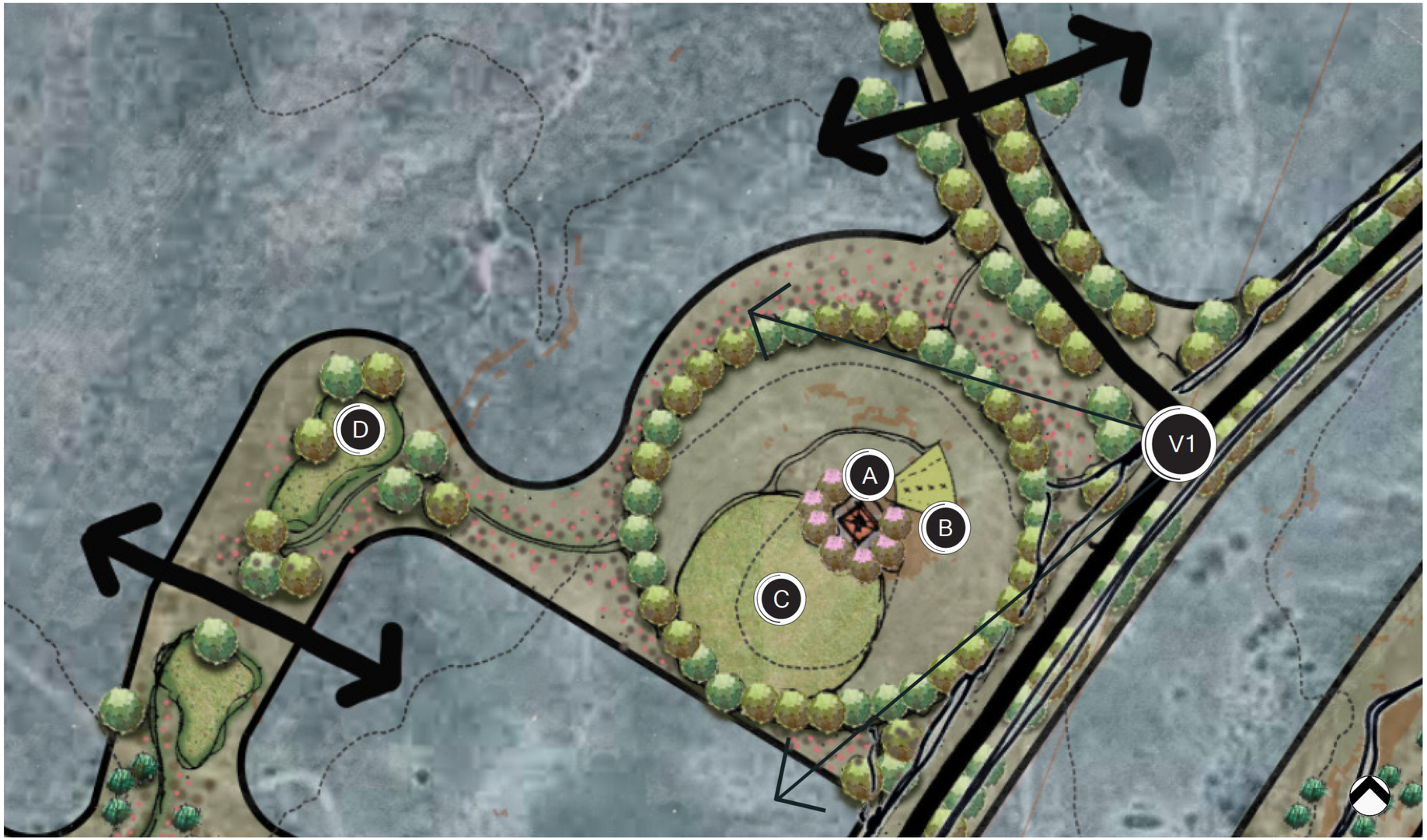
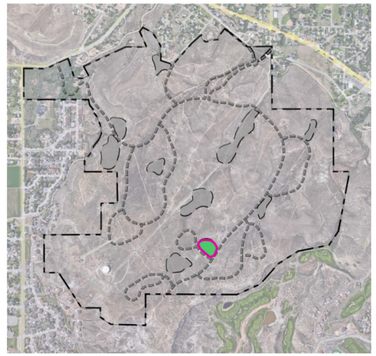


KEY MAP



PARK 3

- A — Picnic shelter
- B — Slope play
- C — Native grass lawn
- D — Water quality & detention
- V1 — View to Park 3 from community loop road

A



B



B



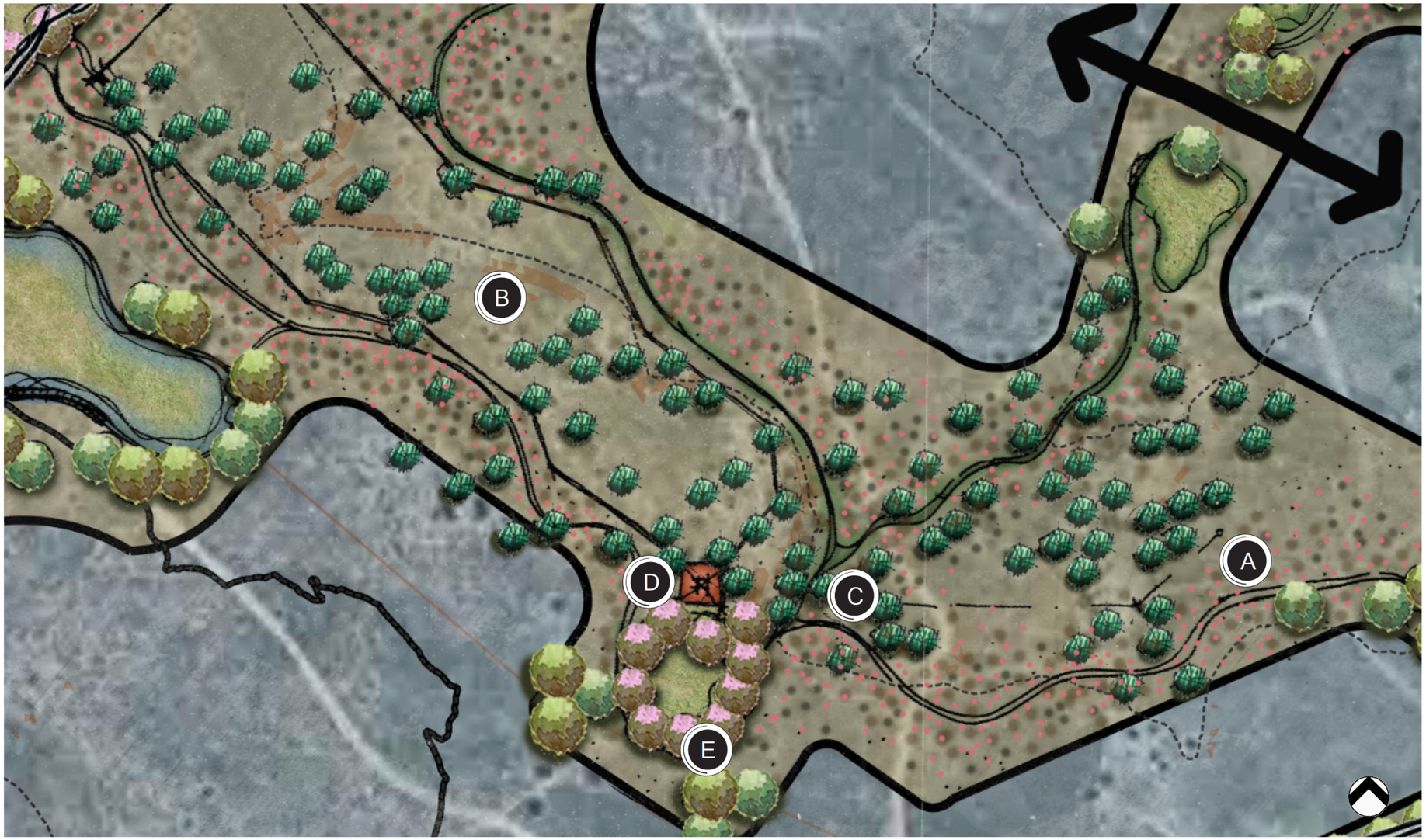
C



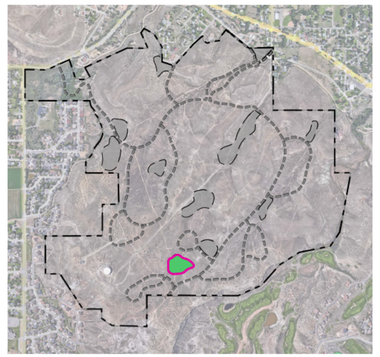
D



CONCEPT ONLY, NOT FOR CONSTRUCTION



KEY MAP



PARK 4

- A Frisbee golf
- B Dog park
- C Trail connection
- D Picnic shelter
- E Active lawn area

A



B



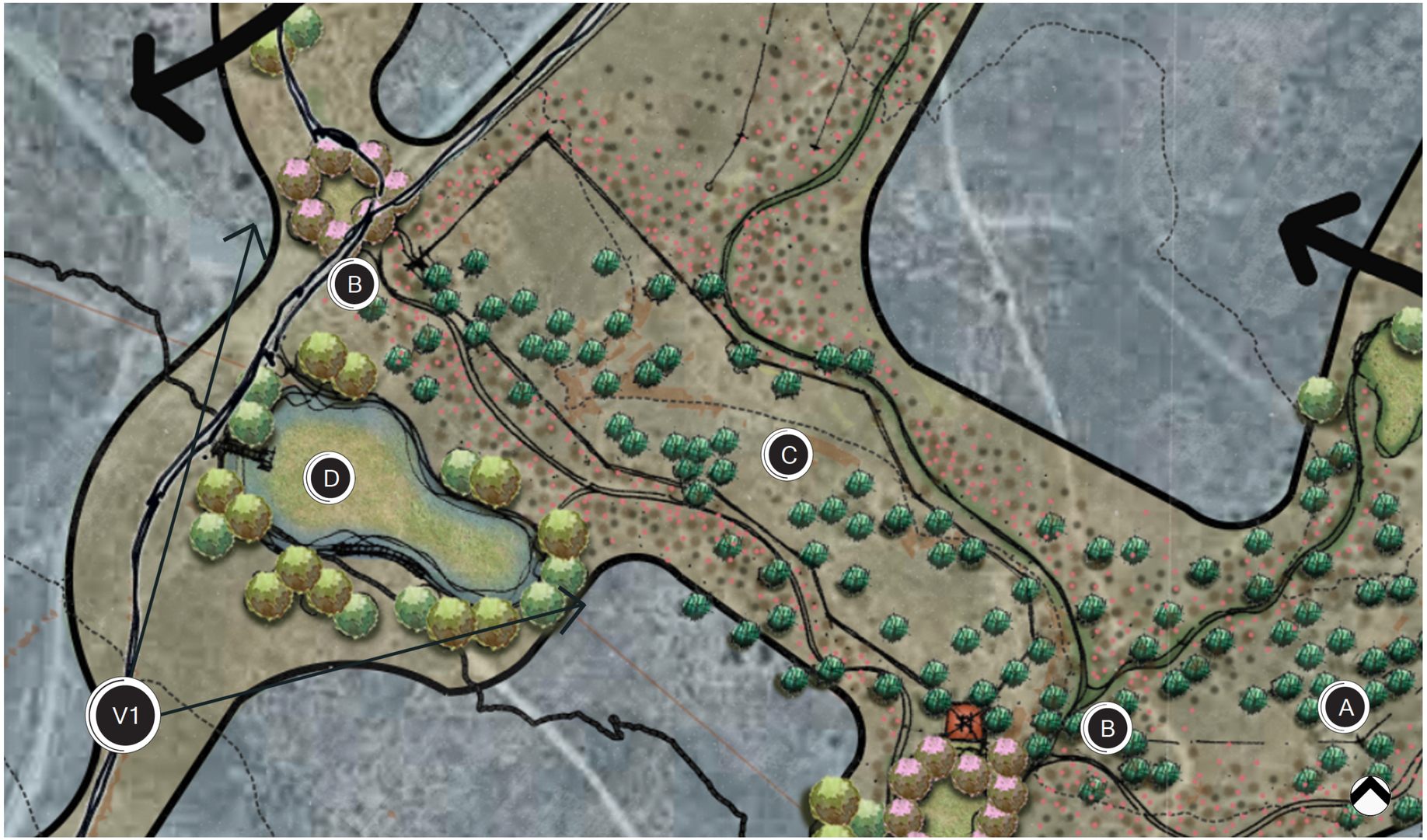
D



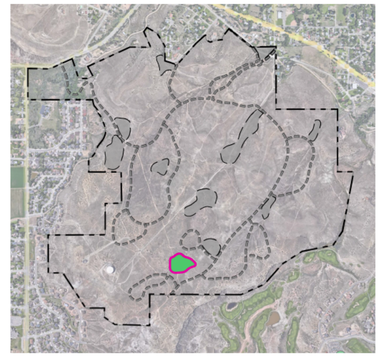
E



CONCEPT ONLY, NOT FOR CONSTRUCTION



KEY MAP



PARK 4 WEST

- A — Frisbee golf
- B — Trail connection
- C — Dog park
- D — Irrigation pond
- V1 — View of irrigation pond from trail

A



C



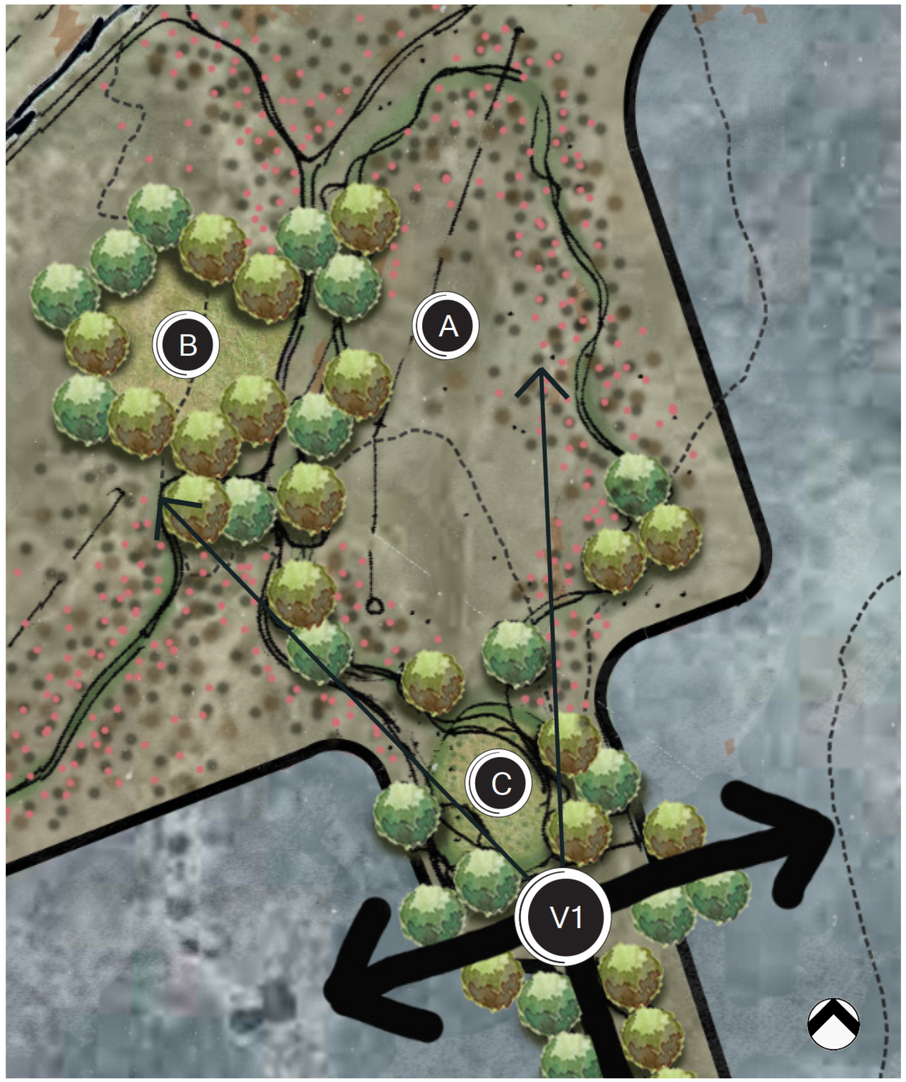
D



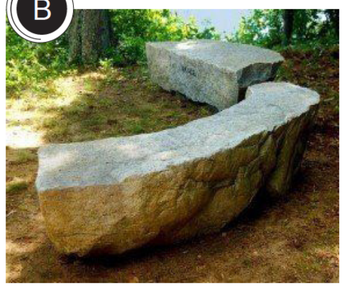
D



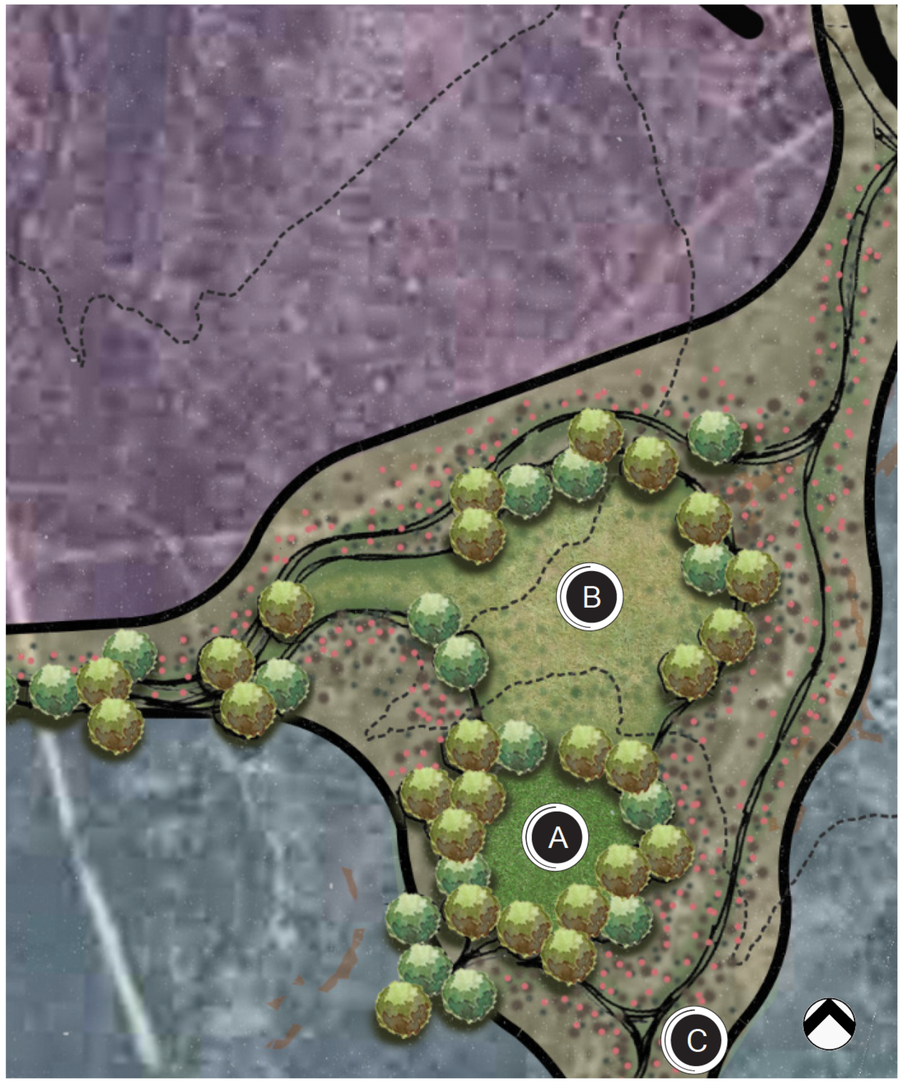
CONCEPT ONLY, NOT FOR CONSTRUCTION



PARK 5





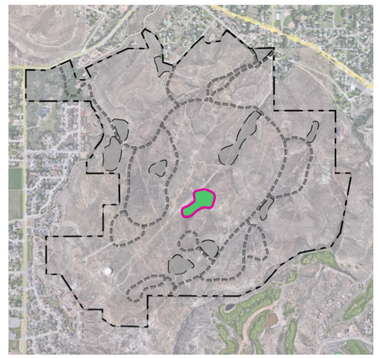


PARK 6





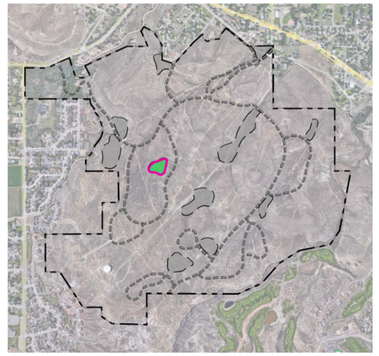
KEY MAP



PARK 5

- A — Frisbee golf
- B — Natural play feature
- C — Water quality & detention pond
- V1 — View of Park 5 from neighborhood entry drive

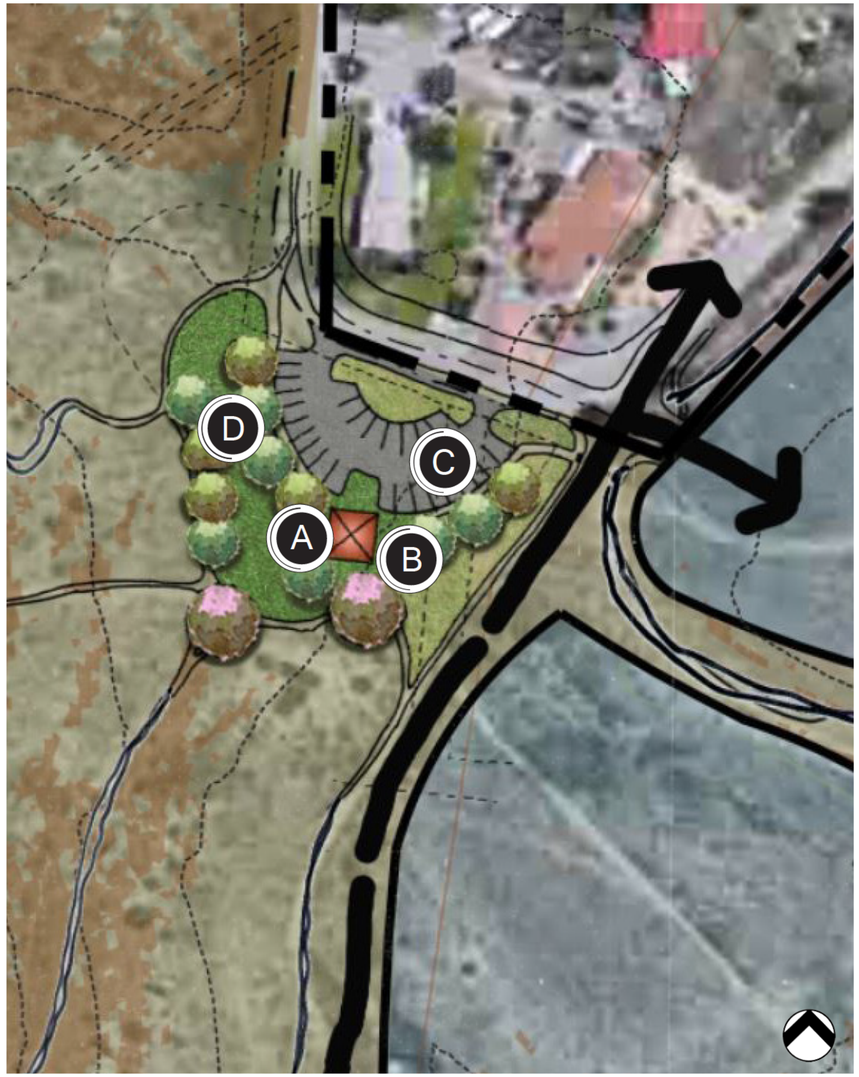
KEY MAP



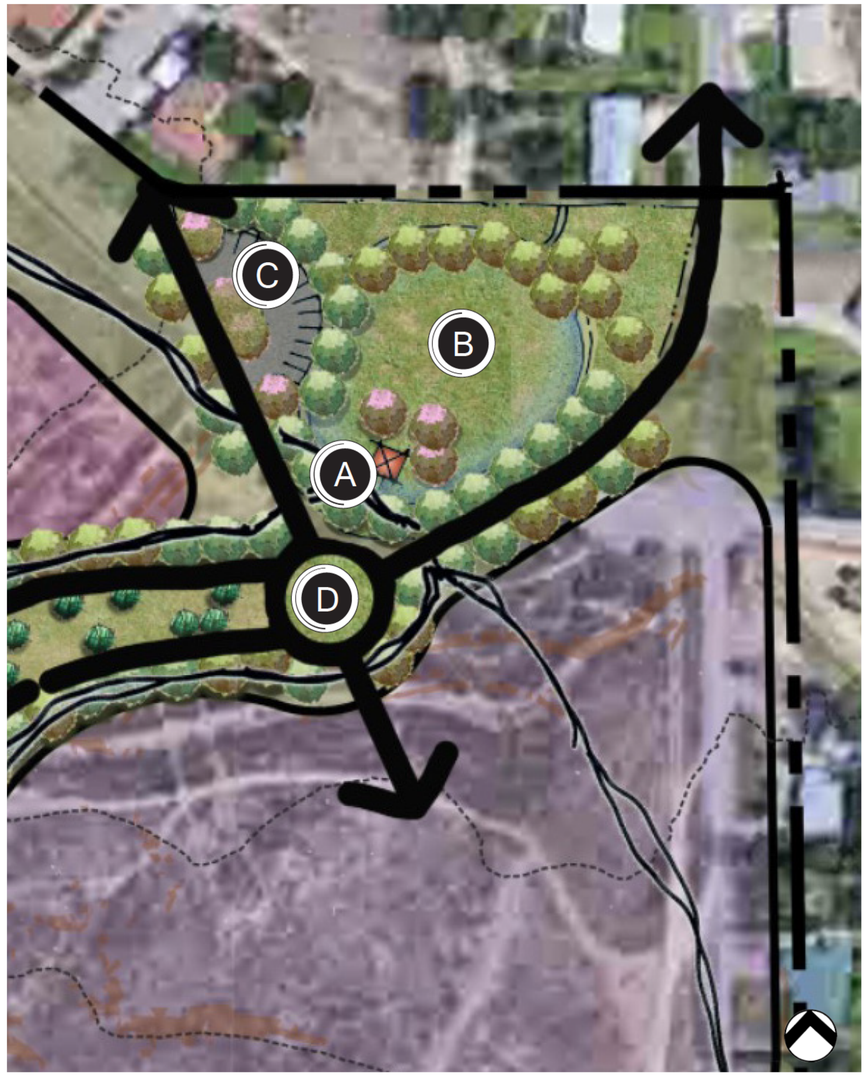
PARK 6

- A — Natural play feature
- B — Seasonal runoff feature
- C — Trail Connection

CONCEPT ONLY, NOT FOR CONSTRUCTION

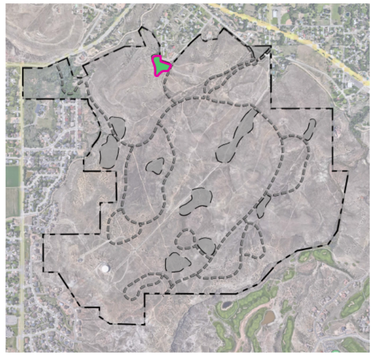


PARK 7



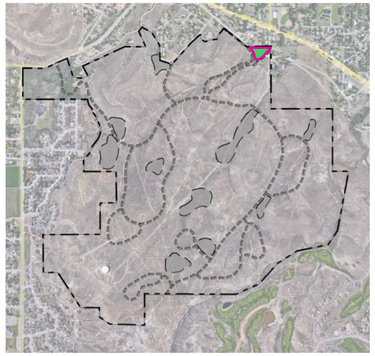
PARK 8

KEY MAP



PARK 7

- A — Kiosk with trail map
- B — Shade structure
- C — Parking
- D — Active lawn area



PARK 8

- A — Kiosk with trail map
- B — Water quality & detention
- C — Parking
- D — Landscape & art feature

A



B



C



A



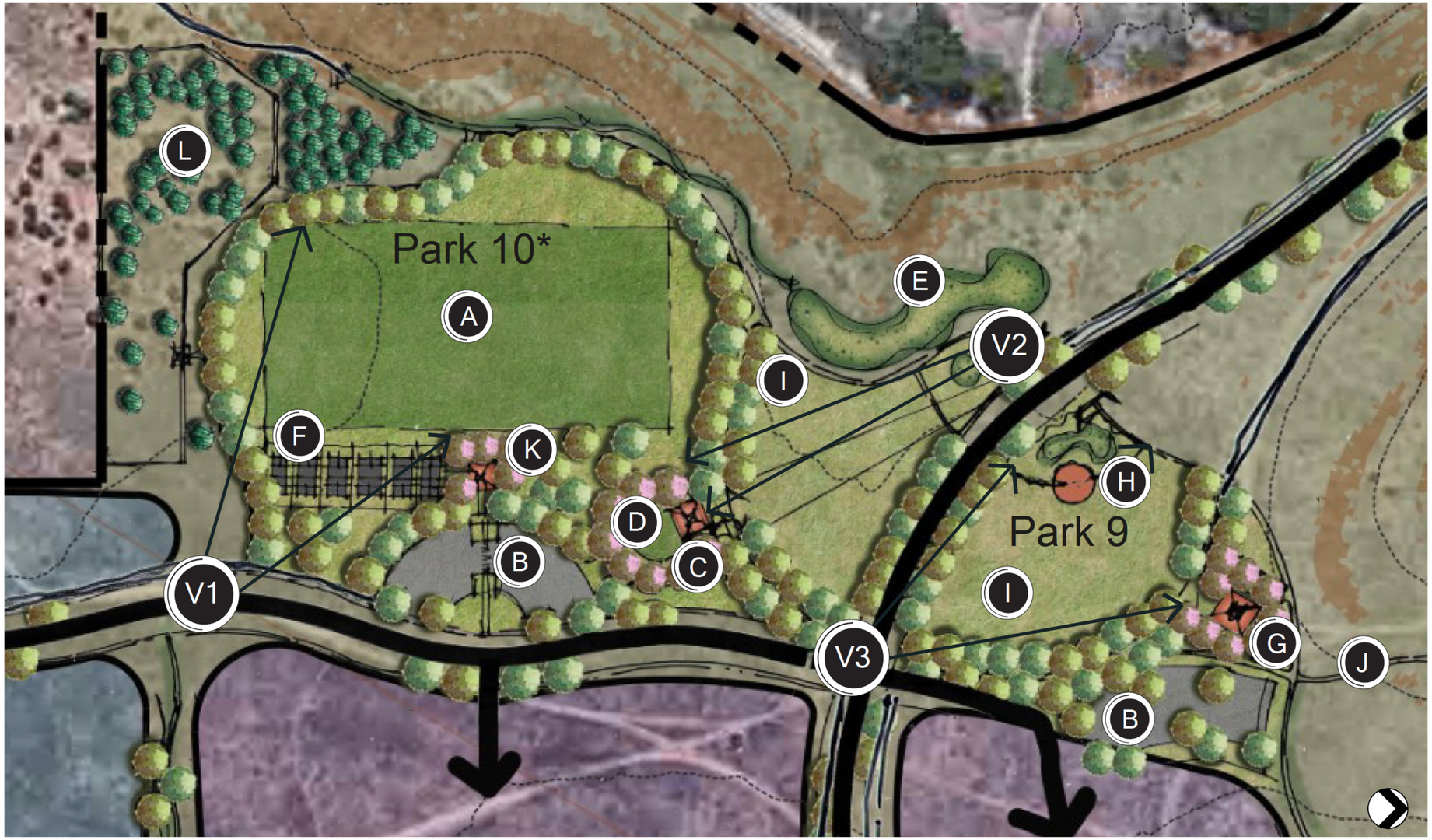
B



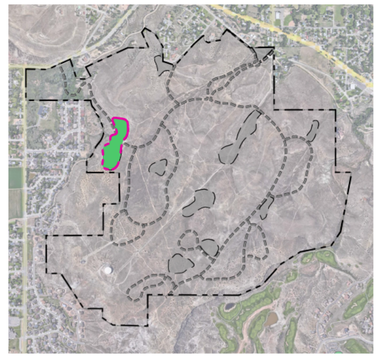
D



CONCEPT ONLY, NOT FOR CONSTRUCTION



KEY MAP



PARK 9 & 10*

*City Park Dedication

- A — Programmed field space
- B — Parking
- C — Community pavilion/gathering space
- D — Traditional play structure
- E — Water quality & detention
- F — Pickleball
- G — Picnic shelter with restroom
- H — Informal amphitheater
- I — Native grass lawn
- J — Trail to Brother 1
- K — Bathrooms & water fountain
- L — Dog park

Views

- V1 — View to Park 10 from adjacent street
- V2 — View over the great lawn to pavilion
- V3 — View of Park 9 from road intersection

CONCEPT ONLY, NOT FOR CONSTRUCTION

A



B



C



D



E



F



G



H



I



J



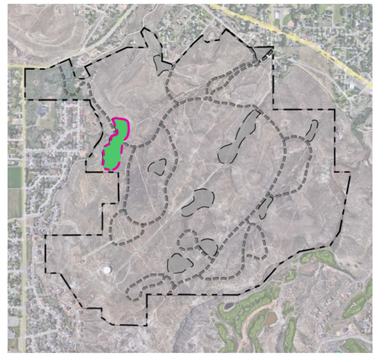
K



L



KEY MAP



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- B Parking
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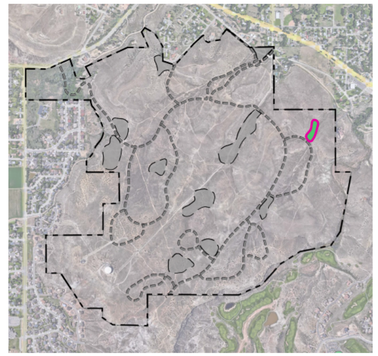
- H Informal amphitheater
- I Native grass lawn
- J Trail to Brother 1
- K Restrooms & water fountain
- L Dog park

CONCEPT ONLY, NOT FOR CONSTRUCTION



KEY MAP



PARK 11

- A — Trail connection
- B — Natural play feature
- C — Mountain bike skills course
- D — Water quality & detention
- V1 — View to Park 11 from neighborhood entry road

A



C



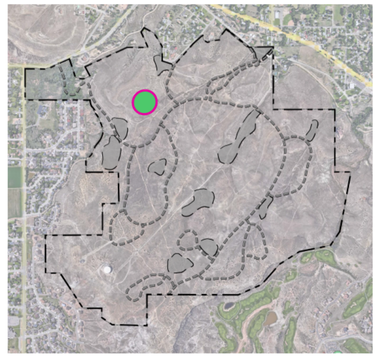
C



CONCEPT ONLY, NOT FOR CONSTRUCTION

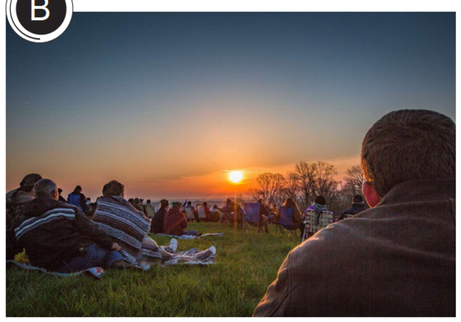


KEY MAP

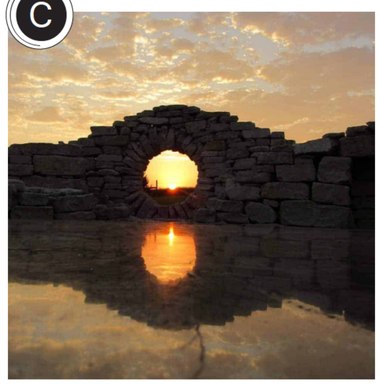


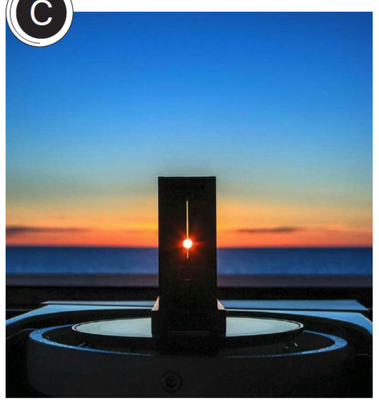
BROTHER 1

- A — Trail connection
- B — Community gathering space
- C — Sunrise celebration element
- V1 — View over Park 9 & Park 10



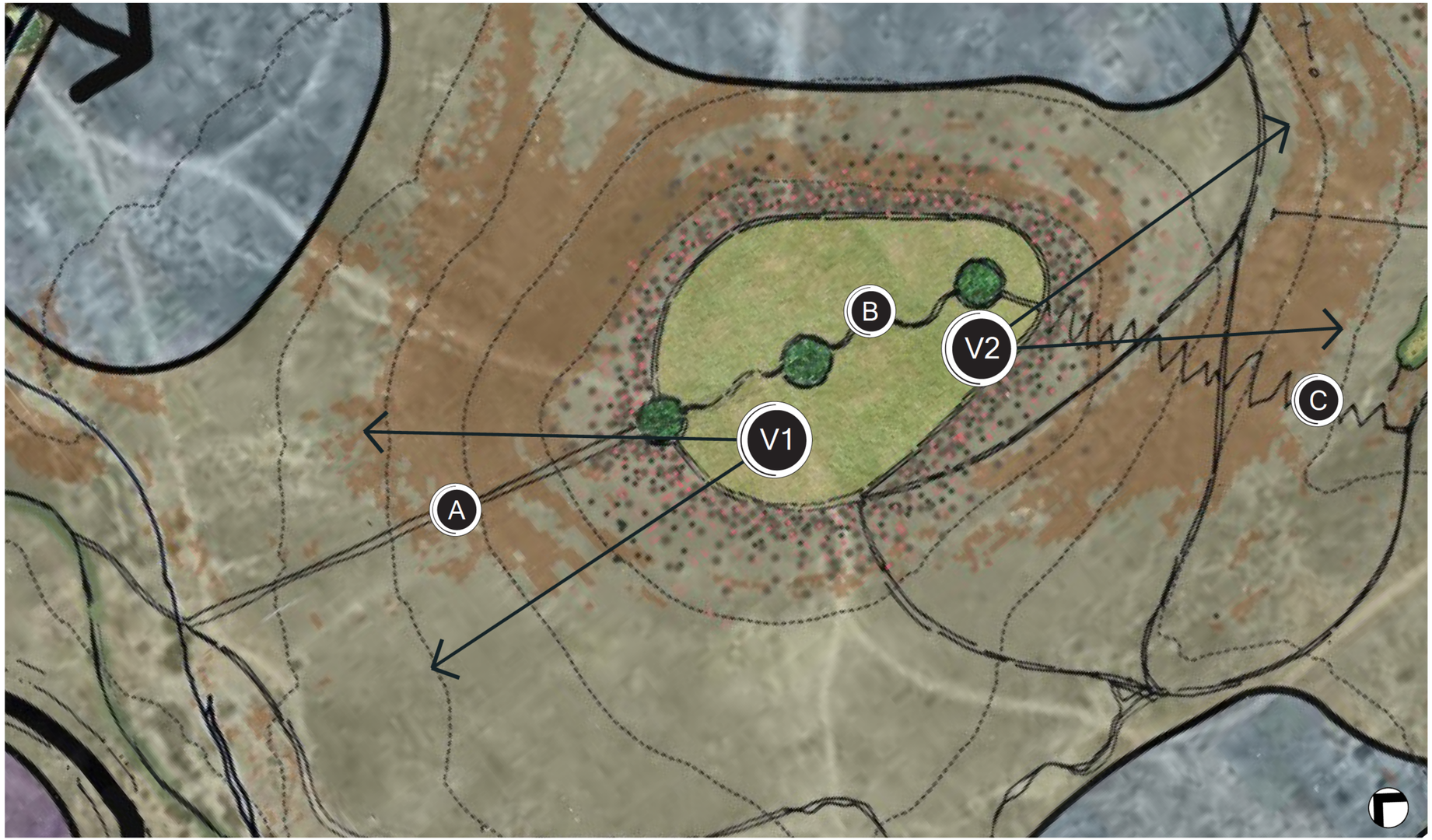




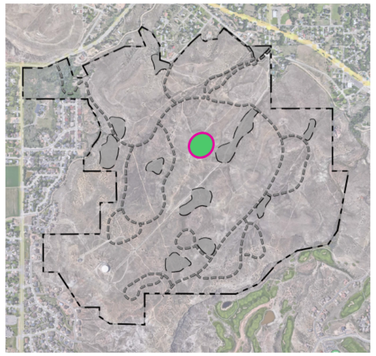


"Easter Hill", or our "Sunrise Park" at the top of Brother 1, will tell the story and continue the historic tradition of sunrise services at the top of the hill. A semiformal gathering place designed to celebrate the sunrise will be included for reflection and other community and family events. Interpretive displays and signage will celebrate the history of this Brother, Redlands 360, and the surrounding community.

CONCEPT ONLY, NOT FOR CONSTRUCTION



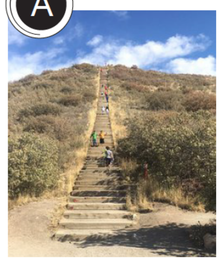
KEY MAP



BROTHER 2

- A — Incline steps
- B — Geology walk & interpretive signage
- C — Boulder scramble
- V1 — View to Brother 1 & beyond
- V2 — View to Brother 3 & beyond

A



B



C



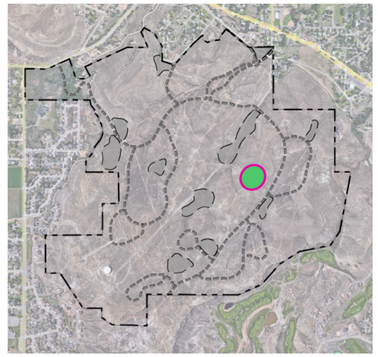
“Earth”, will tell the story of the geology of the Redlands and surrounding mountain ranges. Interpretive displays with stone samples representative of the site and the surrounding mountains, along with maps, graphics and narrative will teach residents about the geology of their community and the region.

An interconnected system of incline stairs and rock scrambles at Brothers 2 & 3 challenges people to summit each mesa as a combined fitness circuit.

CONCEPT ONLY, NOT FOR CONSTRUCTION



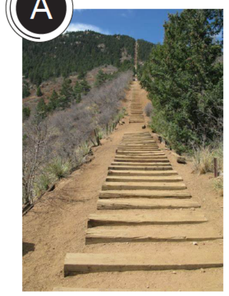
KEY MAP



BROTHER 3

- A — Incline steps
- B — Sundial with interpretive signage
- C — Exercise area
- D — Boulder scramble
- V1 — View over Park 1 to Brother 2
- V2 — View over Park 2 to Brother 4

A



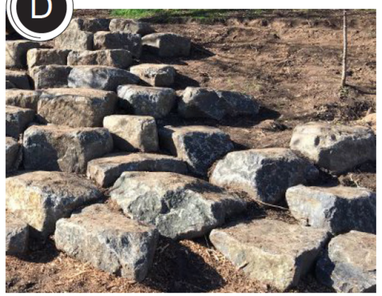
B



B



D

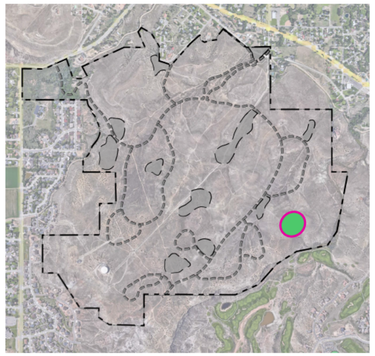


"Horizon", will tell the story of the geography of the community through interpretive displays. A large "compass" trail will frame the mesa top, and a sundial will be a central feature.

CONCEPT ONLY, NOT FOR CONSTRUCTION



KEY MAP



BROTHER 4

- A — Benches
- B — Nature blind that celebrates sunset
- C — Interpretive trail about flora & fauna
- D — Trail connection
- V1 — View over Park 2 to Brother 3
- V2 — View to greater valley



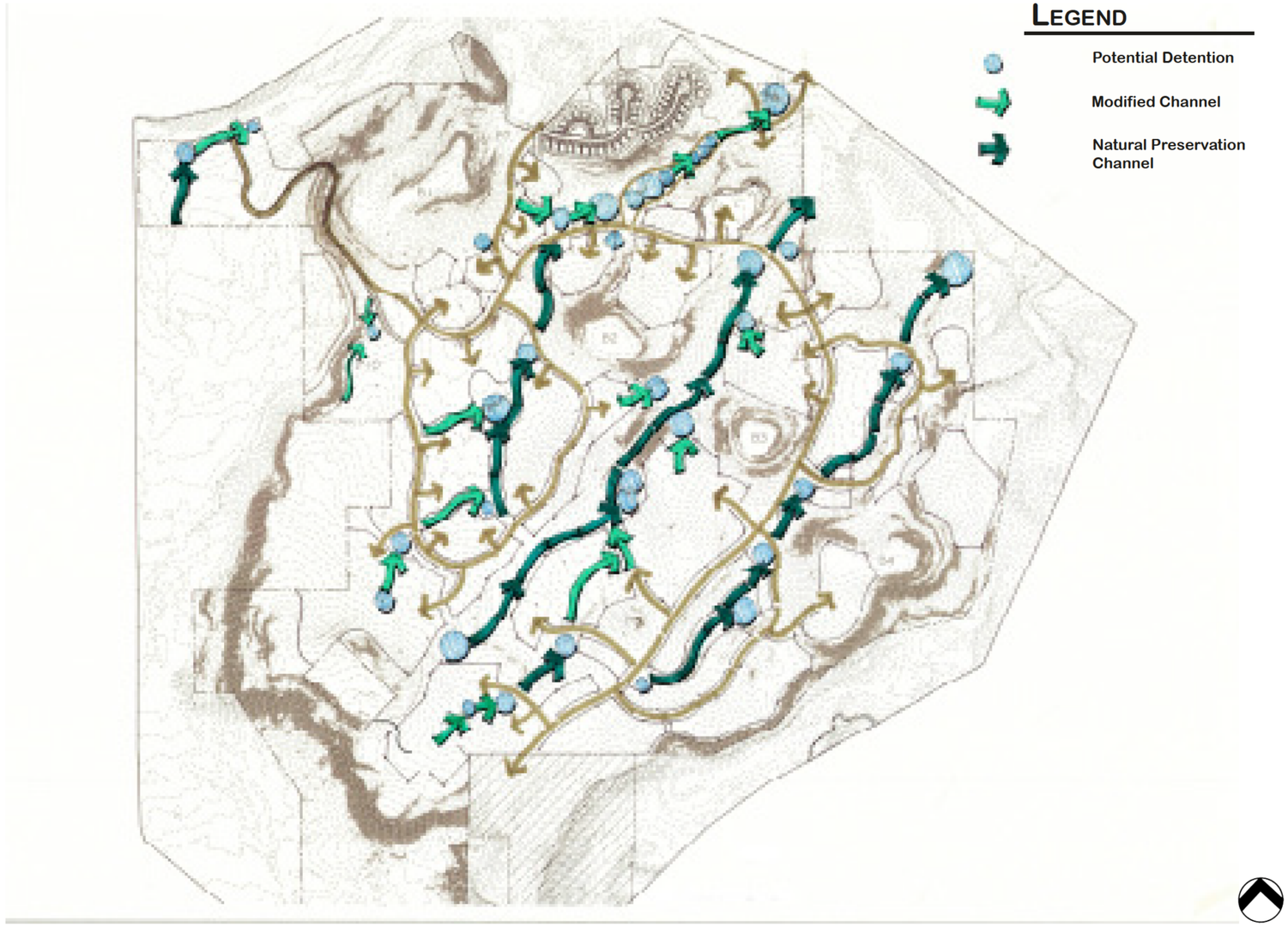






"Nature", will tell the story of the flora and fauna of Redlands 360 at a "Sunset Park" on top of Brother 4. An artful viewing blind will sit upon the top of the mesa which will celebrate the sunset. Spotting scopes will give people a close-up view of the plants and animals that call Redlands 360 home.

CONCEPT ONLY, NOT FOR CONSTRUCTION



Enhanced Natural Drainageways

- Preserve existing vegetation and topography whenever possible
- Use check dams and drop structures to slow flows to minimize channel erosion and encourage infiltration
- Use weirs to direct flows from channel to infiltration and detention basins.
- Integrate infiltration and detention basins into neighborhood parks
- Incorporate on-line infiltration and detention basins at road and trail crossings
- Use sheet flow and curb cuts to allow water to flow directly into adjacent landscape areas wherever feasible

Modified Drainageways

- Integrate open channel drainage into neighborhood designs where feasible, to minimize structured stormwater improvements
- Use small pocket parks for integrated infiltration and detention
- Include shade trees in infiltration and detention basin design
- Use sheet flow and curb cuts to allow water to flow directly into adjacent landscape areas wherever feasible

Open Space and Trails

- Preserve the native landscape wherever possible
- Preserve and reuse topsoil for placement at disturbed landscape areas to restore the native landscape
- Amend soils as needed for improved plant performance at parks and other improved landscapes

Neighborhood and Home Design

- Encourage builders to include two 55-gallon rain barrels with each home for domestic rainwater capture.
- Encourage builders to meet Water Sense standards for home and site design
- Incorporate micro-infiltration basins into lot design where feasible, directing downspout water and sheet flow from drives to shade trees and other plantings
- Use latest technologies in irrigation design including submetering, separate meters or irrigation controllers to monitor landscape water demand






CONCEPT ONLY, NOT FOR CONSTRUCTION

Grand Junction City Council

Workshop Session

Item #1.e.

Meeting Date:	August 28, 2023
Presented By:	Greg Caton, City Manager
Department:	City Manager's Office
Submitted By:	Johnny McFarland, Asst. to the City Manager

Information

SUBJECT:

Riverside Education Center (REC)

EXECUTIVE SUMMARY:

This item is to consider Riverside Education Center's (REC) request to alter the use of $300,000 granted by the City for the purchase of 1177 Winters Ave. REC indicated in a letter to City Council that they had received additional grant money that would cover the capital cost of the building along with additional improvements. As such, they are requesting to utilize City funding toward capital improvements needed at the donated building at 1199 Winters.

BACKGROUND OR DETAILED INFORMATION:

In January 2023 Riverside Education Center (REC) submitted a letter requesting $300,000 in off-cycle funding to support their capital campaign to purchase buildings at 1177 and 1199 Winters Avenue. At the April 19 meeting, Council gave direction to staff to prepare a supplemental appropriation for $300,000 from the General Fund Reserve to fund the request from Riverside Educational Center.

In June of 2023, REC submitted a second letter indicating they had been approved for a state grant covering the purchase of the building and capital improvements up to approximately $170,000. As a result, REC requested authorization to reallocate the $300,000 in City funding to fund a portion of the sustainability phase of their capital campaign.

On August 21, 2023, REC submitted a third update letter which indicated they will be finalizing purchase of the 1177 Winters Ave building on August 31 and provided a breakdown of capital improvements needed to make the space fully functional. This is expected to be covered by the $170,000 that will be dispersed to them once they finalize closing on the building. REC is requesting to utilize the $300,000 approved by City Council toward needed capital improvements at the donated building, 1199 Winters. Improvements include a remodel to build offices and meeting space. REC received a quote for the total cost of improvements which is attached to this staff report.

FISCAL IMPACT:

On May 17th, City Council authorized the supplemental appropriation ordinance authorizing the use of $300,000 to fund the original REC funding request from the General Fund reserve prior to REC requesting a reallocation.

SUGGESTED ACTION:

This item is for discussion only.

Attachments

1. City of Grand Junction - updated - August 2023
2. DDB quote - August 2023
3. City of Grand Junction - updates letter - June 2023
4. City of Grand Junction - off-cycle funding request - January 2023

August 21, 2023

Dear City Manager Caton,

In preparation for Thursday's City Council Workshop Session, REC wanted to provide an update on our ever-evolving status as future property owners, including capital improvement projects. We are requesting the City continue with the previously approved funding for REC allowing us to utilize the funds for capital improvements needed in the donated 1199 Winters unit.

We are excited to report the closing for our building, 1177 Winters Ave. is scheduled for Thursday, August 31st. This has been a whirlwind event including a capital campaign feasibility study, fundraising, and now the closing. In addition to the funds we were granted to purchase the building, we will also receive $170k for capital improvements. The grant requires REC to purchase the building before the funds are disbursed and that will be the same for the funds available for improvements.

The owner of 1177 made significant improvements to our current space for REC to function but additional improvements and upgrades are still needed. Below is a list of additional capital improvement projects planned for 1177. We have not gotten complete quotes for all items, but anticipate total costs to align closely with the $170k currently raised.

We have included a quote for the updates that will be needed for the donated 1199. No capital improvements have occurred in that space for several years. REC needs to remodel the space to include, at a minimum, seven offices and meeting space to house the current REC staff who are working in an upstairs office space at 1111 Winters Ave. 1111 Winters was purchased by Timeless Millworks who is allowing REC to continue to utilize the seven offices in the upstairs of the office building until we are able to remodel 1199. These offices are used by REC's development director, grant writer, IT/software development team, finance manager, operations director, executive director, and administrative assistant.

Distinctive Design Builders, the general contractor on all the improvements completed in 1177, has provided a quote for the required improvements needed to allow REC adequate office and meeting space, insulation, windows, and more in 1199.

It is the second week of school and REC already has over 900 students enrolled at sixteen schools (nine elementary, four middle, and three high schools) and we have over 130 full- and part-time staff. We are set-up to sustain programs at all sixteen schools for the 2023-2024 school year.

REC plans to be a pillar in our community into perpetuity and we hope the City will continue with this investment not only for the kids and families we serve, but for the corridor in-between downtown and Las Colonias, where REC is making our permanent home. We sincerely appreciate Council making a responsible decision on how to invest taxpayer money in the betterment of our community.

Thank you!

Joy Hudak
Executive Director

Current capital improvement projects 1177 Winters Ave.:

- Adding insulation in the ceiling and walls of our 18,000 square foot warehouse - $80k
- Irrigation to front planters $3k
- Upgraded passage doors in warehouse $5k
- New overhead rear door (powered and insulated) - $3k
- Snack prep space upgrades - range $2-5k
- Adding gutters to the back of the building, cover for the a/c unit, and an updated sensor pad to the back gate - We don't have a quote for all items yet, but expect to be $10k+
- New front door - $1-3k
- Upgraded swamp coolers in warehouse - $20k
- Building paint - TBD

We anticipate using the grant capital improvements money to cover all necessary improvements and upgrades needed for 1177.

Capital improvement costs for donated 1199 Winters Ave.:

See attached quote

We are requesting City Council approve directing the $300,000 to relocation improvements to 1199.

d·d·b DISTINCTIVE DESIGN BUILD

1177 Winters Ave. Grand Junction, Colorado
Interior Remodel
REC
Attn: Joy Hudak

DATE	DURATION (WEEKS)	SQUARE FEET
8/22/2023	26	3,000

ITEM:	TYPE (L/E/S/M/O):	QTY:	UNIT:	UNIT COST:	EXTENSION:
SCOPE OF WORK					
Selective Demo	Mat/labor	1	Lump Sum	$ 16,350.00	$ 16,350.00
New Doors/Hardware and Hardware/Door Install	Mat/labor	1	Lump Sum	$ 18,520.00	$ 18,520.00
Framing Labor and Material Package	Mat/labor	1	Lump Sum	$ 110,200.00	$ 110,200.00
Painting	Mat/labor	1	Lump Sum	$ 15,100.00	$ 15,100.00
ACT	Mat/labor	1	Lump Sum	$ 17,000.00	$ 17,000.00
Electrical /Low Volt and Data	Mat/labor	1	Lump Sum	$ 28,000.00	$ 28,000.00
HVAC	Mat/labor	1	Lump Sum	$ 54,600.00	$ 54,600.00
Carpet and LVT	Mat/labor	1	Lump Sum	$ 15,100.00	$ 15,100.00
Above Ceiling Installation/ fire Code	Mat/labor	1	Lump Sum	$ 12,500.00	$ 12,500.00
Fire suppression rework	Mat/labor	1	Lump Sum	$ 12,200.00	$ 12,200.00
Toilet Accessories/Grab Bars	Mat/labor	1	Lump Sum	$ 2,500.00	$ 2,500.00
Interior Trim and Window	Mat/labor	1	Lump Sum	$ 14,400.00	$ 14,400.00
Misc. Carpentry/ Shelving Install	Mat/labor	1	Lump Sum	$ 12,600.00	$ 12,600.00
Plumbing Allowance	Mat/labor	1	Lump Sum	$ 25,425.00	$ 25,425.00
Windows, Glazing and all interior Storefront	Mat/labor	1	Lump Sum	$ 18,500.00	$ 18,500.00
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
					$ -
				Subtotal:	$ 372,995.00

General Conditions

Site Coordination	L	1	LS	$ 25,000.00	$ 25,000.00
Dumpsters		1		$ 3,200.00	$ 3,200.00
Final Clean		1		$ 1,500.00	$ 1,500.00
Equipment rental		1		$ 3,500.00	$ 3,500.00
Design and Engineering		1		$ 26,000.00	$ 26,000.00
				Subtotal:	$ 59,200.00

Assumptions & Qualifications:

Subtotal	$	432,195
Contingency	$	-
Builders Risk Insurance	$	2,161
General Liability Insurance	$	6,515
CM FEE	$	39,679
TOTAL:	**$**	**480,550**
Cost / SF	$	160.18

ALTERNATES					
				Total	$ 480,550

Acceptance of Proposal

The above proposal, assumptions and qualifications are satisfactory and are hereby accepted. Distinctive Design Build, LLC. is authorized to perform the work as outlined above.

Signature _____ **Date:** _____

Name & Title: _____

Dear City Manager Caton,

Riverside Educational Center
After School Tutoring and Enrichment

As previously discussed, REC is providing an update to you and Council as a result of two recent significant events.

In January 2023, REC officially entered a fundraising campaign and, based upon our landlord's proposal, began to source options to secure funding to purchase our current space for $1,480,000. The landlord's intent is to then donate to REC the adjacent smaller unit valued at $845,000. Our outreach efforts were extensive and have been successful.

As a reminder, our campaign comprises several phases, including funds to purchase the building, funds for necessary capital improvements, and the funding of a sustainability reserve to ensure we can maintain this valuable community program well into the future. REC's management and board have recognized the unpredictability of grants/grant renewals and the need for REC to broaden fundraising efforts with a focus on expanded community awareness and support to ensure our programming sustainability.

On May 19, REC received unexpected (but exciting) news that we have been approved for a state of Colorado grant. The grant amount covers the purchase price of the building and capital improvements up to approximately $170,000. After 18 years of operations, REC will finally have a permanent home.

While the announcement of the capital grant award was incredible news for REC, on May 15 we received notice that we were not awarded renewal funding for a different state of Colorado programming grant in the amount of $740,000. This grant previously covered most of the expenses associated with running five of our programming sites (our programming primarily occurs onsite at the schools.). With the loss of the programming grant, REC has already made changes to save program costs.

Over the years, we have built a dedicated team, and we are working diligently to increase community awareness of and support for REC with the objective of maintaining our programs as a foundation that our 1,100 plus kids, parents, and the community can count on for years to come. We believe REC adds to the economic success of our community by employing over 200 staff and providing no-cost childcare for working parents/caregivers. Our outcomes facilitate a more educated, self-reliant workforce for our community.

We appreciate the Council's recognition of the value and importance of high-quality after-school programming and the difference academic success makes in the long-term positive trajectory of a child's life and on the stability of our community. REC's impact on underserved students and families in our community cannot be overstated.

The original intent was to use the $300,000 from the City to purchase the building. Since that use is no longer necessary and the resolution did not restrict the dollars for the purchase of the building, we would like to use the City's investment to fund a portion of the sustainability phase of our campaign.

Please know we sincerely appreciate the City's support. Feel free to reach out with questions and/or if further information is needed.

With sincere thanks,

Joy Hudak
Executive Director

Riverside Educational Center
After School Tutoring and Enrichment

January 11, 2023

Grand Junction City Council
250 North 5th Street
Grand Junction, CO 81501

Dear President Stout and Members of the Grand Junction City Council,

Thank you for the opportunity to apply for off-cycle funding in support of Riverside Educational Center's (REC) capital campaign to purchase our current offices and warehouse on Winters Avenue in Grand Junction.

We are requesting $300,000 in support of a $2.4 million campaign, which will result in REC owning both 1177 (our current location) and 1199 (neighboring unit) Winters Avenue. This campaign is launching now, and of the total amount, $945,000 has already been committed, which includes a gift to REC of 1199 Winters Avenue, contingent upon completing the campaign by August 31, 2023. The building owner has agreed to sell 1177 Winters Avenue to REC at its November 2022 appraised value. Together, 1177 and 1199 Winters Avenue will provide sufficient office and warehouse space for REC operations moving into the future. REC has plans for sustainable growth in order to build out our services in a strategic manner and a permanent home will significantly help REC achieve these goals and focus on our mission.

As you may know, REC was displaced from our long-term home in the basement of the Riverside School in 2020. Because of COVID restrictions, we could no longer utilize this space which belongs to School District 51. A very generous REC benefactor stepped up and provided REC with office and warehouse space in a then-vacant building at 1101 Winters Avenue. The building owner has since remodeled the space for REC to our specifications and needs, as well as rented the building to REC at a well-below market rate. In 2022, he divided the building into three condominium units and it is his intention that REC acquire and utilize two of these units.

REC currently provides academic tutoring and educational enrichment services to more than 1,000 registered students at 16 schools. A majority of the schools where REC has programming serve students from within the City of Grand Junction (see list below). The positive impacts of REC carry over in many ways to the city. REC provides important supports to working parents, many of whom live and work within the city. REC students become valuable members of the local workforce upon graduation or after completing degrees at CMU/WCCC. REC employees over 220 full- and part-time workers. And, REC brings several million programming dollars into the local economy each year through outside grants.

In addition to addressing academic needs and helping REC students achieve their best performance, REC also provides social and emotional learning support, a robust outdoor education program

provided in cooperation with various community partners, and career and college readiness programming. Of note, for each of the past two years, 100% of high school students participating in REC have graduated with a post-graduation plan in place.

The building owner, a long-time Grand Junction businessman, is interested in completing the sale to REC by August 2023. His interest in completing this transaction quickly stems from his desire to close out his real estate business and move on to other interests. The building owner has already contributed so much to REC and built a tremendous legacy. It is his belief that this property will be a sufficient long-term home for REC and will support REC's efforts to help students achieve their goals and reach their dreams.

This commitment to local children and youth is an invaluable investment in the future of our community. We hope you agree and will support our off-cycle funding request to provide a permanent home for REC.

Please reach out to me if you have any questions.

Sincerely,

Joy Hudak
Executive Director

REC Schools Serving Students within City Limits:
Fruitvale Elementary School, Chipeta Elementary School, Dos Rios Elementary School, Nisley Elementary School, Dual Immersion Academy, Pear Park Elementary School, Orchard Mesa Middle School, Grand Mesa Middle School, Bookcliff Middle School, Grand Junction High School, and Central High School

REC Schools Outside City Limits:
Chatfield Elementary School, Clifton Elementary School, Rocky Mountain Elementary School, Mt. Garfield Middle School, and Palisade High School.