Grand Junction

2018 CIRCULATION PLAN

Comprehensive Plan
Grand Junction

CITY OF Grand Junction COLORADO

GRAND VALLEY MPO/TPR
Connecting Our Communities
walk fly bus bike drive rail freight

MESA COUNTY

Adopted June 21, 2018

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2018 Grand Junction
CIRCULATION PLAN

Adoption

The Grand Junction Circulation Plan is adopted as part of the Comprehensive Plan.

Vision

The community envisions a safe, balanced and environmentally sensitive multi-modal, urban transportation system that supports greater social interaction, facilitates the movement of people and goods, and encourages active living, mobility independence, and convenient access to goods and services for all users.

A multi-modal transportation system should accommodate pedestrians, bicyclists, motorists, movers of goods, and transit; and should be safe and navigable for all users. It must provide transportation options to all users including those with limited mobility such as children, seniors, and persons with disabilities.

Purpose

The Grand Junction Circulation Plan ("Circulation Plan") is a strategic document adopted by both the City of Grand Junction and Mesa County. This document moves forward the transportation principles, strategies and vision to create an urban area-wide multi-modal circulation plan as identified in: the Grand Junction Comprehensive Plan adopted in 2010; the 2010 Circulation Plan; and the 2001 Urban Trails Plan.

It supports the Grand Valley 2040 Regional Transportation Plan's sound planning principles and best practices including:

- reducing congestion;
- easing commutes;
- improving roadway safety;
- enhancing sidewalks, bike, and multi-use trails; and,
- maintaining an efficient and effective transportation system.

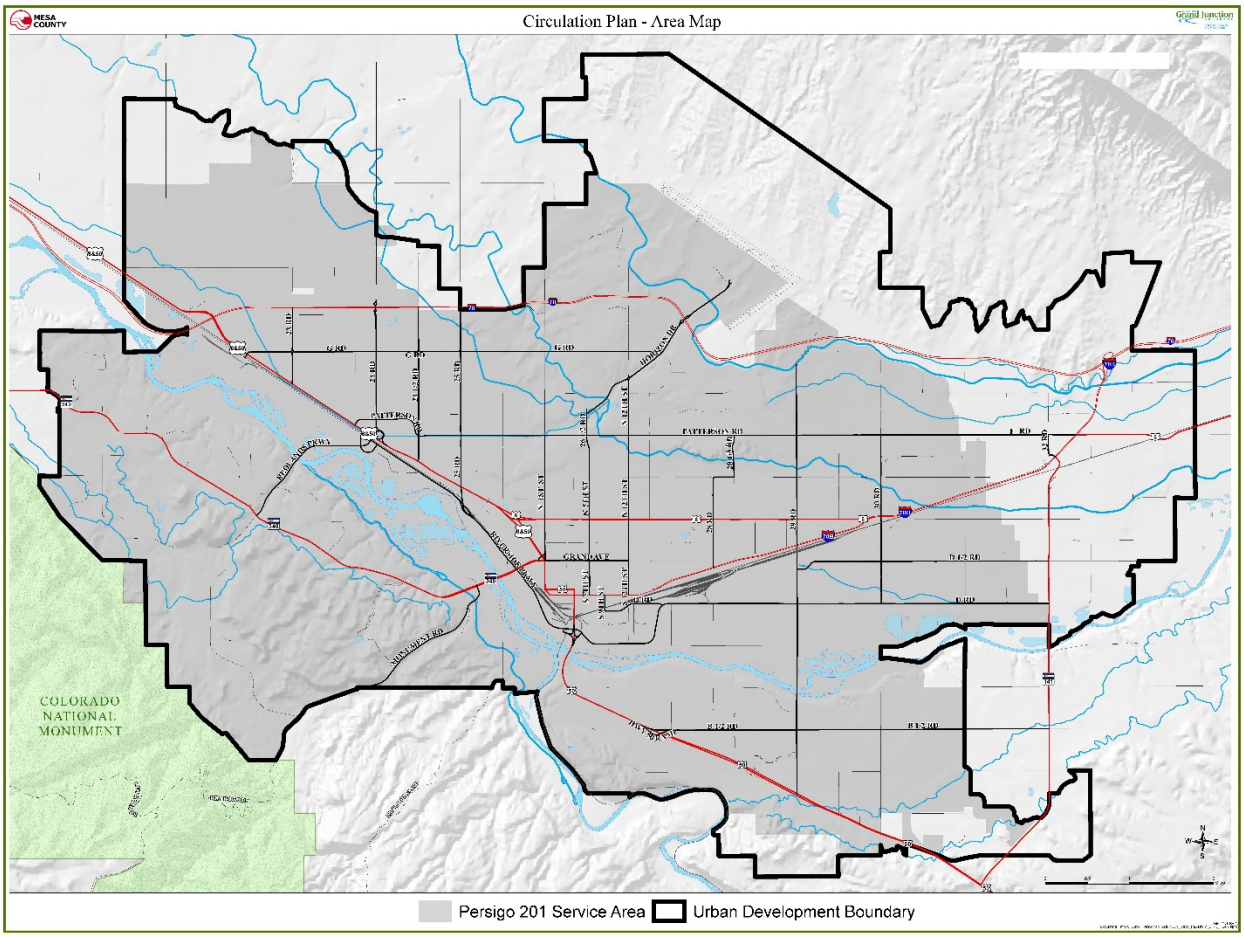
It builds on the transportation goals found in the Grand Junction Comprehensive Plan, including:

- designing streets and walkways as attractive public spaces;
- constructing streets to include enhanced pedestrian amenities; and
- developing a well-balanced transportation system that supports automobile, local transit, pedestrian, bicycle, and freight movement while protecting environmental conditions of air, water and natural resources.

The Circulation Plan will be used by elected officials and staff to guide the assignment of financial resources for infrastructure construction, future development and dedication of other funds for transportation purposes.

Planning Area

This Circulation Plan is applicable to transportation corridors within the Urban Development Boundary as defined by the Grand Junction Comprehensive Plan Future Land Use Map. Minor exceptions occur where a particular corridor falls both within and outside of the Urban Development Boundary and whereby consistency of standards along the length of the corridor would be beneficial to the traveling public.



Executive Summary

The Circulation Plan establishes a comprehensive approach to transportation planning through the following four sections (Plan Elements). Conceptual and corridor maps have been created to aid decision makers and city and county staff to improve the transportation systems. See Appendix A for full-page maps. Hyperlink to appendices

Plan Elements

A. The Network Map identifies important corridors and linkages connecting centers, neighborhoods and community attractions.

B. The Street Functional Classification Map identifies the functional classification of the roadway corridors that connect neighborhoods, employment centers and local attractions and amenities. Many of these corridors are also major truck routes providing heavy truck movement and access to the Grand Junction community. There are over fifty proposed changes since the map was last adopted by City Council and Mesa County Board of County Commissioners in 2010. These changes include adding road segments, reclassifying some existing road segments and removing others from the map.

C. The Active Transportation Corridors Map replaces the Urban Trails Master Plan/Map and identifies major corridors important for non-motorized travel by providing critical, continuous and convenient connections for bicyclists and pedestrians. The corridors are broadly defined and could accommodate active transportation as part of the road network or as separated paths. This Circulation Plan identifies corridors important for active transportation and does not attempt to identify trails that are predominately recreational in nature. In the city limits, it proposes using trails on, along, adjacent to or near canals, ditches and drainages for non-motorized route connections only where there is not another safe or better alternative for non-motorized transportation on the road network.

D. Specific Strategies and Policies

Goals and policies identified in the Grand Junction Comprehensive Plan and strategies and policies identified in the Circulation Plan will help the community achieve its vision of becoming the most livable City west of the Rockies. A balanced transportation system will be achieved through the following strategies and policies that are further described in the Circulation Plan.

1. Adopt a Complete Streets Policy for Grand Junction and develop and adopt a Complete Streets Policy for Mesa County.
2. Develop or revise policies for support of an integrated transportation system.
3. Provide conceptual and corridor maps that will be used by decision makers and staff to improve transportation systems.
4. Improve interconnectivity between Grand Valley Transit and centers, neighborhoods and community attractions.
5. Improve the Urban Trails System on and connecting to Active Transportation Corridors.
    a. Provide guidance on incentives for trail construction
    b. Provide guidance on standards for trail construction
    c. Provide guidance on ownership and maintenance of trail system

d. Maintain or improve multi-purpose trails
e. Provide wayfinding to attract visitors to the trail system and improve the ability of residents and visitors to find area attractions.

6. Maintain or improve circulation of vehicles on road system.

Background

The 2010 Circulation Plan was adopted as an element of the Grand Junction Comprehensive Plan. It is limited to a brief description of the planning area and the principle that development should support an integrated transportation system. It also includes a functional classification street network map, of future, general vehicular circulation patterns for collector and arterial streets and highways to accommodate the ultimate buildout of the urban area.

The 2001 Urban Trails Plan was developed as a strategic tool to guide the future course of trail development in the Grand Valley. The Plan identifies the locations for new non-motorized facilities and serves as a guide for the development, protection, management, operations and use of a trail system that meets the demands of the growing community. The plan identifies the opportunity to utilize the natural waterways, drainages and canals to create an interconnected system of safe and efficient means of non-motorized travel.

This Circulation Plan acknowledges the planning that was previously completed and incorporates the previous findings into a broader framework for transportation to include more than a functional classification of streets. The Circulation Plan works to combine urban trails planning with street planning and establish goals and policies with a multi-modal approach to transportation within the Urban Development Boundary established in the Comprehensive Plan. In addition to these two plans, the City and County also have adopted transportation plans for specific neighborhoods and geographic areas (see appendix). Hyperlink to appendices

The following adopted plans have shaped the transportation planning in the community and have been adopted by one or both, the City of Grand Junction and Mesa County, and can be found at www.mesacounty.us/planning and/or at http://www.gjcity.org. These plans serve as the foundation for the updated Circulation plan.

- 2010 *Grand Junction Comprehensive Plan*
- Grand Valley 2040 Regional Transportation Plan
- *2001 Urban Trails Master Plan*
- 2002 Redlands Area Transportation Plan
- 2004 Pear Park Neighborhood Plan
- 2014 Orchard Mesa Neighborhood Plan
- 2011 Clifton/Fruitvale Community Plan

- 2007/2011North Avenue Corridor Plans and Zoning Overlay
- 24 Road Subarea Plan and Overlay

Access Management Policies and Access Control Plans -

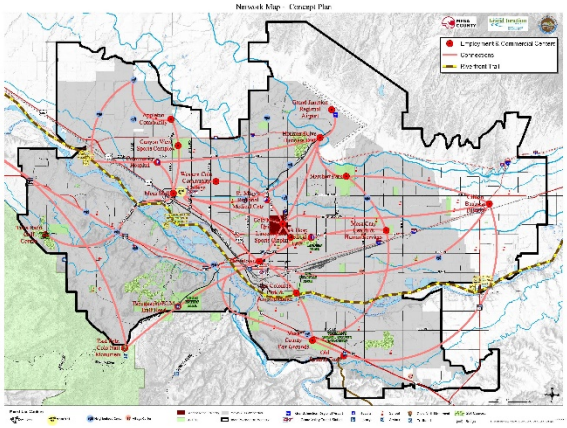
The City, County and CDOT have various access management plans and policies. This circulation plan update has been developed to work in conjunction with these policies, which can be found in the following documents:

- Mesa County Standard Specifications for Road and Bridge Construction (RB Spec) - www.mesacounty.us/publicworks/roads/specifications.aspx
- Mesa County Road Access Policy- www.mesacounty.us/RoadAccessPolicy.aspx
- City of Grand Junction Transportation Engineering Design Standards (TEDS). http://www.codepublishing.com/CO/GrandJunction/?html2/GrandJunction29/GrandJunction29.html
- Access Control Plans with the Colorado Department of Transportation (CDOT) - Some corridors fall under the ownership and jurisdiction of CDOT. CDOT has specific "Access Control Plans" that are implemented through intergovernmental agreements with Mesa County and/or Grand Junction for the State Highway system which affects driveways, street intersections and signalization spacing on these roads. The roads include Interstate-70, I-70 Business Loop, State Hwy 141, State Hwy 340, US Hwy 6 (North Avenue), and US Hwy 50, all of which run through the Grand Junction community.

Plan Elements

SECTION A: MAPS

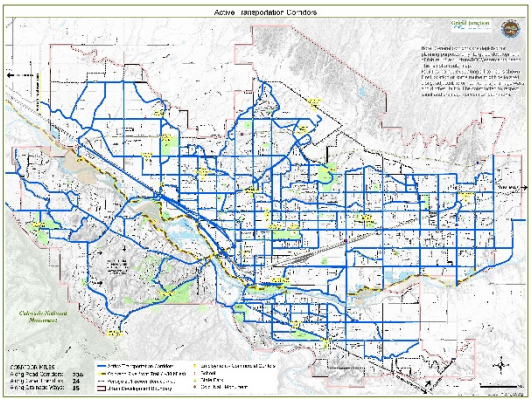
1. The Network Map The Network Map is a conceptual view of the community from an overall "30,000 foot" vantage point that identifies important corridors and linkages connecting centers, neighborhoods and community attractions. It is used to support more detailed planning, such as the Active Transportation Corridor Map. It is implemented through capital construction of streets, sidewalks and trail infrastructure. A full-page map is included in Appendix A as Figure 1. Hyperlink to appendices



2. <u>The Active Transportation Corridors Map</u> (Non-motorized Transportation Map)
This Circulation Plan establishes the Active Transportation Corridor Map, to create a network of critical, continuous, safe, and convenient connections for non-motorized transportation (bicycles, pedestrians, motorized wheelchairs, e-bikes where permitted by law, etc). While it may be used for recreation or connect to the Colorado River and other trails, the Active Transportation Corridors are intended to provide a complete alternative network of non-motorized traffic routes. This includes using existing streets and future trails along water ways (canals, ditches and drainages) to connect neighborhood, schools, parks and other open space areas, as well as commercial and business districts with each other. It further identifies specific corridors that follow and support the Network Map and links important centers identified in the Comprehensive Plan's Future Land Use Map with neighborhoods and other attractions and local amenities.

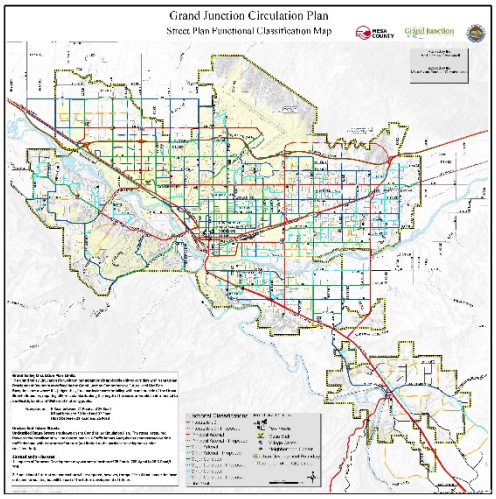
Active Transportation Corridors will include some canal, ditch and drainageway alignments where they provide the safest and best connections between neighborhoods and area attractions. This focused approach limits the use of canals, ditches and drainageways to only those routes that are most viable and critical for the active transportation network. During the planning, design and construction of these corridors the best route can be established which may include a combination of canals, ditches drainageways, roads or other properties to locate the actual active transportation non-motorized corridor on. Final location of these routes may be located on, along, adjacent to or near the canals, ditches and drainageways, but will be constructed to respect canal and drainage companies' operations.

The Active Transportation Corridors Map will be used to support more detailed planning and implementation, including capital construction of sidewalks, bike lanes and trail infrastructure. Active Transportation Corridors can be improved during new development projects or through capital improvement projects and through the development of drainageways as identified in the Grand Junction Comprehensive Plan.



As property develops there may be situations where trails may be a desired amenity but a route is not shown on the Map. An example of this may be providing a connection from an internal subdivision street to an outside collector or arterial street. Constructing these type of site and development specific improvements will provide connectivity that helps the overall transportation system work. See also "5. Improve Urban Trails System on and connecting to Active Transportation Corridors (Policy)" below. A full-page map of eh Active Transportation Corridors is included in Appendix A as Figure 2. <u>Hyperlink to appendices</u>

3. <u>The Street Plan Functional Classification Map</u> The Street Plan Map identifies major corridors for general circulation of motorized traffic within the Urban Development Boundary. Roadway classifications include collectors and arterial streets that move more traffic than local subdivision streets. Subdivision and other local streets connect to collector streets that connect to arterial streets. Collector and arterial streets connect community attractions including neighborhood centers, village centers, and downtown together. The map also shows unclassified roads which are important for neighborhood circulation. They establish general locations for these important future local streets in undeveloped areas. The classification of these will be determined via a traffic impact analysis that demonstrates vehicular traffic demand within the area of interest.



There are over fifty changes to the Street Plan Map in this Circulation Plan since the map was adopted by City Council and Mesa County in 2010. These revisions are incorporated into the map and are the result of new development or improved traffic data. A full-page map is included in Appendix A as Figure 3. Hyperlink to appendices

SECTION B: STRATEGIES/POLICIES

1. <u>Complete Streets Policies (Policy)</u>

a. Grand Junction – Adopt a Complete Streets Policy – The Complete Streets Policy will support the City of Grand Junction Comprehensive Plan goal to "develop a well-balanced transportation system that supports automobile, local transit, pedestrian, bicycle, air, and freight movement while protecting air, water and natural resources." A Complete Streets approach integrates the needs of people and places in the planning, design, construction, operation and maintenance of transportation networks, making streets safer for people of all ages and abilities and thereby supporting overall public and economic health. At the heart of a complete streets policy is the intent for communities to build streets that safely accommodate all modes of transportation.

While the City has historically incorporated Complete Streets concepts in the design of transportation corridors, this policy memorializes that commitment for all transportation related projects. The Grand Junction Complete Streets Policy recognizes the importance of all modes of transportation and is established for the areas under the jurisdiction of the City of Grand Junction.

The City established the Urban Trails Committee to advise City Council on matters pertaining to the safe, convenient and efficient movement of pedestrians and bicyclists of all ages and abilities. It has been a long-standing goal and desire of the Urban Trails Committee, whose planning jurisdiction is limited to the Persigo 201 service area, to develop and adopt a Complete Streets policy. That goal was incorporated into the 2017 City Council Strategic Plan as a Key Initiative.

b. Mesa County - Develop and adopt a "Complete Streets" Policy – For Mesa County, an Urban Area Complete Streets Policy limited to the Urban Development Boundary will be developed that is appropriate to its jurisdiction and supports the Grand Junction Comprehensive Plan by fostering community values of transportation connections, attractive corridors and safe routes for all modes of travel. This policy will be part of the Mesa County Road & Bridge Standards and separate from the Complete Streets Policy adopted by the City of Grand Junction.

2. <u>Apply the principles of an Integrated Transportation System (Strategy)</u>

An integrated transportation system is defined as a system that provides transportation options and needs for all mobility types. New development shall be designed to continue or create an integrated system of streets and trails that provides for efficient movement of pedestrians, bicycles, and automobiles to and from adjacent development, while also encouraging the use of transit. Design shall allow for through movement of general traffic utilizing connectivity, thus avoiding isolation of residential areas and over-reliance on arterial streets.

Another aspect of an Integrated Transportation System is the concept of Complete Networks. There are limited number of corridor segments that cannot serve all mobility types due to a variety of restrictions such as constrained rights-of-way or an exclusive facility type. Some corridors, like off-street trails, are intended exclusively for bicycles and pedestrians and a small number of corridors can serve vehicles only. However, in all instances the transportation system as a whole should provide effective connections for all modes of travel. The individual corridors, when combined, work together to form an integrated transportation system or "complete network". This circulation plan update was prepared with this concept in mind. The Street Functional Classification Map and the Active Transportation Corridor Map have been developed to work together with the Complete Network concept in mind.

Implementation Actions:

A. Amend Development Codes to include requirements for building street networks and identify construction/reconstruction responsibility.
B. Amend Development Codes to establish construction responsibility, design guidelines, and ownership guidance for bicycle and pedestrian facilities.
C. Develop methods to incentivize construction of bicycle and pedestrian facilities.
D. Revise the City of Grand Junction Transportation Engineering and Development Standards (TEDS) manual, specifically relating to street and trail design

guidelines and cross sections and transit requirements, to support the concepts presented in this plan.

E. Revise the City's Zoning and Development Code to create best practices for street and intersection design alternatives based on anticipated travel patterns and multi-modal demand.
F. Update the Mesa County Road and Bridge Standards to include additional options for implementation of the strategies/policies presented in this plan.
G. Revise the Mesa County Development Standards to provide the necessary criteria to promote an integrated transportation system.

3. Incorporate Sub Area Maps (Strategy)

Various plans have been developed for some areas (sub-areas) within the Urban Development Boundary while many other areas still need specific plans. The following list recognizes planning efforts to date that are incorporated into this Circulation Plan.

A. Safe Routes to Schools – Studies to improve safety for children between existing neighborhoods and schools continue with projects planned, funded and constructed for Nisley Elementary, Clifton Elementary and West Middle School. Other planning has occurred and will continue to occur for all schools in School District 51.
B. Clifton Pedestrian Plan – refer to Clifton Fruitvale Community Plan
C. Orchard Mesa Pedestrian Plan at the Fairgrounds/Meridian Park Neighborhood Center – refer to Orchard Mesa Neighborhood Plan
D. Redlands area - refer to the Redlands Area Plan
E. North Avenue Corridor Plans
F. Pear Park refer to the Pear Park Neighborhood Plan
G. Horizon Business District – refer to (future) Horizon Business District Overlay
H. Mesa Mall Environs – (future)
I. Safe Routes to Parks & Open Space (future)

Implementation Actions:

A. Revisit each sub-area plan regularly and update when needed.
B. Add to the list as new sub-areas are planned and mapped.

4. Improve Interconnectivity with Grand Valley Transit (GVT) (Strategy) - The vision for GVT is to provide a viable transportation choice for all populations that connects communities, neighborhoods, and destinations while improving quality of life and supporting economic vitality in the region. GVT strives to provide an affordable, connected, efficient, and easy to use transit system that attracts all rider types, integrates all modes of transportation and that provides a transportation system that

supports jobs, recreation and overall community well-being. Additional statistical information for GVT can be found in Appendix B. Hyperlink to appendices

To achieve GVT's vision, the transit system must provide improved interconnectivity and accessibility including first and last mile connections. Many of the improvements will rely on coordination with both Mesa County and City of Grand Junction for implementation.

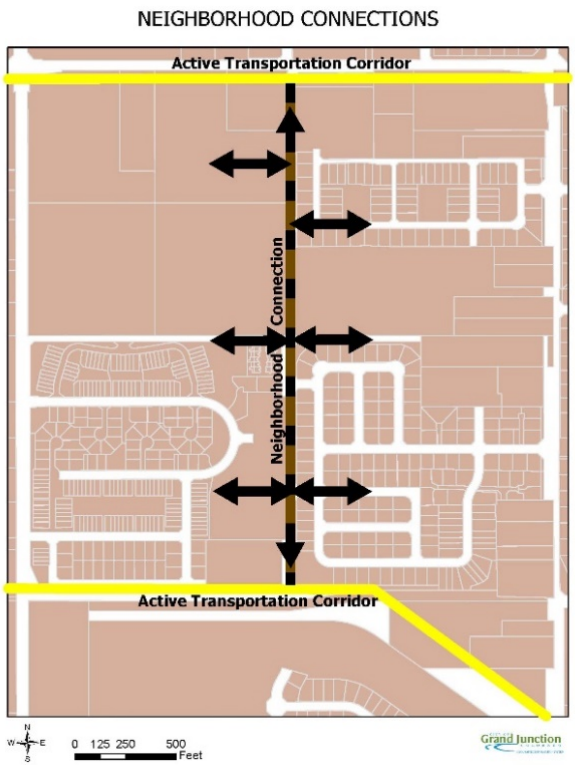
Implementation Actions:

A. Access - In coordination with its partners, GVT will improve sidewalks, curb ramps, and bike lanes and provide bike racks at bus stops in an ongoing effort to improve access for riders.

B. Collaboration – GVT will collaborate and be a strong community partner that works with public, private, and non-governmental organizations to provide transit service options within the transportation system and look to emerging trends and technologies to bring this to fruition.

5. Improve the Urban Trails System both on and connecting to Active Transportation Corridors (Strategy)

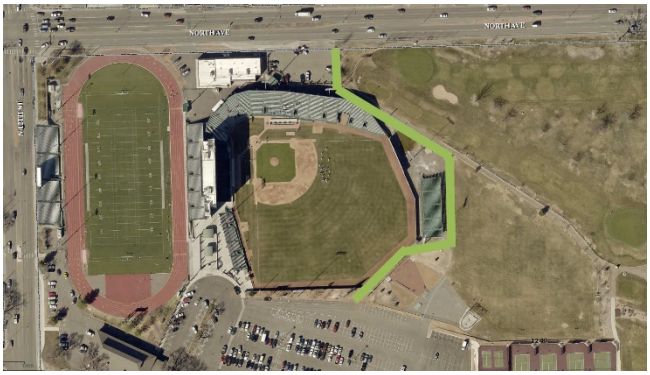
Creating neighborhood and community connections that are safe, convenient and efficient are very important to providing transportation options. These can include active transportation routes to parks, schools, commercial and employment areas that are off the major, highly traveled ways. Efforts should look at planning at a ¼ mile radius from a proposed development as well as the entire transportation corridor between major attractions.



Access between neighborhoods and subdivisions and connecting them and other attractions to the Active Transportation Corridors can be accomplished in a variety of ways. Using drainage ways and open space areas is deemed the highest priority to make these connections work. See the four examples below.

The City has a history of working with development to create safe and convenient connectors between not only similar land uses, like residential neighborhoods, but also between unlike land uses.

Example 1: Lincoln Park Connection from North Avenue. Creating a safe community connection from collector and arterial streets allows good public access to major attractions and is important in encouraging non-motorized transportation including transit. A bus stop exists on North Avenue at the entrance of this trail connection.



Example 2: Leach Creek Trail - The Estates and Blue Heron residential subdivisions and development of the Leach Creek bike/pedestrian concrete trail.

<u>Leach Creek Drainage Trail</u> – Connecting G Road and G ½ Rd

Looking north from G Rd

Looking west from Beaver Lodge Dr. near G ½ Rd

Example 3: Connection with Patterson Road – Trail across O'Reilly Auto Parts store property connects GVT Transfer Station with Patterson Road via a crosswalk at 24 ½ Road.

Looking east from Patterson Rd

Example 4: Neighborhood connections to Active Transportation Corridors. These "neighborhood connections" provide individual subdivisions with access to the larger transportation system and link them with neighborhood subdivisions and other areas of the community. A "pathway" from a subdivision which leads to an Active Transportation Corridor will provide residents with an optional mode of transportation, while providing them access to major attractions in the urban area.

Pathway link from The Estates Subdivison to Leach Creek Trail

a. Incentives for Trail Construction - Trails and public streets are part of the transportation network They provide transportation corridors for commuting purposes; serve as an amenity to the community, new developments, and neighborhoods. Trails have been shown to improve public health, strengthen community social connections and lead to increased property values.[1]

Implementation Actions:

A. The City or County will seek funding for off-site trail construction to connect development-required trail(s) to the existing trail network (Active Transportation Corridors).
    1. Revise the City's Zoning and Development Code (Z&D) and County's Land Development Code (LDC) to establish responsibility of new development and incentives for constructing trails shown on the Active Transportation Corridor Map and associated connections within their project limits.

b. Standards for Trail Design & Construction - All trails should be hard surface, preferably concrete and constructed to meet the American with Disabilities Act (ADA) requirements, follow specific regulations found in the Grand Junction Development Code and Transportation Engineering Design Standards (TEDS) manual, and be designed according to the latest industry standard.

The type of facility to be constructed for on-street trails shown on the Active Transportation Corridor map will generally be specified by the standard street cross sections in the TEDS Manual. However, the flexibility to choose a facility type that

[1] CMU Study: "The Impact of Natural Amenities on Home Values in the Greater Grand Junction Area" by Nathan Perry, Tammy Parece, Cory Castaneda and Tim Casey – updated June 2017

exceeds the minimum standards should be allowed and encouraged. Additionally, consideration should be given to implementing innovative pedestrian and bicycle facilities, in accordance with the latest industry standards, when the context of the corridor makes it feasible. Careful selection of the appropriate facility type is particularly important along the CDOT State Highway segments identified as Active Transportation corridors. For example, because of a corridor's context, a detached multi-use path or a separated two-way path could be preferred instead of on-street bike lanes. The designs for all projects on State Highway corridors are subject to the review and approval of CDOT staff.

Standards for trail design and construction must also account for crossings. Trail crossings occur when on-street or off-street trails intersect with another street. Crossings should be designed according to the latest industry standards and guidelines and prioritize the safety of vulnerable road users, pedestrians, and bicyclists.

A. The majority of trail crossings will occur at existing street intersections. Design standards pertaining to the application of pedestrian crosswalks will apply.
B. Current design standards and guidelines should be utilized to determine which of the various trail and pedestrian crossing treatments to select. For new crossing locations, an Engineering Study including a warrant analysis should be performed. The various trail and pedestrian crossing treatments that could be warranted by Engineering Study include crosswalk signage and markings, flashing warning beacons, pedestrian hybrid beacons, conventional traffic signals with pedestrian signal heads, or a grade separated crossing.
C. When off-street trails cross streets, such as trails along drainageways or trails along canals, the preferred crossing treatment should be a grade separated facility. Ideally this would utilize a structure that accommodates both the trail and the necessary drainage conveyance. If a grade separated crossing cannot be reasonably accommodated, then an Engineering Study should be performed to select the appropriate at-grade crossing treatment. Ideally all at-grade crossings should occur at signalized intersections.
D. When on-street trails cross CDOT State Highways or City/County arterials, the preferred crossing treatment should be a signalized intersection. A grade separated facility should be provided when it can be accomplished in combination with primarily vehicular bridge structures; such as the 29 Road overpass crossing the I-70 Business Loop. Grade separated trail crossings may also be possible by reallocating space on existing bridge structures; such as the B ½ Road Overpass crossing Highway 50. The designs for all projects crossing State Highway corridors are subject to the review and approval of CDOT staff.

Implementation Actions:

A. Revise the City's Zoning and Development Code (Z&D) and County's Land Development Code (LDC)to reflect the intent of the following:
    1. Off-street trails shown on the Active Transportation Corridor Map shall be 10' wide, designed and constructed per the Transportation Engineering Design Standards (TEDS).

2. Minimum standards for on-street trails shown on the Active Transportation Corridor Map shall consist of on-street bike lanes in accordance with standard street cross sections and a detached sidewalk.
3. In some cases, because of topography or other concerns, it may be impossible to meet ADA requirements. Soft trails may be acceptable in those instances.
4. Per the Stormwater Management Manual (SWMM), most drainage channels require at least one 12' wide service road. All drainage channel service roads shall also be designed to function as soft trails. If a trail is shown on the Active Transportation Corridor Map along a drainage channel, the service road must be constructed of a hard surface. To achieve the required 12' service road width, it can be 10' of concrete with compacted road base shoulders.

c. Ownership and Maintenance of Trail System - This policy is as follows and is different within the jurisdiction of Grand Junction than it is in the unincorporated areas of Mesa County.

City of Grand Junction Implementation Actions:

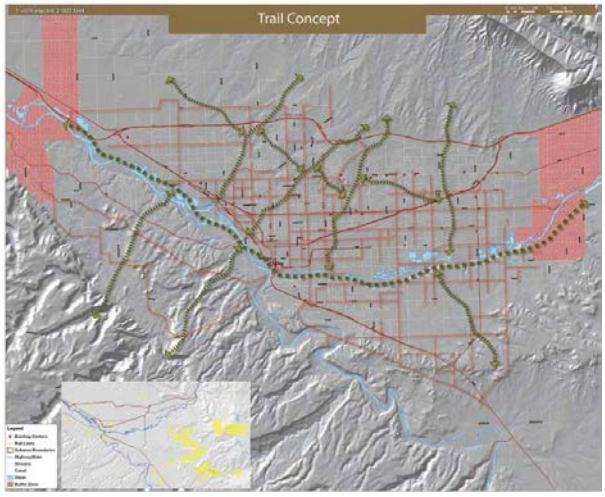
A. Revise the Zoning and Development Code to reflect the intent of the following:
    1. If the trail is shown on the Active Transportation Corridor Map it must be in a tract or easement dedicated to the City of Grand Junction. If the trail is not shown on the Active Transportation Corridor Map the developer shall dedicate an appropriately sized tract or easement to accommodate the trail to the appropriate entity in the following order of descending priority: the City of Grand Junction, the Canal Company/ Drainage District, or the Homeowners Association (HOA) per the following:
        a) When the trail is located adjacent to a drainage channel if maintained by the City of Grand Junction, it shall be dedicated to the City. If the Grand Valley Drainage District (GVDD) maintains the channel, dedication shall be to the City and/or the GVDD.
        b) If the trail is located adjacent to a canal, dedication shall be to the City and/or the canal company.
        c) Trails connecting internal subdivision streets or trails to external streets or trails shall be dedicated to the City or the HOA.
        d) Trail connections between neighborhoods shall be dedicated to the City or the HOA.

Unincorporated Areas of Mesa County Implementation Actions:

A. Establish the following language in the Mesa County Land Development Code and/or Transportation and Engineering Design Standards (TEDS) for developing property:
    1. Trails connecting internal subdivision streets or trails to external streets or trails shall be dedicated to the HOA, but available for public use with appropriate easements.
    2. Trail connections between neighborhoods shall be dedicated to the HOA of which they are a part, but available for public use with appropriate easements.
    3. Sidewalks along streets shall be in the Mesa County right-of-way.

d. Active Transportation Corridors along Drainageways, Canals and Ditches – As shown in the 2010 Comprehensive Plan, the Colorado River Regional Trail envisioned by Grand Junction, Mesa County and many other partners establishes a regional trail running the length of the Colorado River from the Town of Palisade to the City of Fruita and beyond. Today parts of this trail are already built and more segments will be constructed through the combined efforts of various partners including Colorado Parks and Wildlife, the Colorado Riverfront Commission (One Riverfront), partner municipalities and the Urban Trails Committee.

Trails along Drainage Ways - North of the Colorado River, drainageways generally orient in a northeast/southwest direction as they drain toward the river. These drainageways create a grid system separate from the grid of the street system and can provide necessary connections for a trail network from many existing and future residential neighborhoods and the Colorado River. In the Redlands, drainageways generally orient from southeast to northwest. Trails can be located within some of the broader drainageways, but may have to be aligned along the edge of narrower drainage corridors.



Trails along Canals and Ditches – Canals are part of the secondary water system of the valley and generally run along contour lines in a northwest/southeast alignment, following the terrain of the valley. These canals are owned and operated by the U.S. Bureau of Reclamation (BOR) and private irrigation companies, and are located on lands owned by the BOR, in rights-of-way or easements across private land. Using a combination of limited drainageway trails (discussed above) and limited canal trails can create a part of the active transportation corridor grid system.

The concept of accessing the Colorado River Trail system through these non-motorized Active Transportation Corridors takes advantage of existing road corridors, greenways, drainages, and a few canal and ditch segments as identified on the Active Transportation Corridor Map to tie most of Grand Junction to the Colorado River Regional Trail.

City of Grand Junction Implementation Actions:

A. Revise the Zoning and Development Code to reflect the intent of the following:
    1. Trails along canals and drainages are shown on the Active Transportation Corridor map for certain segments needed to make essential trail system connections. Utilizing these segments for trail connections will require:
        a) Cooperation and allowance of public access from the irrigation and drainage providers to ensure public safety along the canal.
        b) Providing canal and drainage operators the ability to maintain their infrastructure.
        c) Permission from the underlying landowners and provisions to minimize public impacts on private land (such as fencing).
        d) Establishment of Memorandums of Understanding (MOU's) to address liability.

Unincorporated Areas of Mesa County Implementation Actions:

It is Mesa County's policy to not require trails along drainageways or canals.

e. Develop wayfinding and marketing for trails system - A wayfinding system for bicyclists and pedestrians consists of comprehensive signing and/or pavement markings to guide bicyclists and pedestrians to their destinations along "Active Transportation Corridors" and other preferred routes. Signs are normally placed at decision points along routes – typically at the intersection of two or more routes, trails, or bikeways, and at other key locations leading to and along bike and pedestrian routes.[2]

Implementation Actions for all transportation providers/partners:

A. Make trail maps available on key websites including at a minimum: Mesa County, City of Grand Junction, Grand Junction Economic Partners, Chamber of Commerce, Colorado Mesa University, and "Visit Grand Junction."
B. Distribute hard copy maps/brochures at visitors' centers/ mobile visitor center/ hotels/ library/ schools and other locations that serve as visitor and user destinations.

[2] Adopted from *Urban Bikeway Design Guide*, Second Edition, National Association of City Transportation Officials, March 2014

C. Distribute and/or post full-sized maps at various locations including downtown, the CMU campus, GVT transit centers and at important transit stops showing the multi-modal transportation network (GVT routes, trails, and roads, etc.).
D. Develop a phone app showing different forms of circulation using different modes including photos. A mobile app could also be used to show history or points of interest as well as include the ability to report problems or suggestions.

6. <u>Maintain/Improve Vehicular and Nonvehicular Circulation (Policy)</u>

In less developed sections of the urban area there is a need for local (subdivision) streets to be constructed in specific locations for better connectivity and access to the collector and arterial street network. These streets have been identified as "Unclassified" on the Street Functional Classification Map and may be reclassified in the future when actual traffic demand is determined with development proposals.

Stub Streets - Local circulation systems and land development patterns must not detract from the efficiency of adjacent higher order streets nor limit access to undeveloped property within a neighborhood. Requiring stub streets is necessary to provide access and connectivity within a neighborhood. Management of access to higher volume streets, including public and private streets and driveways, is necessary to ensure that efficiency and safety are not unduly compromised.

Jamison Avenue is stubbed on both the east and west sides of this undeveloped area in Fruitvale

Implementation Actions:

Revise the Z&D and LDC to reflect the following:

A. Unclassified "Future" Streets are required to be built during development. However, the classification will be determined via a Traffic Impact Analysis that demonstrates vehicle traffic demand within the area of interest (not limited to the development under consideration).
B. Developments are required to stub streets to adjacent properties in logical locations, based on the Circulation Plan and each jurisdiction's Access Management Policies. This will allow for an interconnected local street system while minimizing the number of points required for access to the general street system. Stub streets may be required for any functional classification street including local streets.

Appendix A- Maps

Figure 1 - Network Map

Figure 2 - Active Transportation Corridors Map

Figure 3 - Street Plan - Functional Classification Map

Figure 4 – Whitewater - Street Plan – Functional Classification Map

Figure 5 – Whitewater - Active Transportation Corridor Map

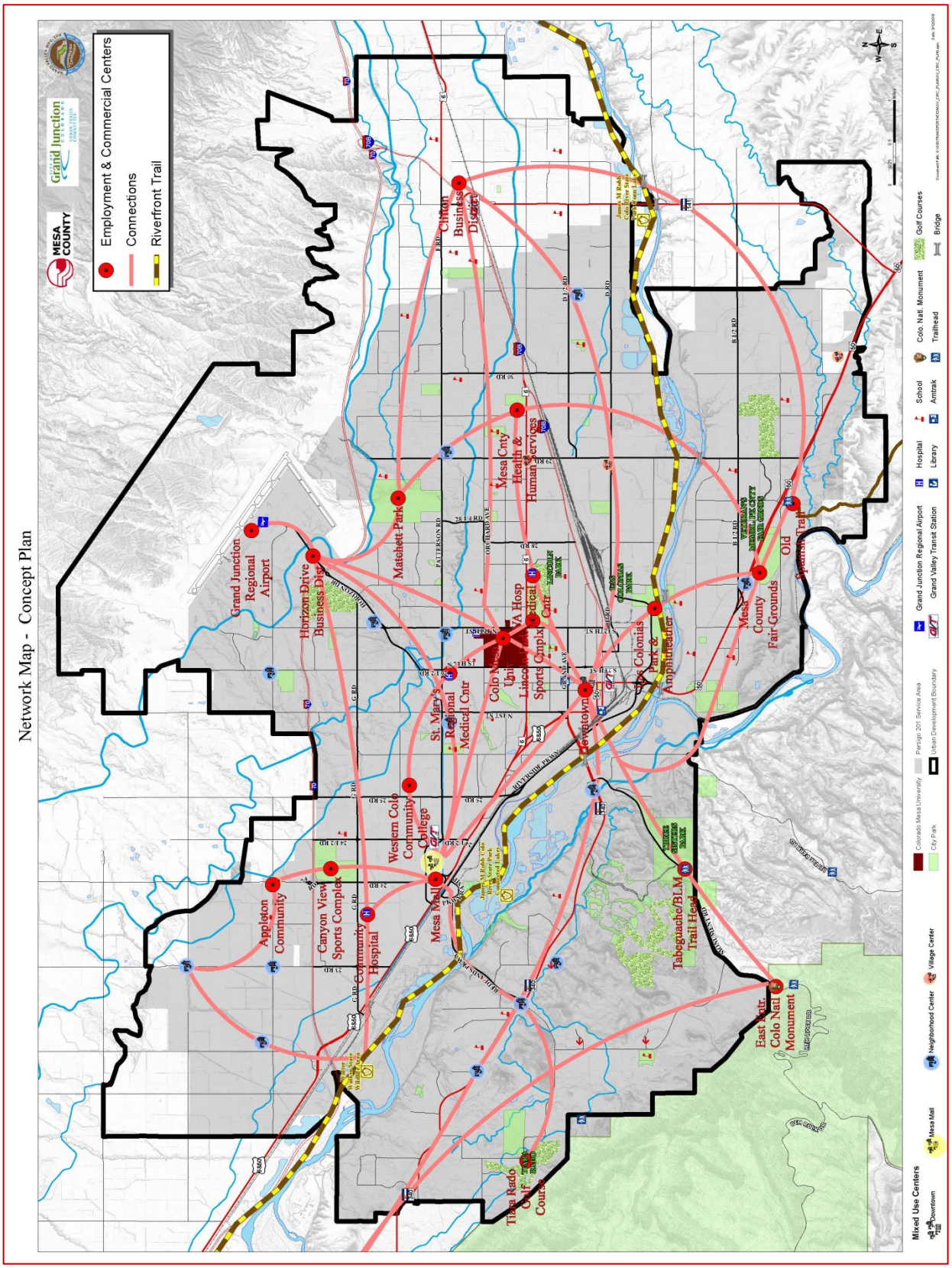

Network Map - Concept Plan
MESA COUNTY
Grand Junction
Employment & Commercial Centers
Connections
Riverfront Trail
Grand Junction Regional Airport
Horizon Drive Business Dist
Matchett Park
Clifton Business District
Mesa Cnty Health & Human Services
VA Hosp
Medical Ctr
Colo Mesa Univ
Lincoln Park Sports Cmplx
Downtown
Las Colonias Park & Amphitheater
Mesa County Fair Grounds
Old Spanish Trail
St. Mary's Regional Medical Ctr
Western Colo Community College
Mesa Mall
Appleton Community
Canyon View Sports Complex
Community Hospital
Tabeguache/BLM Trail Head
East Entr. Colo Natl Monument
Tiara Rado Golf Course
Mixed Use Centers
Downtown
Mesa Mall
Neighborhood Center
Village Center
Colorado Mesa University
Pomona 201 Service Area
City Park
Urban Development Boundary
Golf Courses
Colo. Natl. Monument
Trailhead
Bridge
School
Amtrak
Hospital
Library
Grand Junction Regional Airport
Grand Valley Transit Station

Figure 1

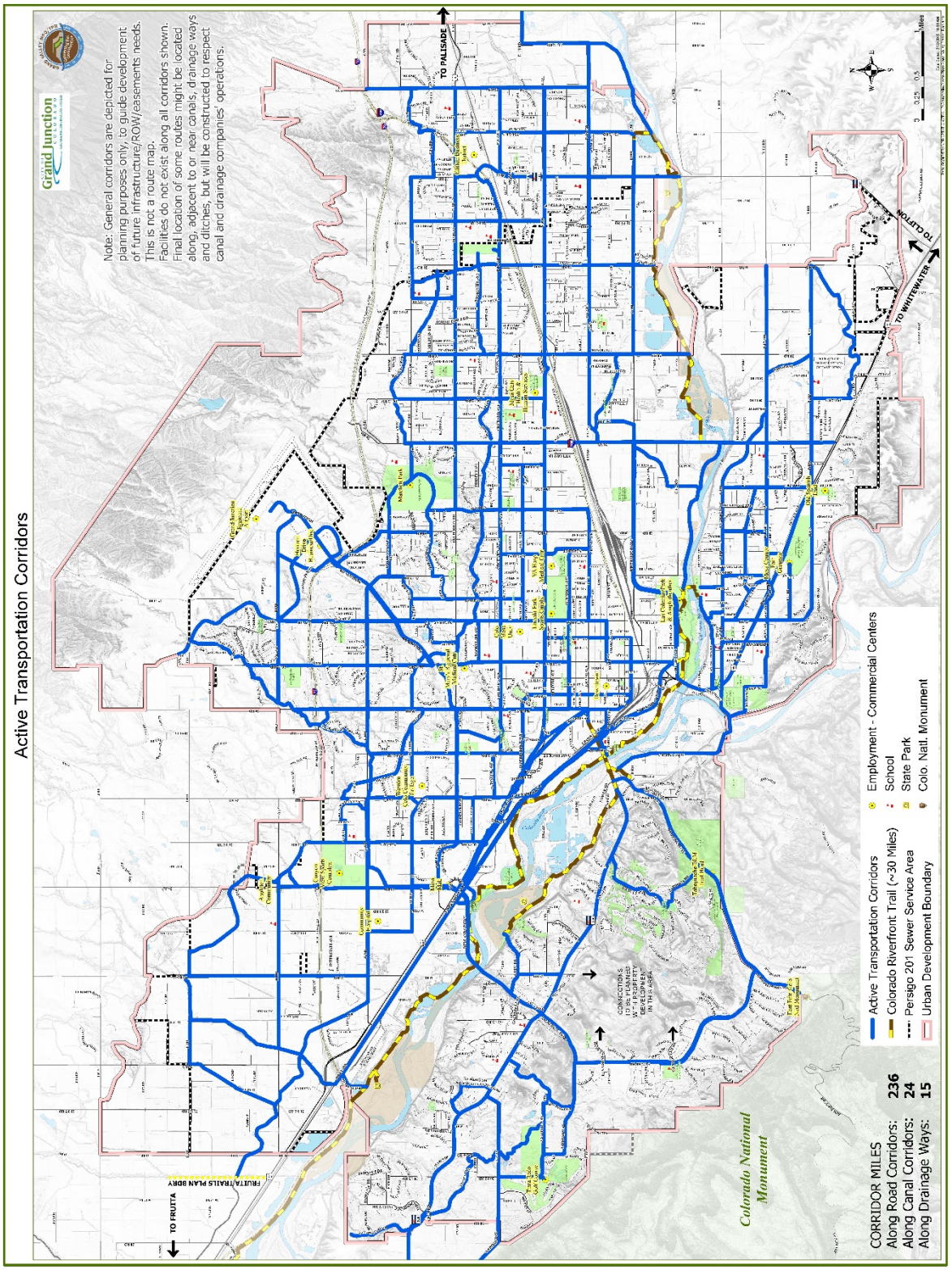

Active Transportation Corridors
Grand Junction
Note: General corridors are depicted for planning purposes only, to guide development of future infrastructure/ROW/easements needs. This is not a route map. Facilities do not exist along all corridors shown. Final location of some routes might be located along, adjacent to or near canals, drainage ways and ditches, but will be constructed to respect canal and drainage companies' operations.
TO PALISADE
TO CLIFTON
TO WHITEWATER
TO FRUITA
FRUITA TRAILS PLAN BDRY
Colorado National Monument
CONNECTIONS TO BLM LANDS W/ LIMITED PUBLIC ACCESS IN THIS AREA
CORRIDOR MILES
Along Road Corridors: 236
Along Canal Corridors: 24
Along Drainage Ways: 15
Active Transportation Corridors
Colorado Riverfront Trail (~30 Miles)
Persigo 201 Sewer Service Area
Urban Development Boundary
Employment - Commercial Centers
School
State Park
Colo. Natl. Monument

Figure 2

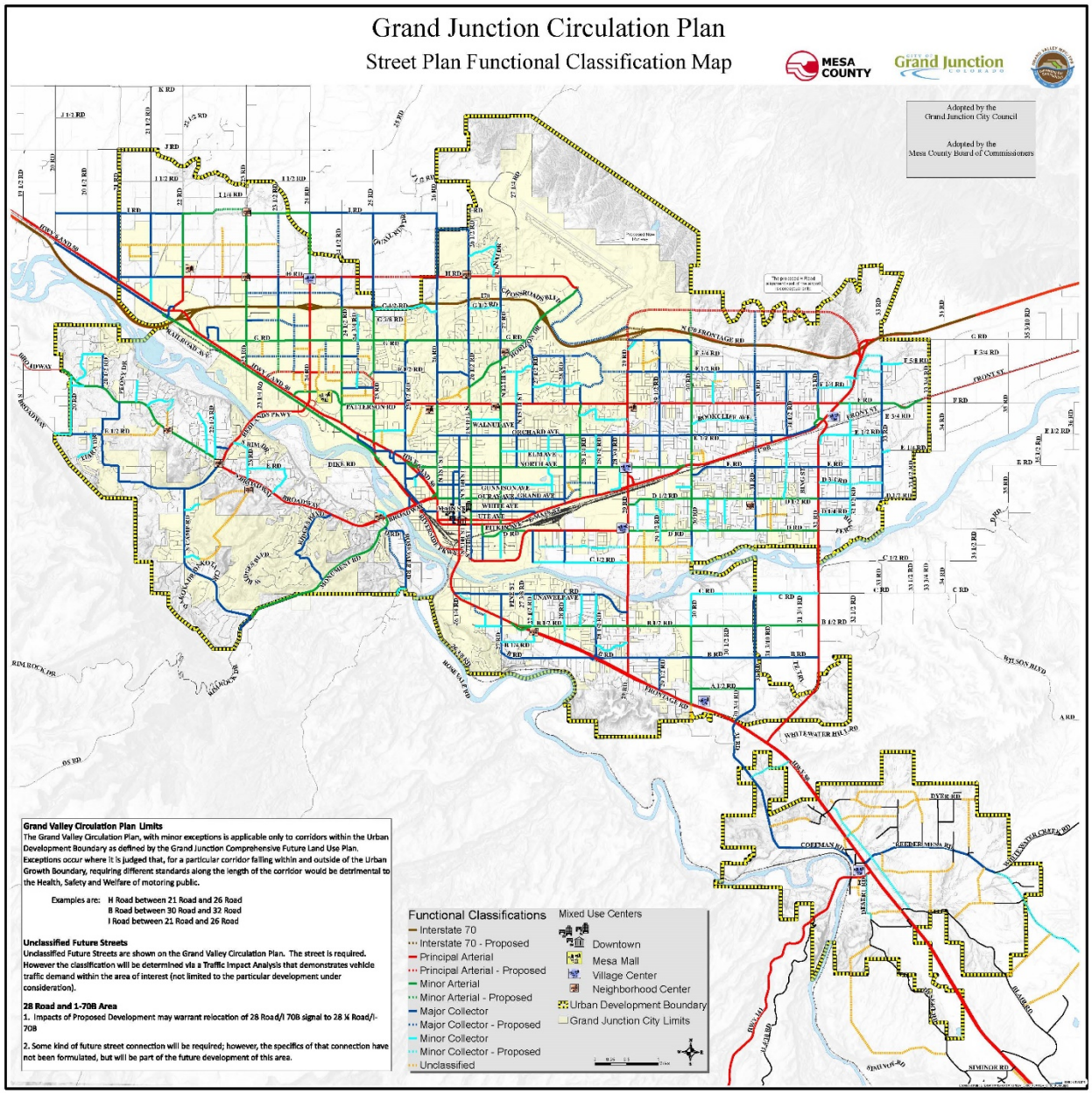

Grand Junction Circulation Plan
Street Plan Functional Classification Map
MESA COUNTY
Grand Junction
COLORADO
Adopted by the Grand Junction City Council
Adopted by the Mesa County Board of Commissioners
Grand Valley Circulation Plan Limits
The Grand Valley Circulation Plan, with minor exceptions is applicable only to corridors within the Urban Development Boundary as defined by the Grand Junction Comprehensive Future Land Use Plan. Exceptions occur where it is judged that, for a particular corridor falling within and outside of the Urban Growth Boundary, requiring different standards along the length of the corridor would be detrimental to the Health, Safety and Welfare of motoring public.
Examples are: H Road between 21 Road and 26 Road
B Road between 30 Road and 32 Road
I Road between 21 Road and 26 Road
Unclassified Future Streets
Unclassified Future Streets are shown on the Grand Valley Circulation Plan. The street is required. However the classification will be determined via a Traffic Impact Analysis that demonstrates vehicle traffic demand within the area of interest (not limited to the particular development under consideration).
28 Road and I-70B Area
1. Impacts of Proposed Development may warrant relocation of 28 Road/I 70B signal to 28 ¼ Road/I-70B
2. Some kind of future street connection will be required; however, the specifics of that connection have not been formulated, but will be part of the future development of this area.
Functional Classifications
Interstate 70
Interstate 70 - Proposed
Principal Arterial
Principal Arterial - Proposed
Minor Arterial
Minor Arterial - Proposed
Major Collector
Major Collector - Proposed
Minor Collector
Minor Collector - Proposed
Unclassified
Mixed Use Centers
Downtown
Mesa Mall
Village Center
Neighborhood Center
Urban Development Boundary
Grand Junction City Limits

Figure 3

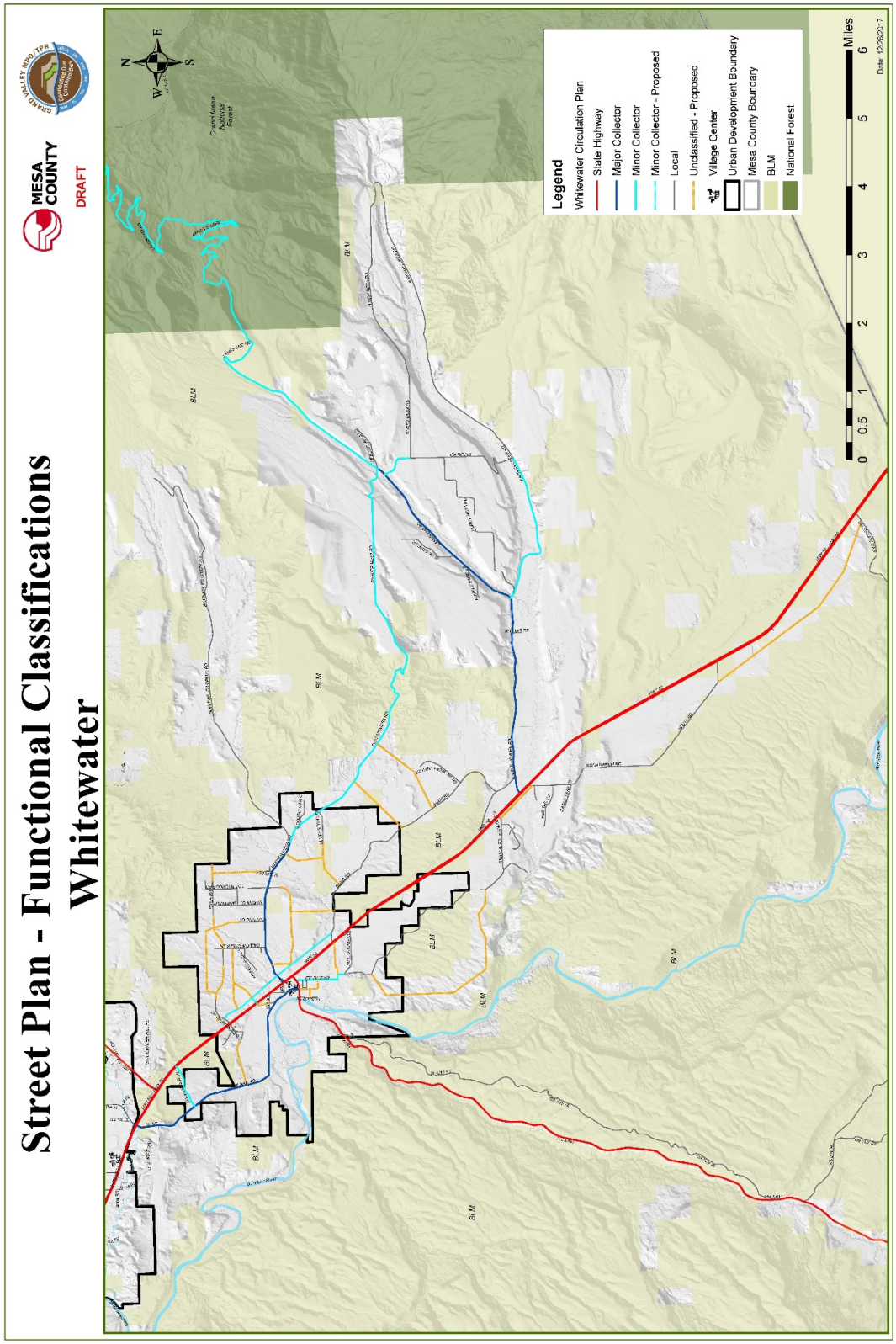

Street Plan - Functional Classifications
Whitewater
MESA COUNTY
DRAFT
Legend
Whitewater Circulation Plan
State Highway
Major Collector
Minor Collector
Minor Collector - Proposed
Local
Undassified - Proposed
Village Center
Urban Development Boundary
Mesa County Boundary
BLM
National Forest
Miles
0 0.5 1 2 3 4 5 6
BLM

Figure 4

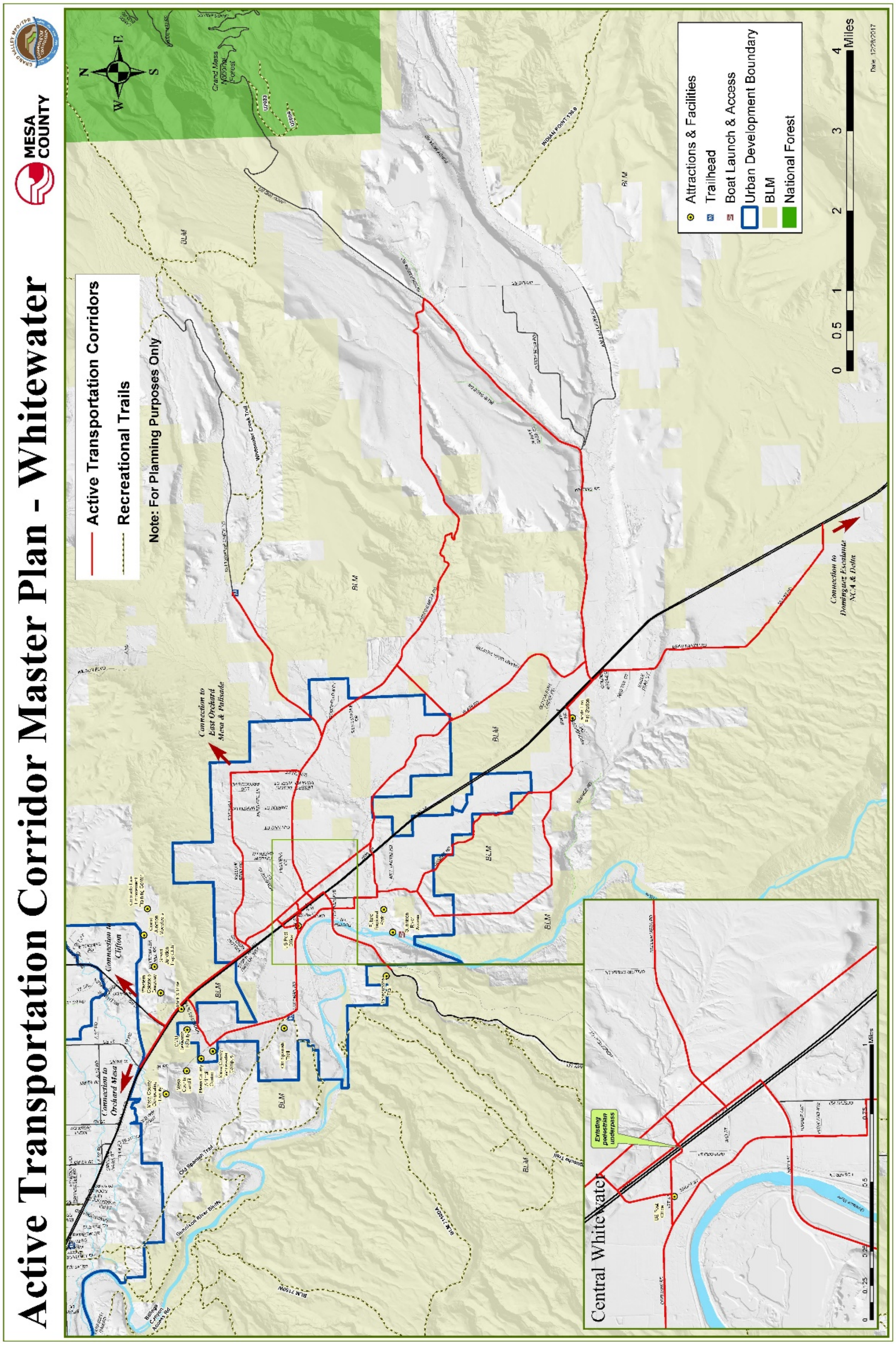

Active Transportation Corridor Master Plan - Whitewater
MESA COUNTY
Active Transportation Corridors
Recreational Trails
Note: For Planning Purposes Only
Attractions & Facilities
Trailhead
Boat Launch & Access
Urban Development Boundary
BLM
National Forest
0 0.5 1 2 3 4 Miles
Connection to East Orchard Mesa & Palisade
Connection to Clifton
Connection to Orchard Mesa
Connection to Dominguez Escalante NCA & Delta
Central Whitewater
Existing pedestrian underpass

Figure 5

Appendix B - Background on Previous Adopted Transportation Plans

The following adopted plans have shaped the transportation planning in the community and have been adopted by one or both, the City of Grand Junction and Mesa County, and can be found at www.mesacounty.us/planning and/or at http://www.gjcity.org. These plans serve as the foundation for the updated Circulation plan.

- 2010 *Grand Junction Comprehensive Plan* The Grand Junction Comprehensive Plan was adopted in 2010 by both the City Council of Grand Junction and the Mesa County Planning Commission. The Comprehensive Plan provides the vision and the goal of "Becoming the Most Livable Community West of the Rockies". Creating a community with an excellent transportation system is essential to achieving this vision. The goals and policies of the Comprehensive Plan are furthered discussed in this Circulation Plan.
- Grand Valley 2040 Regional Transportation Plan (see gv2040rpt.org) - The 2040 Plan was adopted by the Grand Valley Regional Transportation Commission in 2015. To maintain the region's transportation system, ensure the efficient movement of people and goods, and support future growth and development, transportation services and infrastructure are planned and coordinated through a regional transportation planning process carried out by the Grand Valley Metropolitan Planning Organization (GVMPO). The GVMPO is the federally-designated transportation planning organization for the Grand Junction urbanized area and all of Mesa County. The long-term guidance developed in the regional Long Range Regional Transportation Plan (RTP) informs a short-term capital improvement plan, or the Transportation Improvement Program (TIP), and prioritize projects to make the best use of limited funding. The regional plan covers all of Mesa County, including incorporated Grand Junction. The Grand Valley 2040 Regional Transportation Plan (RTP) is the most recent update to the region's overall vision for future transportation infrastructure and investment and identifies the types of investments and strategies needed to address transportation mobility needs in the region. The plan guides future investments in the region's transportation system to reduce congestion; ease commutes; improve roadway safety; enhance sidewalks, bike, and multi-use trails; and maintain an efficient and effective transportation system that supports the regional economy. It is scheduled to be updated in 2019 by a 2045 Plan.
- *2001 Urban Trails Master Plan* - The City of Grand Junction last adopted an Urban Trails Master Plan in 2001 and the Mesa County Board of County Commissioners retired it in April 2014, leaving a plan that is limited, outdated and only implemented within the city limits of Grand Junction. The Urban Trails Master Plan defines the type and locations of non-motorized transportation corridors in the Grand Junction urban area, as well as on-street bicycle and pedestrian facilities. Rather than update the Urban Trails Master Plan, it is being incorporated into this Plan, which will provide more direction, priorities, policies and implementation strategies.

- 2002 Redlands Area Transportation Plan – Includes a transportation section that was adopted as part of the Circulation Plan in 2002. There were four key elements of the planning effort: 1) State Highway 340 Access Control Plan; 2) capacity improvements on existing routes; 3) new roadways and neighborhood connections; and 4) multi-modal accommodations.
- 2004 Pear Park Neighborhood Plan – Includes a Transportation and Access Management Plan for the Pear Park neighborhood and was adopted as part of the Circulation Plan in 2004. It remains a part of the Circulation Plan today and its detail at a neighborhood level guides development access and street cross sections for major corridors in Pear Park.
- 2014 Orchard Mesa Neighborhood Plan – Includes a transportation planning section supporting complete street improvements, multi-modal enhancements for all major corridors on Orchard Mesa including US Highway 50, establishing non-motorized crossings of US Hwy 50 (including the eastbound conversion of the B ½ Road overpass to a pedestrian/bicycle path), and creating safe non-motorized routes to area attractions, schools, the riverfront, and centers.
- 2011 Clifton/Fruitvale Community Plan - Includes the Clifton Transportation Study and Clifton Pedestrian Circulation Study. Adopted in 2006 and amended in 2011, it specifically looks at pedestrian and bicycle improvements to US Highway 6 that runs through Clifton on the way to Palisade.
- 2007/2011North Avenue Corridor Plans and Zoning Overlay - Includes transportation requirements that reinforce a “Complete Street” infrastructure that support this Circulation Plan.
- 24 Road Subarea Plan and Overlay - Adopted in 2000 and updated in 2017, it includes transportation requirements that reinforce a “Complete Street” infrastructure and support this Circulation Plan.

Appendix C - GVT Transit

GVT Transit Summary, Service Areas and Major Corridors

Based on onboard passenger surveys conducted between 2008 to 2016, the two major destinations for Grand Valley Transit (GVT) passengers while riding the bus are home followed by work. Therefore, GVT focuses the system around densities of residential development and centers of employment. Determining factors for route alignments and stop placement focus on transit-dependent populations that include older adult, persons with ambulatory disabilities, low-income, and zero-vehicle populations. Much of this information comes from Census tract data, while the Grand Junction Housing Coalition is another resource.

GVT focuses on specific corridors - Since the inception of fixed routes in 2000, GVT has focused on particular corridors including the following within the City of Grand Junction: North Avenue, Patterson Road, Orchard Avenue, Horizon Drive, Unaweep Avenue, D ½ Road, D Road, 4th & 5th Street couplets, 7th Street, 12th Street, 29 Road, and 32 Road.

GVT daily boarding's and alightings –

The busiest stops in 2016 for passenger boardings include the following (in order):

- Downtown Transfer Facility
- Clifton Transfer Facility
- West Transfer Facility
- North Ave & East of 28 ¾ Rd - Walmart
- 1st St & North of Rood Ave – City Market
- North Ave & West of 28 ¾ Rd – Texas Road House - North Ave & East of 28 ½ Rd – Homeward Bound

The busiest stops in 2016 for passengers' alightings include the following:

- Downtown Transfer Facility
- Clifton Transfer Facility
- West Transfer Facility
- North Ave & Orchard Ave - West of 29 ¼ Rd
- North Ave & East of 28 ½ Rd – Homeward Bound
- North Ave & West of 29 ½ Rd – Career Center
- East of 28 ¾ Rd - Walmart

GVT seeks Economic and Community Vitality – Provide a transit system that supports jobs, recreation, and overall community well-being.

GVT seeks System Preservation – Maintain a financially sustainable transit system operating in a state of good repair.

GVT seeks Education and Outreach – Strive to inform and educate the public about transit services and the mobility options they provide for all trip types and populations. Municipalities and educational institutions can partner with GVT to leverage grant funding for capital improvements.

Examples of recent successes include:

- Pedestrian and bicycle facilities (crossing beacons, sidewalks, ADA ramps, etc.)
- Buildings (County Fleet addition in Whitewater, park-and-ride facilities)
- Compressed Natural Gas (CNG) fueling facilities
- Litter vacuum for Mesa County Facilities Department
- CMU coach bus, District 51 & GVT bus pullout on 7th & Elm at new engineering building
- Connecting the GVT West Transfer Station on 24 ½ Road, to Patterson Road, A "Neighborhood Connection "a trail was built by O'Reilly Auto Parts providing pedestrian access from 24 ½ Road to Patterson Road.

CMU (7th St) – GVT Bus Pullout

GVT Bus Transfer Station across street

Looking west from 24 ½ Rd

Appendix D - Resources

City of Grand Junction
www.gjcity.org
Grand Junction Comprehensive Plan
Transportation Engineering Design Standards Manual (TEDS)
Urban Trails Committee

Additional Plans can be found at http://www.gjcity.org/residents/community-development/long-range-planning/

Mesa County
www.mesacounty.us/planning
Mesa County Road Access Policy
Mesa County Road & Bridge Specifications

Additional Plans can be found at http://www.mesacounty.us/planning/master-plan.aspx

Grand Valley Metropolitan Planning Organization
www.rtpo.mesacounty.us
2040 Regional Transportation Plan
Safe Routes to School

Additional Plans, Reports and Studies can be found at http://rtpo.mesacounty.us/plans-reports-studies.aspx

Colorado Mesa University Natural Resource Center
http://www.coloradomesa.edu/natural-resource-center/NRC%20Reports/socioeconomic-studies.html

Studies include:
- Grand Valley Public Trail Systems Socio-Economic Study, 2018
- Rural Colorado Migration Study, 2018
- Mesa County Hedonic House Price Study, 2017