AUGUST

2025

CLEARFIELD

UTAH'S MILITARY CITY

TRANSPORTATION MASTER PLAN

Adopted August 26, 2025

WCG

FEHR PEERS

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I. INTRODUCTION

A. OVERVIEW

Clearfield City (City) continues to see rapid growth with the construction of residential and commercial developments throughout the City. Significant growth in neighboring cities is also impacting Clearfield roadways and facilities. Clearfield's current population is estimated near 35,000. This represents an increase of about 4,000 since the 2020 census, and about 6,000 since the 2010 census. It is projected that this growth will continue, with the population reaching 48,000 by 2050.

This Transportation Master Plan (TMP) guides transportation infrastructure investments for the future by addressing several goals identified by the City. Understanding the roadway network's existing and future operation is key to planning for Clearfield's transportation needs. Once existing conditions are established, roadway conditions are forecasted to 2034 and 2050 to identify deficiencies in the roadway network that may occur due to land development and the resulting population growth.

Additionally, this TMP covers City transportation management-related best practices, such as access management standards, safety analyses, establishing a bridge maintenance and improvements plan, truck routes, and traffic impact study standards. An interactive online mapping website has been created to summarize this TMP.

The location of Clearfield within the context of Davis and Weber Counties is shown in **Figure 1**.

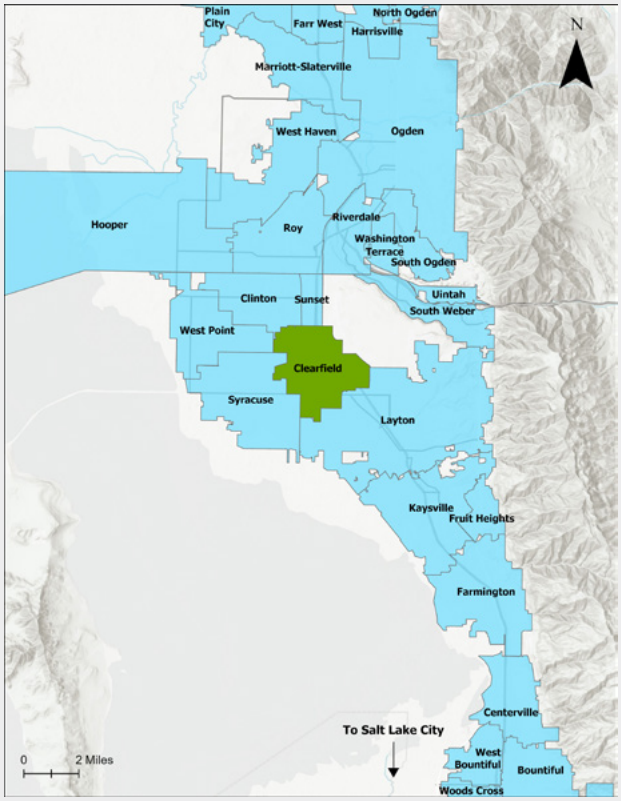


Figure 1: Vicinity Map

GOALS AND OBJECTIVES

Consistent with the Clearfield General Plan, Clearfield aims to have a safe and connected multi-modal transportation network to offer the community access to opportunities, foster a high quality of life, and support sustainable, happy, and healthy neighborhoods. As follows are the key objectives, policies and strategies that the City has identified to achieve this goal:

Objectives

Five objectives reflect key targets Clearfield would like to achieve to meet its overall goal for transportation:

1. Promote the enhancement of all modes of transportation throughout the City to support regional connections to destinations in the Salt Lake and Ogden/Clearfield metropolitan areas.
2. Focus design requirements and investments on multi-modal transportation projects that support the planned growth in the City's key centers and promote citywide connections and economic resilience.

3. Provide easy connections via multiple modes to community amenities, services, and jobs for residents, daytime employees, and visitors by working to improve the transportation network.
4. Preserve and enhance the City's main corridors by defining each corridor's key functions and focusing on transportation investment accordingly.
5. Make Clearfield City more comfortable and attractive for pedestrians and bicyclists, with a focus on safety for all users.

Policies and Strategies

The following policies and strategies reflect a framework of potential options for helping Clearfield meet the five objectives and overall goal for transportation:

TA-1 Provide safe and efficient movement of people and goods within and through the City, and to regional transportation connections and/or destinations.

- Strive for a balanced, context-sensitive set of major corridors that manage congestion in a way that is supportive of businesses and allows efficient travel while balancing the need to preserve quality of life for City residents.
- Improve connectivity in Clearfield in areas with poor maintenance conditions, facility gaps, high delay and/or multimodal safety barriers.

TA-2 Continue to coordinate with nearby jurisdictions and regional partners and stakeholders—including the Utah Department of Transportation (UDOT), Utah Transit Authority (UTA), Wasatch Front Regional Council (WFRC), and Davis County—on multimodal transportation, including:

- Roadway projects that improve functionality and connections
- Freight connectivity projects that balance the needs of freight traffic with multimodal safety and mobility
- Active transportation projects that improve and expand the regional network
- Integrated transit planning to facilitate transit connections within and between Clearfield and the regional network
- Safety projects identified in the WFRC Comprehensive Safety Action Plan and other regional planning efforts

TA-3 Continue to support cross-city multi-modal travel by improving routes and connections at key areas, including:

- Clearfield FrontRunner station
- Freeport Center
- Downtown Clearfield
- Parks, open spaces, and schools
- Transportation barrier crossings, such as I-15 overpasses; rail tracks; bridges; and major roadways

TA-4 Ensure the parking, access, and multi- modal transportation options for housing in centers are designed to be safe and convenient while minimizing impacts on surrounding neighborhoods.

TA-5 Continue to evaluate additional strategies and standards for city-wide parking policies that reduce extraneous amounts of land used only for parking, referring to the parking study conducted in 2022. These strategies may include, but are not limited to:

- Shared parking standards
- Reduction of minimum parking requirements
- The use of maximum parking requirements in designated "centers", and
- The opportunity to count on-street parking toward parking requirements for uses associated with short-term parking, such as ground floor retail, in specific areas

TA-6 Continue to collaborate with UDOT on implementing context-sensitive design solutions to the major corridors connecting to and through Clearfield, which contribute to local and regional impressions of Clearfield's community character.

TA-7 Continue to develop and implement context-appropriate streetscape requirements throughout the City's road network to consistently improve the public realm and physical character of Clearfield. Streetscape improvements include, but are not limited to, street trees, landscaping, sidewalks, furnishings, lighting, and on-street or separated bike lanes.

TA-8 Continue to support the expansion of each school's **Safe Routes to School (SRTS)** coverage by working to make any route a safe route.

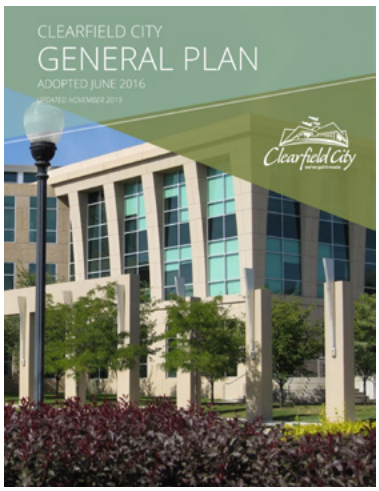
TA-9 Support the success of various destinations in Clearfield by creating high-quality, comfortable, and safe routes geared toward walking, biking, and other forms of active transportation. Enhance the safety and experience of active transportation travel by:

- Using sufficient signage and/or pavement markings for on-street bike lanes and routes;
- Coordinating implementation of on-street bike lanes with proposed streetscape and roadway projects. This should include prioritization of separated bicycle facilities where feasible to improve comfort and safety for bicyclists traveling locally and regionally.
- Prioritization and implementation of sidewalk improvements and filling sidewalk gaps on high-use routes.

TA-10 Continue to advance the initiatives of the North Davis Active Transportation Implementation Plan.

B. PREVIOUS STUDIES

CLEARFIELD GENERAL PLAN (2021)

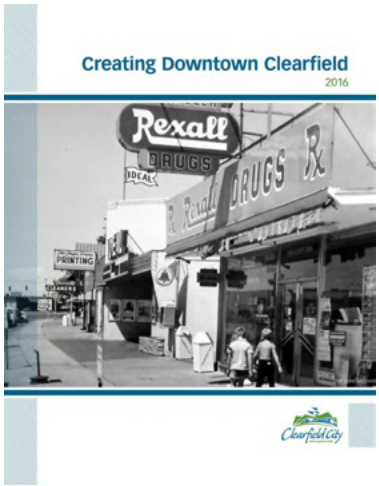


The Clearfield General Plan establishes a vision for sustainable growth in Clearfield. It describes the character of each land-use in the City and includes a land-use map for the City. It also defines future plans for transportation improvements and references the 2016 Creating Downtown Clearfield plan.

CLEARFIELD STATION AREA PLAN (2024)

The Clearfield Station Area Plan details a vision for developing the Clearfield Station Area into a vibrant, mixed-use, highly connective transit-oriented neighborhood. It builds on the 2019 plan, expanding its focus to align with recent state planning requirements and the changing dynamics of Clearfield's development landscape. The plan covers approximately 56 acres near the Clearfield FrontRunner Station, aiming to establish a walkable, connected community that serves as a regional destination for employment, housing, shopping, and recreation.

DOWNTOWN CLEARFIELD (2016)



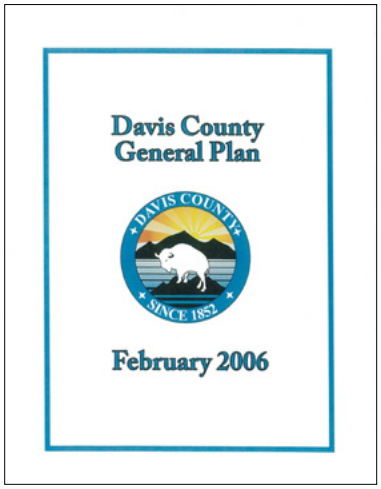
Published in 2016 and subsequently attached to the adopted General Plan, Creating Downtown Clearfield sought "to accomplish two main objectives: (1) to create a vision for downtown

Clearfield, and (2) to develop supporting recommendations on how to achieve and implement the vision over time." Creating Downtown Clearfield covers the area along SR-126 between 700 South and 650 North and includes the Clearfield Station Area. Pertaining to transportation, Creating Downtown Clearfield supports a variety of strategies intended to minimize automobile dependency in the emerging downtown area.

NORTH DAVIS COUNTY ACTIVE TRANSPORTATION IMPLEMENTATION PLAN (2021)

This multijurisdictional plan outlines a series of projects aimed at improving the connectivity and cohesion of the active transportation network across the communities of Clearfield, Clinton, Sunset, Syracuse, and West Point. For Clearfield, the plan includes numerous recommendations developed through a project prioritization process, several of which are now incorporated into the latest WFRC Regional Transportation Plan (RTP). Notably, the plan proposes a shared-use path and on-road bike facilities along Antelope Drive, as well as a trail linking the Clearfield FrontRunner Station to nearby east-west arterials to improve first/last mile transit access. Access to the FrontRunner station from downtown is further improved by the recommendation to build bike lanes along State Street. The overarching goal is to create a safe, well-connected, and accessible active transportation network that supports both recreational and commuting needs.

DAVIS COUNTY GENERAL PLAN (2006)



The Davis County General Plan provides a succinct set of policies to address local values and challenges, primarily focused on balancing the needs of agriculture and increasing growth. The Strategic Plan (2004) serves as a supporting document that addresses transportation issues in Davis County, several of which have been addressed by subsequent regional planning efforts since the plan was published (e.g., improvements to I-15 and the construction of Legacy Parkway and FrontRunner). Two major needs that were identified remain unmet: a north-south light rail or BRT route and an east-west connection on 200 South to overcome rail barriers to walking and biking access.

UTA FALCON HILL SMALL AREA TRANSIT STUDY (2021)

The Falcon Hill Small Area Transit Study provides a comprehensive evaluation of transportation needs and future development impacts related to the Falcon Hill area, which lies adjacent to Hill Air Force Base (HAFB) in northern Davis County. The study identifies key transit and mobility challenges as Falcon Hill evolves into a major regional employment hub, with an anticipated addition of approximately 1,000 new jobs annually from 2020 to 2035. Of particular concern are traffic congestion and limited public transit options, which are expected to worsen unless strategic transportation alternatives are implemented.

UTA FIVE-YEAR SERVICE PLAN (2025-2029)

The UTA Five-Year Service Plan outlines UTA's approach to addressing increasing transit demand driven by regional growth. Updated every two years, the plan provides an overview of planned service adjustments, incorporating insights from both regional and local plans. Its goals are to align transit services with revenue forecasts, adapt to shifting travel patterns, enhance reliability, and foster community engagement.

UTA LONG-RANGE TRANSIT PLAN (2023)

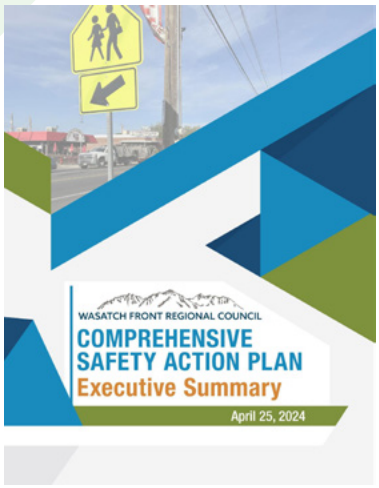
The UTA Moves 2050 Long-Range Transit Plan phases a strategy for the future of public transportation along the Wasatch Front, with an emphasis on addressing the region's rapid growth and expanding access to key destinations like schools, job centers, and essential services by implementing its "Vision Network." The plan also highlights the need for transit-oriented development to support Clearfield's growing population, encouraging the use of active transportation options like biking and walking. These improvements are part of a broader regional strategy to enhance connectivity and improve service reliability throughout northern Davis County as major employers, new families, and other kinds of growth increase in the area.

WFRC REGIONAL TRANSPORTATION PLAN 2023–2050 (2023)

WFRC's RTP outlines a long-term vision for the regional transportation system through 2050, focusing on roadways, transit, and active transportation. The plan aims to support regional economic growth by developing a resilient, intermodal transportation system. Key features relevant to Clearfield include operational roadway improvements to 1000 West and Antelope Drive, roadway widening on SR-193, double tracking the FrontRunner commuter rail, increased frequencies on local bus routes, and several major active transportation investments.

WFRC COMPREHENSIVE SAFETY ACTION PLAN (2024)

The WFRC Comprehensive Safety Action Plan was a regional effort undertaken to develop a plan to



address rising crash rates in the WFRC region. The plan provides project and policy recommendations for WFRC to implement at the regional level, such as an updated project prioritization process, while individual communities receive tailored strategies and project suggestions.

C. TMP DEVELOPMENT PROCESS

To help ensure existing and future needs are met while providing a clear vision for Clearfield to grow and change, Wall Consultant Group (WCG) assembled a TMP project team, coordinated with neighboring jurisdictions, and met with the planning commission and city council. Each of these efforts are summarized below.

PROJECT TEAM

A project team was established with City personnel, Fehr and Peers, Zions Bank, and WCG. This group met throughout the planning process and conducted a kickoff meeting, monthly coordination meetings, neighboring jurisdiction coordination, and planning commission/city council coordination. Team members from the City included Brad Wheeler, Brad McIlrath, Tyson Stoddard, and Braden Felix.

EXTERNAL COORDINATION WITH NEIGHBORING JURISDICTIONS

On Thursday November 14, 2024 Clearfield City hosted a working lunch for prominent stakeholders, neighboring cities, UDOT, UTA, and WFRC to coordinate the update of the City's TMP with its neighbors. The consultants facilitated a review of their existing and future transportation plans. The following organizations were invited:

- Clearfield City
- Syracuse City
- Layton City
- West Point City
- Clinton City
- Sunset City
- HAFB
- Davis County
- Davis School District
- UTA
- WFRC
- UDOT
- Freeport Center

Meeting topics included future roadway plans in neighboring cities, coordinating cross section dimensions on regional roadways, outlining regional transit plans, discussing the regional active transportation network, discussing ways to increase connectivity and safety through the Freeport Center, and discussing plans for future schools in the City. Several follow-up meetings occurred with West Point City, MIDA Falcon Hill, Freeport Center, and Davis County. In addition, the potential for a follow-up study examining opportunities for transit onto HAFB was further discussed by Layton City, WFRC, and Clearfield City staff. Clearfield and Layton City staff should work with WFRC Staff to follow up on applying to WFRC for future study funding.

November 14, 2024, TMP Entity Coordination Meeting at Clearfield City Hall

PLANNING COMMISSION AND CITY COUNCIL

To assist with the adoption of the TMP, IFFP, and IFA, WCG presented the analysis, findings, and recommendations from this TMP to the City Council and Planning Commission as the final step of the plan's development.

D. CLEARFIELD CHARACTERISTICS

The purpose of this section is to discuss the existing and future land use and demographics of Clearfield City. The land use and demographic characteristics are used in the travel demand modeling process to project traffic volumes and determine future transportation needs.

LAND USE

As land use directly drives the quantity and location of new vehicle/bike/transit trips, it is essential to pinpoint changes in future land use to understand the needs of the future transportation network. As new areas develop and existing areas redevelop over time, changes to the transportation network are often needed to accommodate the associated growth and changes in travel demand. The zoning and future land use maps can be found on the City's website.

Given Clearfield's location in the Wasatch Front, direct access to I-15, and the desire to upzone and revitalize the downtown business district, it is primed for continued development. Due to these factors, the Wasatch Front RTP for 2023–2050 forecasts that the number of households in Clearfield will increase by over 7,000 by 2050—nearly doubling the existing number of households.

While a majority of Clearfield (outside of the Freeport Center) is either existing or planned residential, significant mixed-use, industrial, and commercial areas are also present and are expected to grow. It is expected that the City will build upon and further densify its existing mixed-use and commercial areas along State Street. Additional mixed-use growth is expected adjacent to Antelope Drive and in the transit-oriented development district around the FrontRunner station.

DEMOGRAPHICS

This section discusses the demographics of Clearfield City and provides statistical characteristics of human populations such as household size, income, and employment. These characteristics have a direct impact on the transportation needs of the City.

Population

Clearfield has experienced steady population growth over the past 40 years. The most recent 2020 census showed that Clearfield had a population of 31,909, which represents an increase of approximately 1,787 since the previous 2010 survey. Historic population census data are shown below in **Table 1**. It is estimated that the population has continued to increase to 34,694 in 2024, and it is expected to increase by 12,933 by 2050, or 37%. This population growth projection is based on data from WFRC, the Kem C. Gardner Policy Institute, and from analyses of growth patterns within the City performed by Clearfield City staff. **Table 1** below also shows a breakdown of expected population growth between 2023 and 2050. **Figure 2** shows a summary of the historic and projected Clearfield population.

Table 1: Historic and Projected Population Growth

Year	Population	% Change
1990	21,435	--
2000	25,974	21.18% (2.12% per year)
2010	30,122	15.97% (1.60% per year)
2020	31,909	5.93% (0.59% per year)
2024	34,694	8.73% (2.18% per year)
2034	40,320	16.22% (1.62% per year)
2050	47,627	18.12% (1.13% per year)

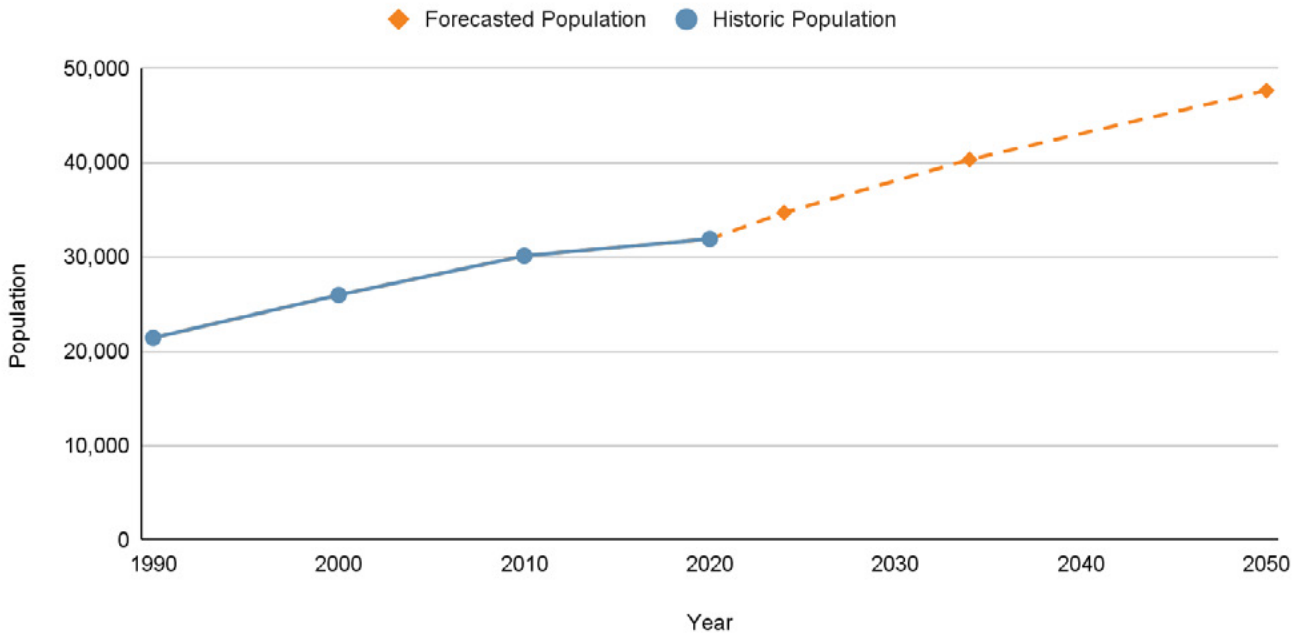


Figure 2: Historical and Projected Clearfield Population

HOUSEHOLDS

In 2020 there were an estimated 10,870 housing units. Most of the housing in Clearfield is single-family homes. As of the 2020 census, there is an average of 3.46 persons per household. The median income for each household in 2020 was $93,421 (in 2020 dollars). Approximately 97% of households have at least one vehicle available for use.

EMPLOYMENT AND JOURNEY TO WORK

The average travel time to work for those who are 16 and older is 22 minutes. Based on data from the US Census Bureau's Center for Economics, **Figure 3** shows that the number of workers who live in Clearfield and travel elsewhere for work is slightly lower than those workers living elsewhere who travel into the City for work. Five percent of the City's workforce both live and work in the City.

Figure 3: Worker In-Flow and Out-Flow (2021)

II. ROADWAY NETWORK

A. PURPOSE

The purpose of the transportation network analysis is to identify existing and future deficiencies in the roadway network that may occur due to increased vehicular traffic associated with land development and population growth. Traffic conditions are examined for the base year (2024) and two future years (2034 and 2050) and recommendations for future improvements are discussed.

B. ROADWAY FUNCTIONAL CLASSIFICATION

Roads are categorized into a hierarchical system based on roadway attributes such as speed, access and right-of-way (ROW) width. The higher a street classification, the more mobility it provides with limited access. Lower street classifications have less mobility but more access. The functional classification of a roadway indicates the road's role within the transportation system, which in turn helps determine when increased travel demand or change in the road's use could lead to negative impacts on its intended function in terms of speed, capacity, and relationship to existing and future land use (FHWA, 2013).

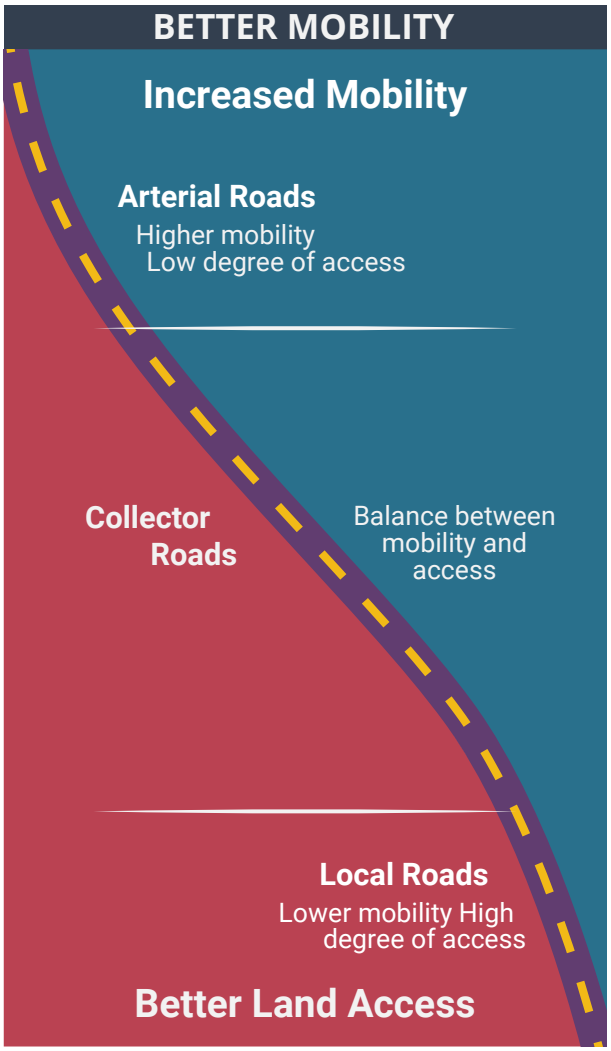


Figure 4: Functional Classification Definitions

The City's functional classifications used in this TMP are:

- Arterial
- Major collector
- Minor collector
- Local residential (for all future construction)
- Special residential (for some previously constructed)

Key cross sectional elements for each of these classifications are summarized in **Table 2** and are accurate as of the publication of this document. See the most recent Clearfield Standard Drawings for up-to-date cross section design criteria city-wide and the Clearfield City Downtown Form-Based Code for additional guidance in the downtown area. Cross section renderings based on these standards were developed for this plan and are shown in **Figures 5** through **9**, including acceptable side treatments for active transportation facilities. Clearfield City classifies street facilities based primarily on the ROW widths provided. An additional classification of "MIDA" was created to designate those roads that are under the management purview of the Military Installation Development Authority. The planned functional classification of each roadway in the city is depicted in **Figure 10** below.

Table 2: Clearfield Key Cross Section Elements

Functional Classification	# Lanes	ROW Width (ft)	Asphalt Width (ft
Arterial	7/5	Per Coordination with the City and UDOT	
Major Collector	3	80	56
Minor Collector	3/2	66	42
Local Residential	2	60	32
Special Residential*	2	60	36

*For previously constructed roads only. Per State law, all new residential streets cannot exceed 32 feet of asphalt.

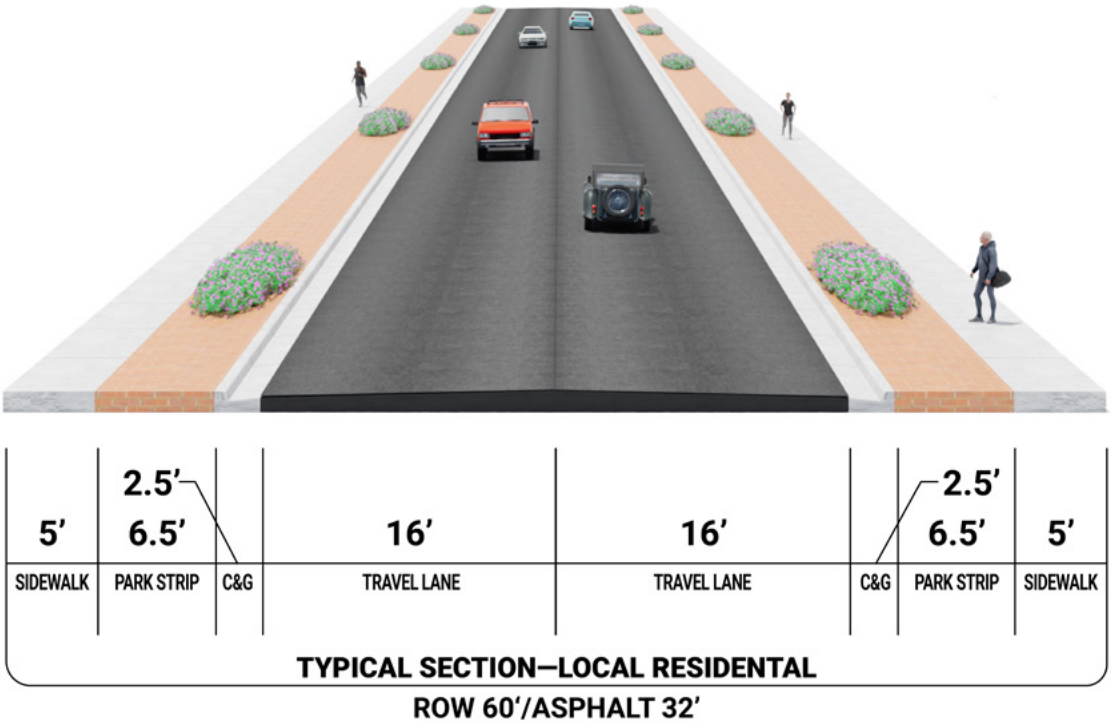


Figure 5: Local Residential Cross Section

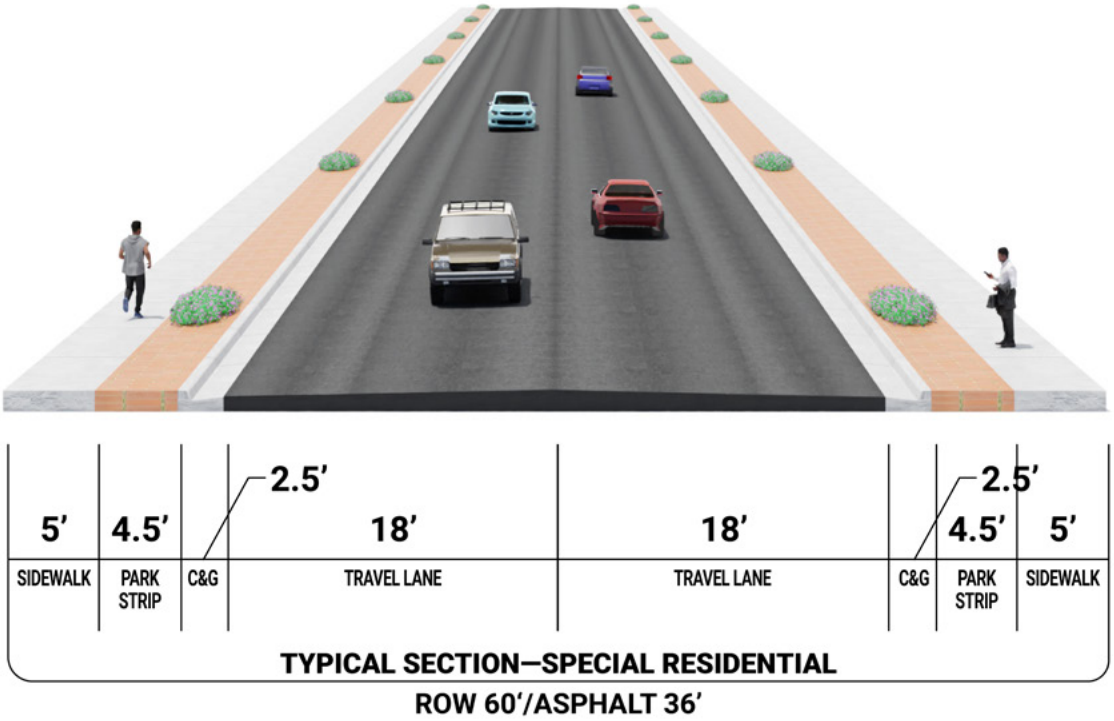
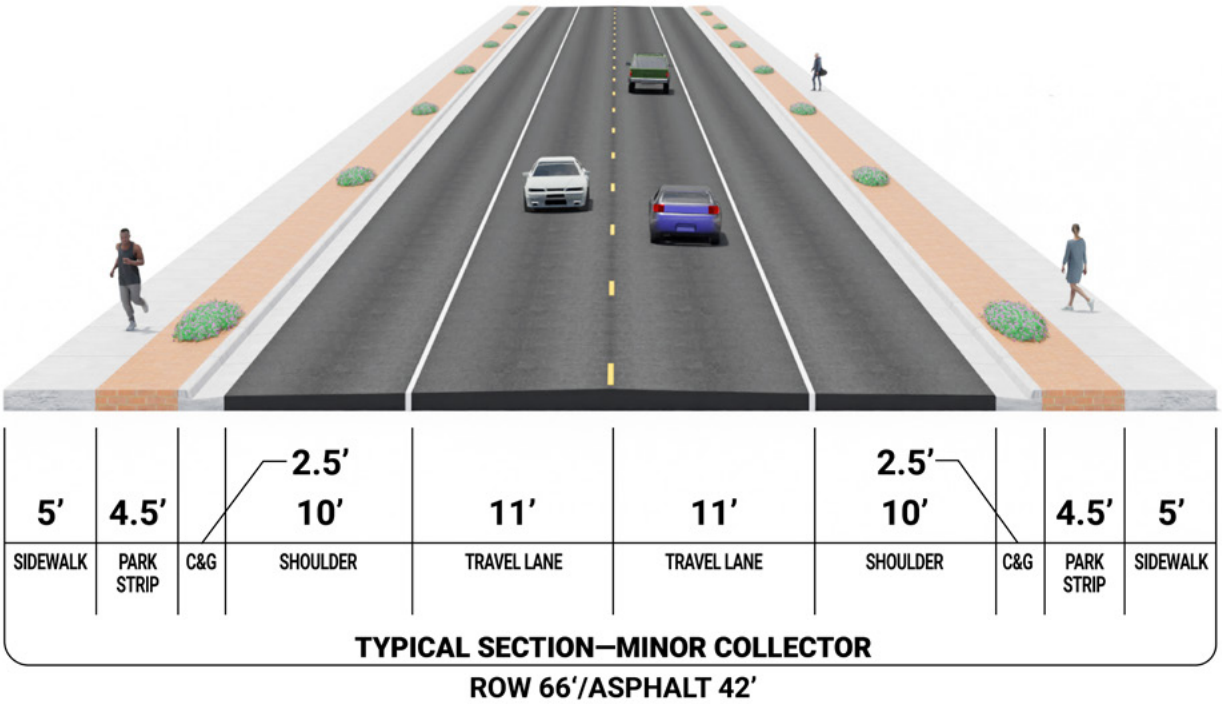


Figure 6: Special Residential Cross Section



*Side treatments (i.e. bike lanes, shared used path, parking etc.) to be determined per City plan.

Figure 7: Minor Collector Cross Section

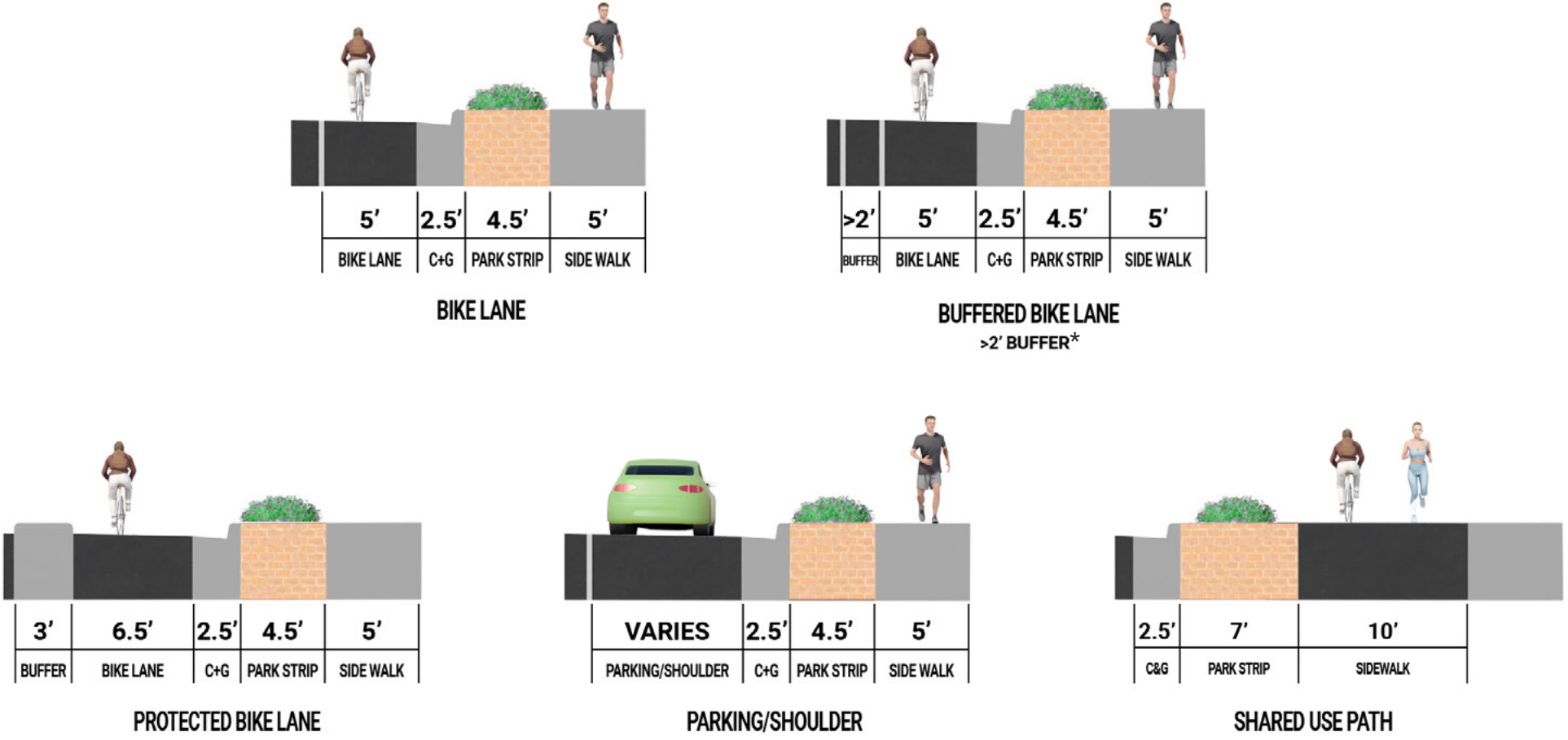
5’	4.5’	2.5’ C&G	10.5’	11’	13’	11’	10.5’	2.5’ C&G	4.5’	5’
SIDEWALK	PARK STRIP		SHOULDER	TRAVEL LANE	CENTER TURN LANE	TRAVEL LANE	SHOULDER		PARK STRIP	SIDEWALK

TYPICAL SECTION—MAJOR COLLECTOR

ROW 80’/ASPHALT 56’

***Side treatments (i.e. bike lanes, shared used path, parking etc.) to be determined per City plan.**

Figure 8: Major Collector Cross Section



***Per NACTO, cross-hatching to be added if buffer width is 3 feet or higher**

****Width of side treatments should be based on available right of way, volume and speed of adjacent roadway, as well as guidance and direction from city staff. Refer to the form-based code for appropriate cross section side treatments for the downtown area.**

Figure 9: Side Treatment Options

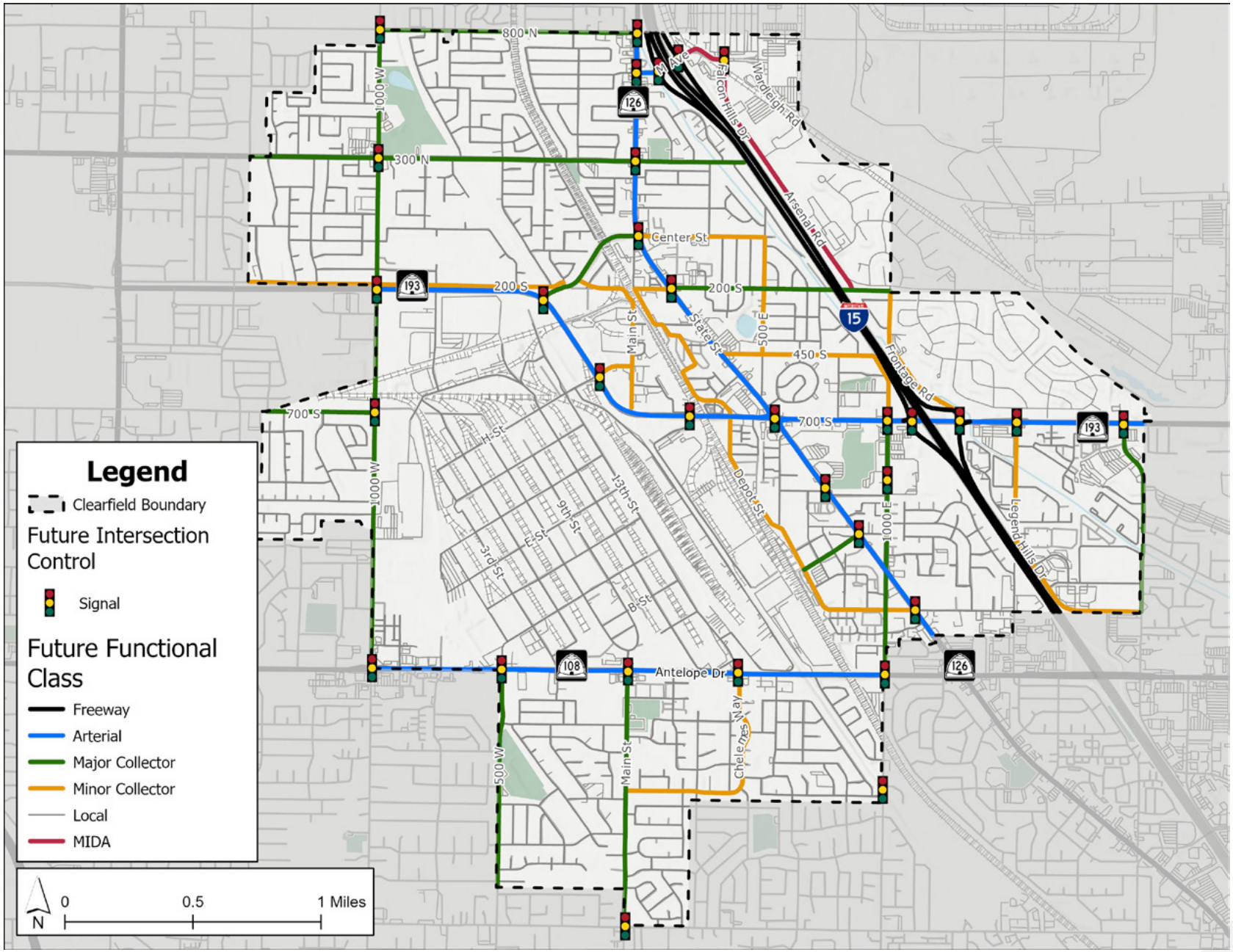


Figure 10: Future Roadway Functional Classification

C. LEVEL OF SERVICE DEFINITIONS

Roadway traffic congestion is reported using the term "Level of Service" (LOS). Roadway segments are assigned LOS categories based on the calculated density of vehicle flow, or the volume-to-capacity (VC) ratio. LOS is reported on a scale from A to F, with A representing free-flow conditions and F representing traffic congestion. For this analysis, daily LOS is calculated for study roadway segments using the projected Average Daily Traffic (ADT) for the given roadway segments and capacities informed by lane count and functional classification. Descriptions for each LOS letter designation and the accompanying range of VC ratios are shown below in **Figure 11** and **Table 3**.[1]

For the purposes of this study, a minimum overall roadway performance of LOS D is considered acceptable. If LOS E or F is calculated for a roadway, explanations and/or mitigation measures are presented.

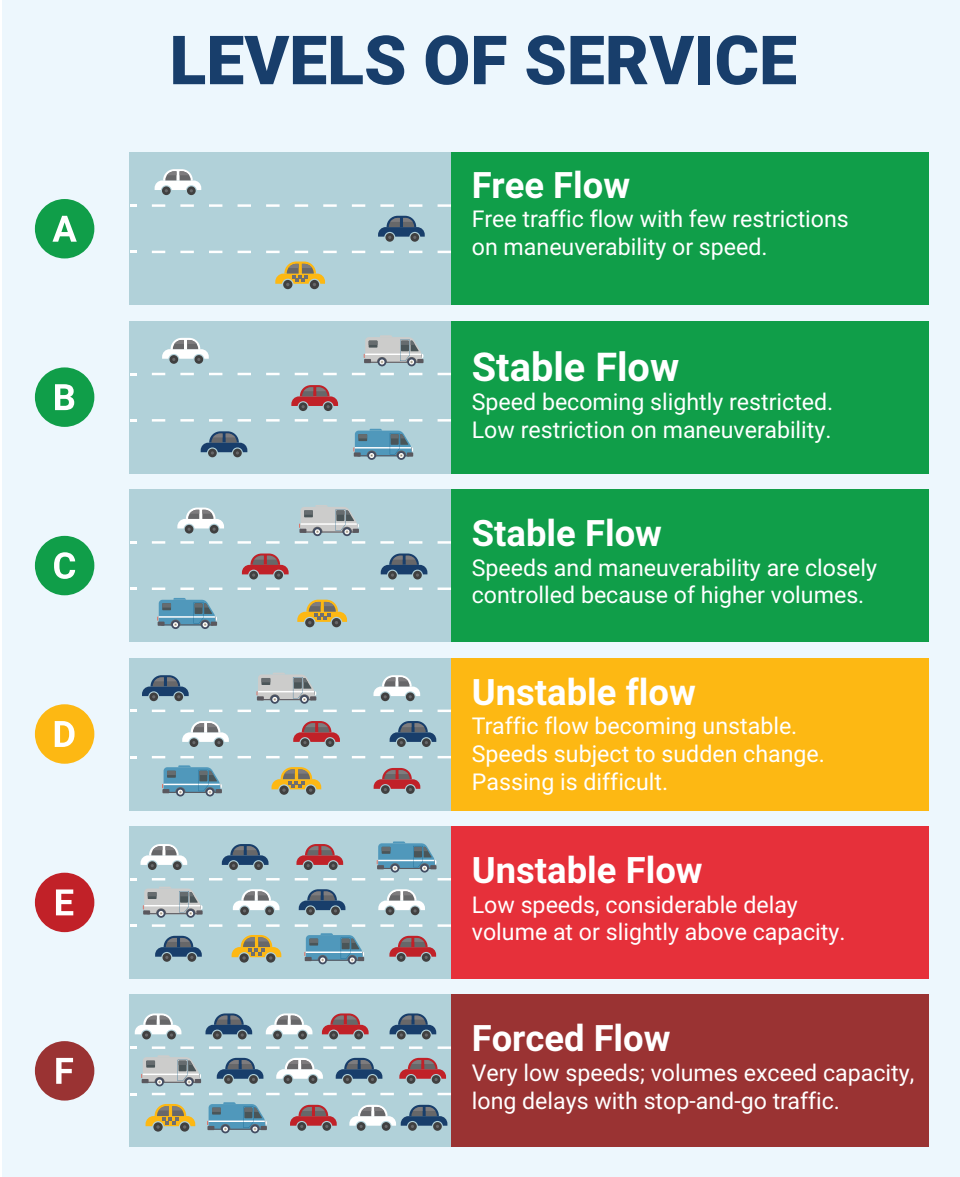


Figure 11: Level of Service Definitions

[1] Level of service volume ranges reflect assumed capacity levels for typical sections of the roadway type and cross section indicated. In select locations, capacity adjustments are applied for this analysis based on local conditions including the presence of turn lanes, intersection spacing, access management, and engineering judgment.

Table 3: Level of Service Capacity Ranges

Functional Classification	Lanes	LOS A-C	LOS D	LOS E	LOS F
Collectors & Arterials	2	< 9,375	9,375 to 10,625	10,625 to 12,500	> 12,500
	3	< 13,350	13,350 to 15,130	15,130 to 17,800	> 17,800
	5	< 28,500	28,500 to 32,300	32,300 to 38,000	> 38,000
	7	< 43,500	43,500 to 49,300	49,300 to 58,000	> 58,000

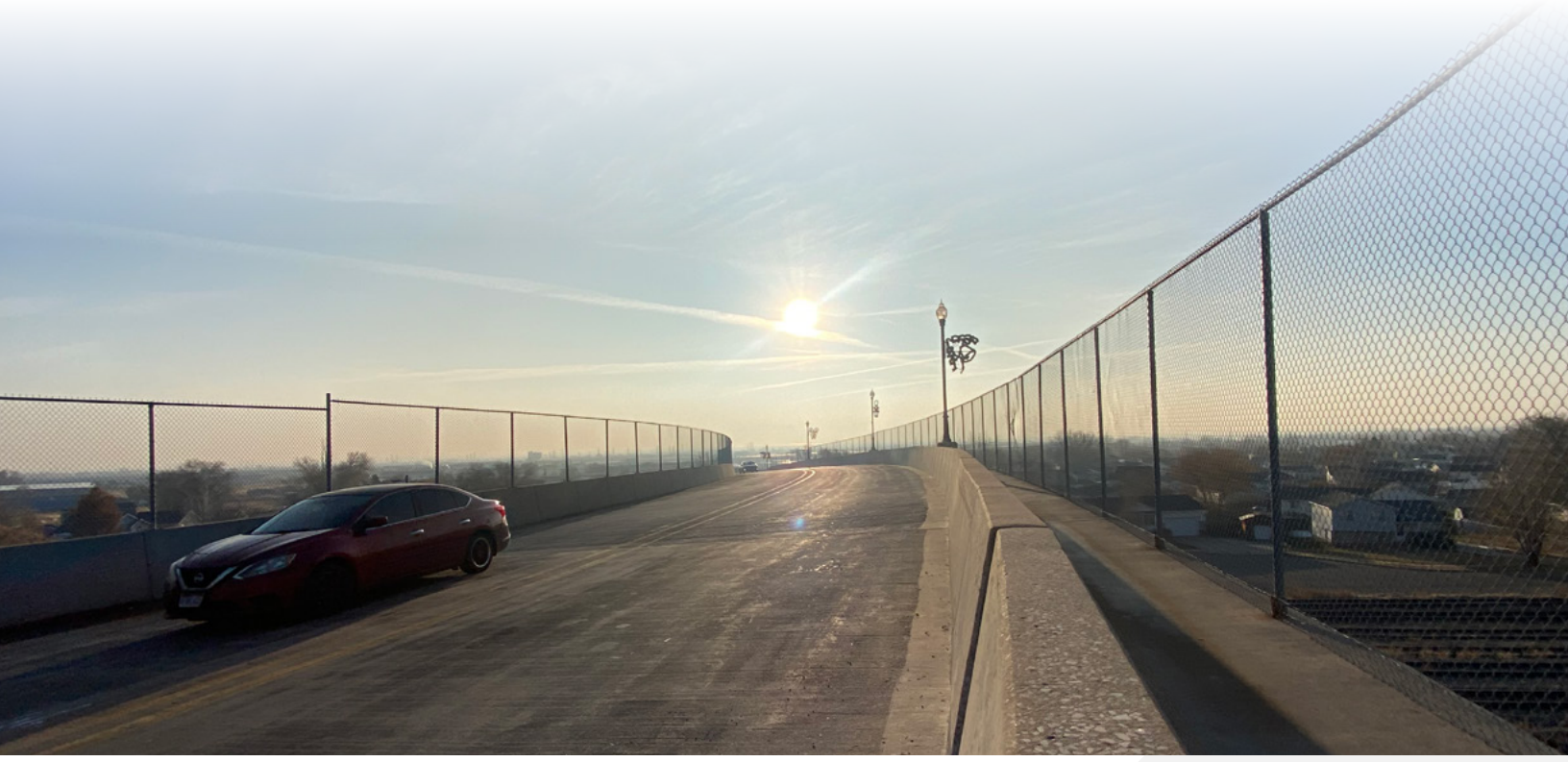
D. EXISTING (2024) CONDITIONS

In order to accurately identify existing conditions on the roadway network in Clearfield City, the consultant team gathered traffic data. Tube count data were collected on November 13, 2024 at locations on key roadways to assist with model calibration. The weather was good for the duration of the counts. The traffic data have been summarized in **Figure 12** below.

Traffic data from UDOT's Automated Traffic Signal Performance Metrics (ATSPM) were used to help identify traffic volumes on state roads.

The volumes from these sources were compiled to calculate the 2024 LOS for study area roadways using cirteria from **Table 3**. The roadway LOS together with current traffic volumes are presented below in **Figure 13**. All roadways in Clearfield are currently operating at an acceptable LOS D or higher with the exception of the following roadway segments, which operate at LOS E or F:

- State Street (SR-126); 650 North/M Avenue to City Boundary
- 700 South (SR-193); 1000 East to Frontage Road
- Antelope Drive (SR-108); Chelemes Way to 1000 East



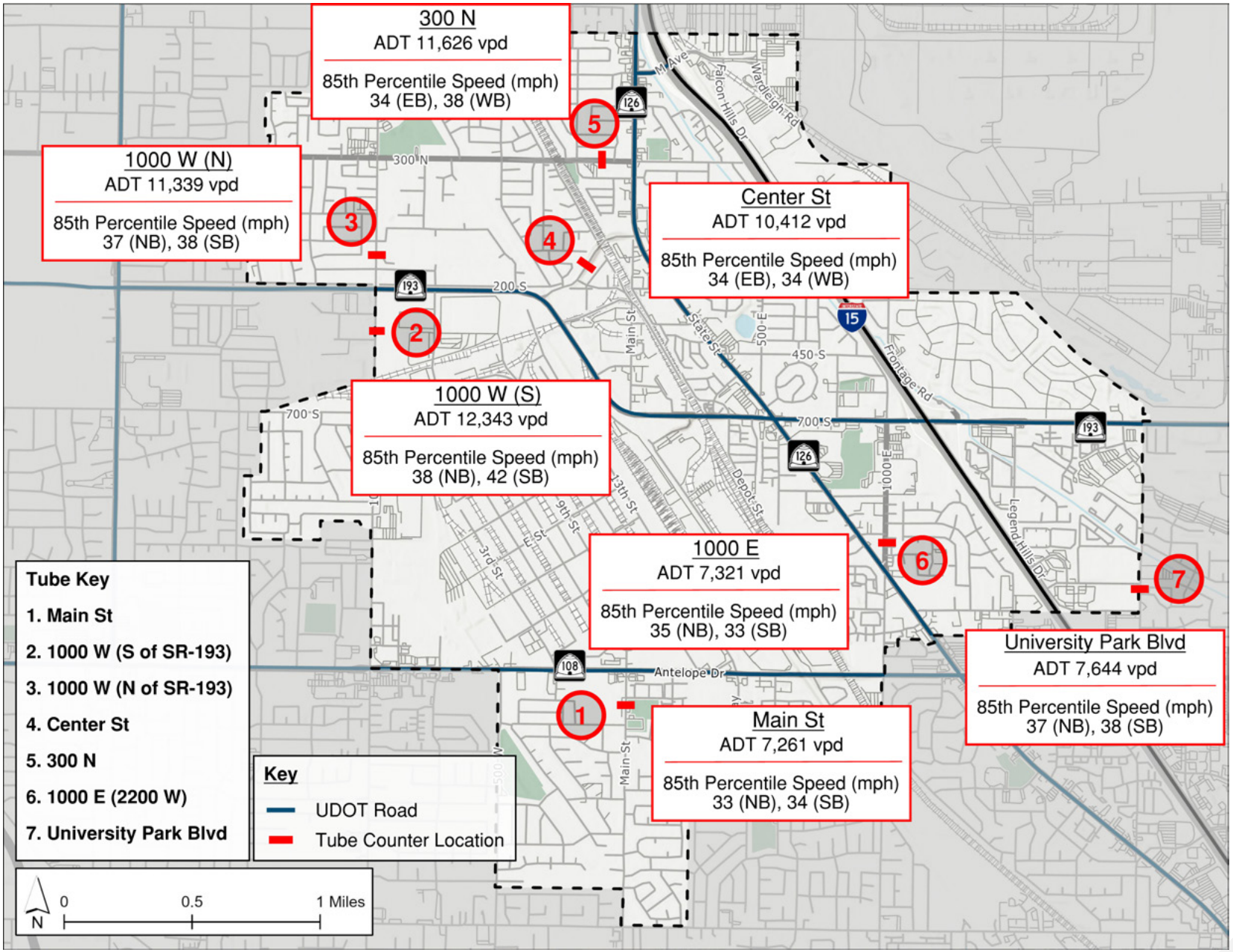


Figure 12: Traffic Count Data

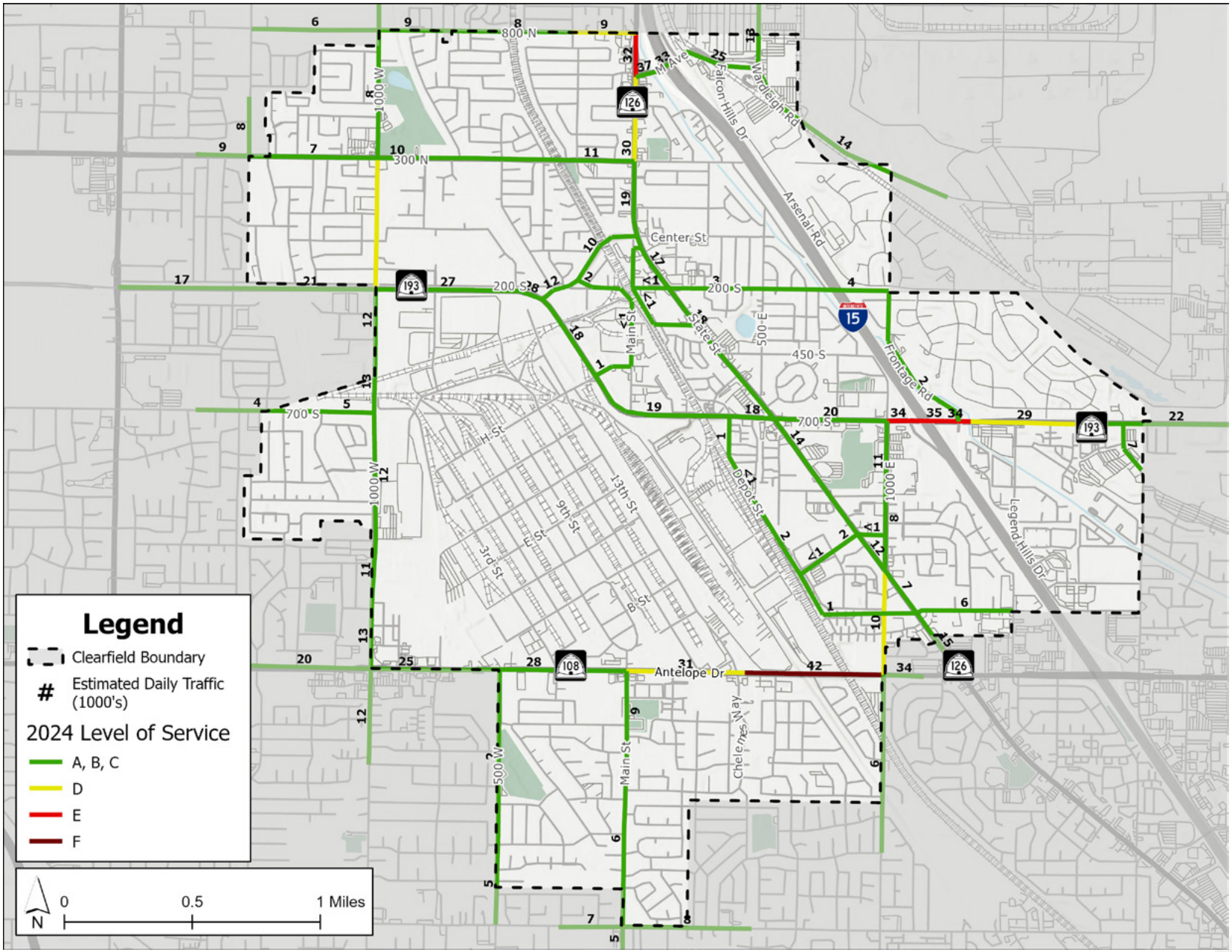


Figure 13: Existing (2024) Roadway LOS and ADT

E. TRAVEL DEMAND MODEL

The transportation network analysis was performed using a locally refined version of the WFRC model (v9.0.1, dated June 24, 2024). The WFRC model was updated to include more refined roadway and land use inputs including base and future-year socioeconomic data informed by planned developments and Clearfield planning staff expectations. Travel demand modeling was performed in Bentley Cube version 6.5.1.

WCG reviewed and updated the roadway network to reflect 2024 conditions. This included adding recently constructed roadway connections near the State Street & 1000 E intersection and refining TAZ centroid connections, particularly along the HAFB fence line. Study area roadways were also reviewed and adjusted to reflect local operating conditions.

Base year (2024) household and employment estimates were initially developed by WFRC for the Wasatch Front 2023 RTP and were refined based on input from Clearfield planning staff and a review of aerial imagery to account for recent construction. **Figure 14** shows the base year 2024 land use inputs in the form of combined relative household and employment density.

Base year ADT estimates from the refined travel model were compared with recent count data collected by WCG in November 2024 and obtained from the UDOT Performance Management System (PeMS) and ATSPM systems. Where the travel demand model over or under predicted current traffic volumes, adjustment factors were identified and applied to base year and future traffic projections to account for inherent imperfections in the travel demand model and to provide the best possible future traffic volume projections.

Details regarding modeling specifics such as roadway network, demographics, and scenario testing are described in the sections below.

Figure 14: 2024 Combined Household and Employment Density

G. FUTURE (2034) CONDITIONS

This section discusses the future (2034) roadway conditions in Clearfield City. Future roadway projects and network updates to the travel demand model are discussed. A no-build scenario LOS is completed. The LOS of each major road is analyzed, improvements are recommended, and a build scenario LOS analysis is completed.

2034 ROADWAY NETWORK

The local roadway network was updated for the 2034 analysis to include new roadways and grid connections that have been planned within Clearfield during the 10-year planning window. WFRC lists the following projects in the RTP 2023–2050. It was assumed that all new roadway connections included in these projects were completed when running the 2034 No-Build and Build travel demand models. Capacity expansion projects from the RTP are assumed along with Clearfield identified projects in the Build scenario.

1. Arsenal Road New Construction from Weber County Line to 200 South: A new three-lane roadway planned between 2024 and 2033
2. Main Street/State Street (SR-126) Operations from Weber County Line to Layton Parkway: An operational improvement project expected to occur between 2024 and 2033
    - Clearfield City has planned a raised median project on State Street through 1000 E that is assumed to be at least a portion of this overall RTP project. The Phase 1 (2034) and Phase 2 (2050) No-Build and Build analyses all include prohibitions of left turns at the State Street & 1000 E intersection due to this project. Left turns would be accommodated at new signalized intersections on State Street at 1150 S and 1450 S.

The 2034 analysis also includes major UDOT roadway improvements outside of Clearfield, including the continuation of the West Davis Corridor and the planned I-15 interchange at 1800 N in Sunset.

ANTICIPATED DEVELOPMENT

The project team coordinated with City planning staff and representatives from both the Freeport Center and MIDA to ascertain what developments can be expected within City limits. Little development is expected to occur in the Freeport Center, but MIDA is planning housing and commercial development in the area between I-15 and HAFB on the northeast side of the city, to be completed along with the new Arsenal Road/Falcon Hills Drive connection. Some infill development is expected along State Street (SR-126) in light of the change to mixed-use zoning, particularly in the FrontRunner station area.

2034 SOCIOECONOMIC DATA

The population in Clearfield is projected to reach 40,000 by 2034, with approximately 3,000 new households accommodating this growth.

Future land use growth in the 2034 travel model scenario was informed by the 2034 WFRC Version 9 land use forecasts and was refined to reflect permitted and planned projects and local planning expertise. Large, planned developments discussed above were incorporated into future land use estimates. Growth projections were reviewed with City staff and adjusted to reflect their best understanding of future growth patterns.

Figure 15 and **Figure 16** present the change in combined household and employment densities from 2024 to 2034 and the final 2034 combined household and employment densities, respectively. As can be seen below, 10-year projected growth is concentrated along Arsenal Road/Falcon Hills Drive and the space between the Union Pacific Rail Alignment and I-15.

Figure 15: 2024 to 2034 Combined Household and Employment Density Growth

Figure 16: 2034 Combined Household and Employment Density

2034 NO-BUILD SCENARIO

The 2034 No-Build scenario provides an analysis of traffic conditions without project capacity improvements. **Figure 17** presents the 2034 No-Build LOS results obtained by applying LOS thresholds from **Table 3** to the projected 2034 No-Build traffic volumes from the travel demand modeling.

As shown, the following roadway segments are expected to operate at unacceptable levels of service (LOS E or worse):

- 1000 West; SR-193 to 300 North
- SR-193; 1000 West to Center Street
- State Street (SR-126); 300 North to 650 North/M Avenue
- Antelope Drive (SR-108); Main Street to 1000 East
- 1000 East; 2200 South to 1450 South
- SR-193; 1000 East to University Park Boulevard

2034 BUILD SCENARIO

The 2034 Build scenario provides an analysis of traffic conditions after implementation of roadway projects identified to improve areas of unacceptable LOS from the 2034 No-Build scenario. Projects shown in Phase 1 (2024–2033) of **Table 4** and **Figure 23** of the Roadway Projects section are recommended to increase roadway capacity and accommodate projected 2034 traffic volumes. The 2034 Build scenario LOS is shown below in **Figure 18**. As shown in the 2034 Build scenario, Phase 1 (2024–2033) projects for 2034 address the majority of LOS E and LOS F conditions identified in the No-Build analysis. However, LOS E conditions remain on SR-193 between 1000 West and Center Street and between I-15 and 1600 East. These locations are planned to be addressed with a Phase 2 project between 2034 and 2043.

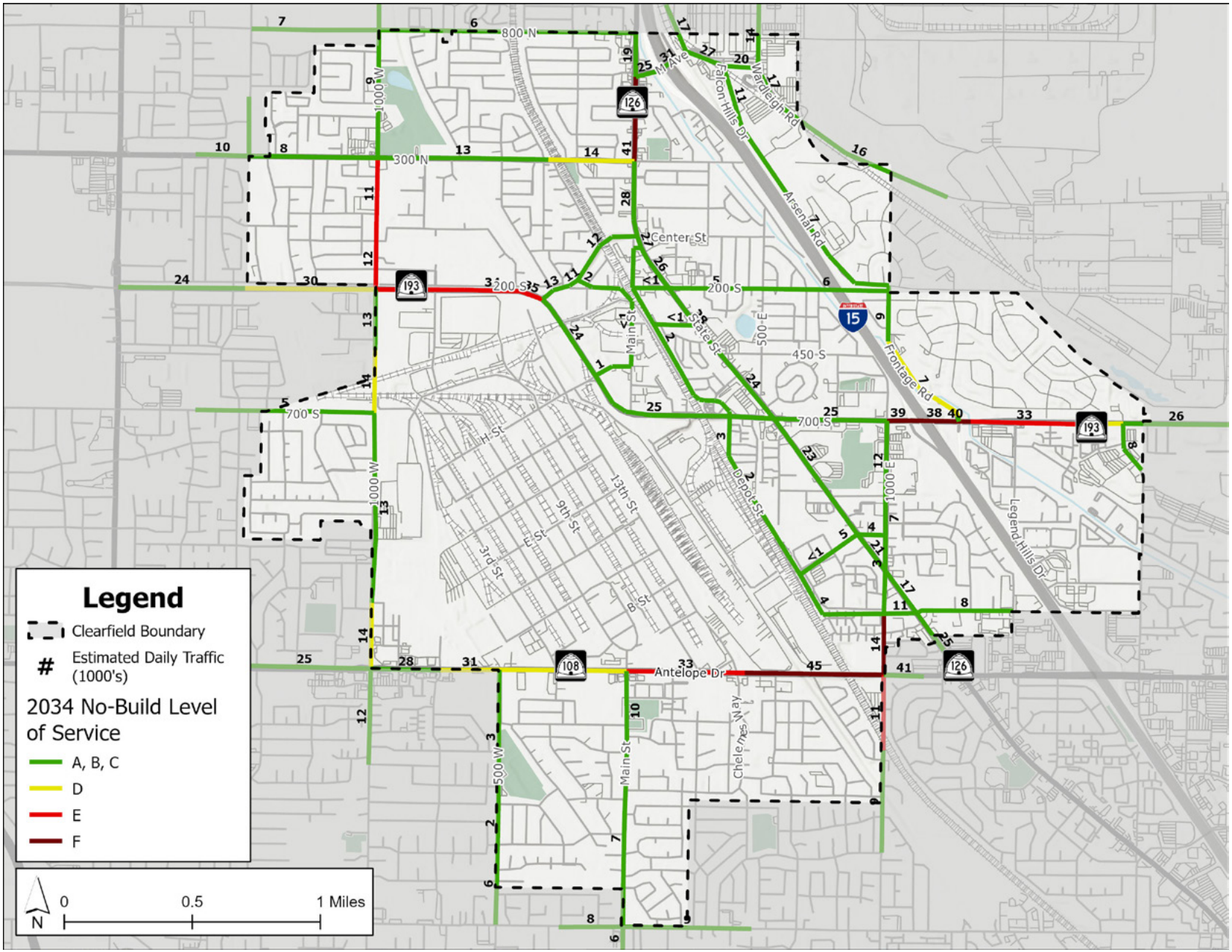


Figure 17: 2034 Roadway LOS and ADT— No-Build

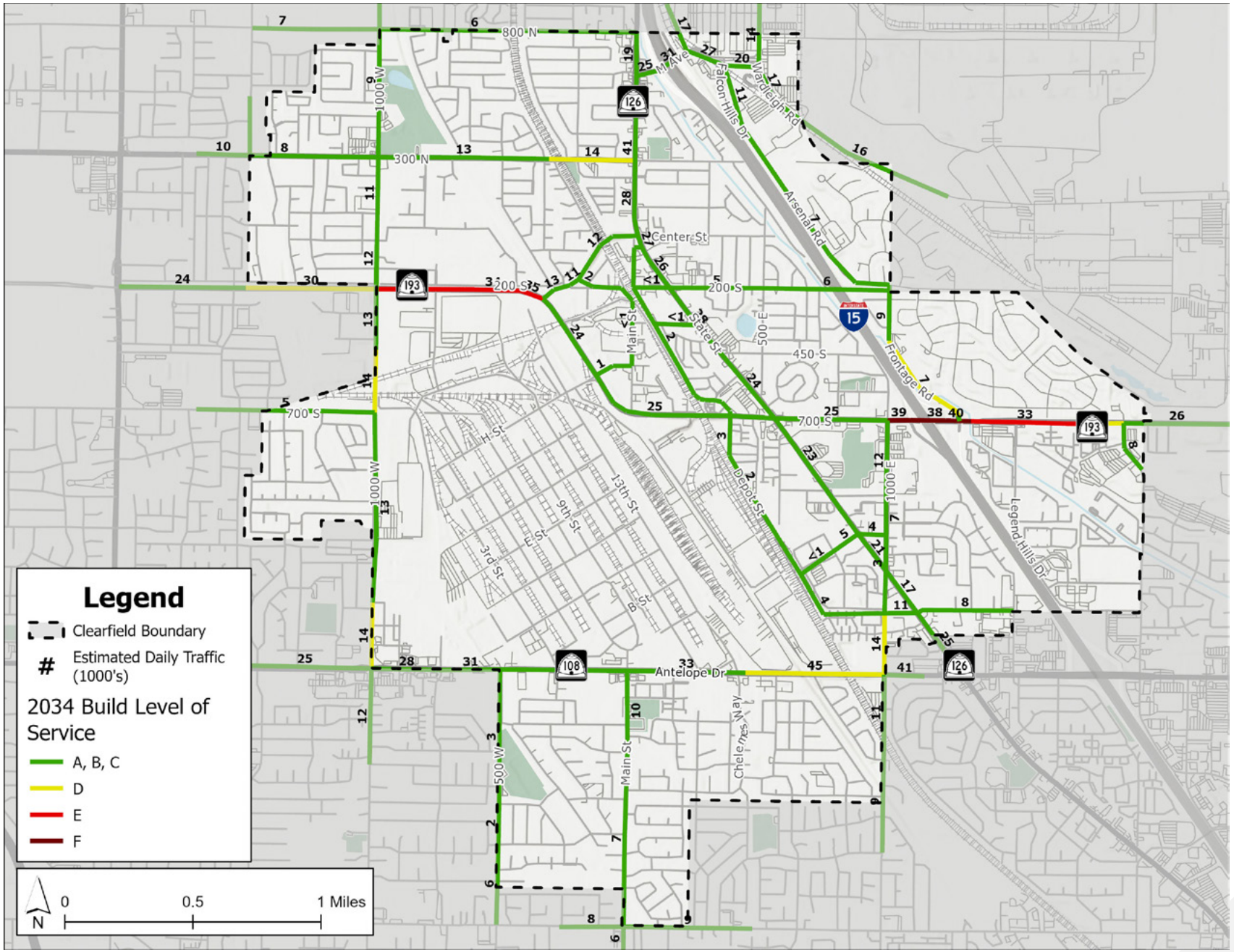


Figure 18: 2034 Roadway LOS and ADT—Build

H. FUTURE (2050) CONDITIONS

This section discusses the future (2050) roadway conditions in Clearfield City. Future roadway projects and network updates to the travel demand model are discussed. A no-build scenario LOS is completed. The LOS of each major road is analyzed, improvements are recommended, and a build scenario LOS analysis is completed.

2050 ROADWAY NETWORK

The local roadway network was updated for the 2050 analysis to include new roadways and grid connections that have been planned to occur within Clearfield during the planning window. WFRC lists the following projects in the RTP 2023–2050 under Phase 2 and #3:

- SR-193 Widening from 1000 West to I-15: A five-lane to seven-lane roadway widening project expected to take place between 2034 and 2043
- SR-193 Widening from I-15 to Fort Lane: A five-lane to seven-lane roadway widening project expected to take place between 2034 and 2043
- 1000 East Operations Project from SR-193 to Antelope Drive: An operations project expected between 2034 and 2043.
- Antelope Drive (SR-108) Operations Project from 2000 West to I-15: An operations project expected between 2034 and 2043
- 2200 West Railroad Structure: Railroad Crossing planned between 2034 and 2043
- I-15 Interchange at SR-193: An upgraded interchange project expected to occur between 2034 and 2043
- 1000 West Operations Project from 800 N to Bluff Road: An operations project expected between 2044 and 2050

As with the Phase 1 2034 analysis, new roadway connections included in these projects, and assumed in Phase 1, are assumed to be in place for the 2050 No-Build travel model analysis. Capacity expansion projects identified in the RTP and Clearfield identified projects are added to the 2050 Build scenario analysis.

The 2050 analysis also includes major UDOT roadway improvements outside of Clearfield, including the continuation of the West Davis Corridor and the planned I-15 interchange at 1800 North in Sunset.

2050 SOCIOECONOMIC DATA

The population in Clearfield is projected to be approximately 48,000 by 2050; approximately 8,000 new households are expected to accommodate this population growth.

Future land use growth in the 2050 travel model scenario was informed by the 2050 WFRC Version 9 land use forecasts and was refined to reflect permitted and planned projects and local planning expertise. Large, planned developments discussed above were incorporated into future land use estimates. Growth projections were reviewed with City staff and adjusted to reflect their best understanding of future growth patterns.

Figure 19 and **Figure 20** present the change in combined household and employment densities from 2024 to 2050 and the final 2050 scenario densities, respectively. As can be seen below, projected growth is concentrated along Arsenal Road/Falcon Hills Drive and the space between the Union Pacific Rail Alignment and I-15.

Figure 19: 2024 to 2050 Combined Household and Employment Density Growth

Figure 20: 2050 Combined Household and Employment Density

2050 NO-BUILD SCENARIO

The 2050 No-Build scenario provides an analysis of traffic conditions without project roadway improvements. **Figure 21** presents the 2050 No-Build LOS results obtained by applying LOS thresholds from **Table 3** to the projected 2050 No-Build traffic volumes from the travel demand modeling.

As shown below, the following roadway segments are expected to operate at unacceptable levels of service (LOS E or worse):

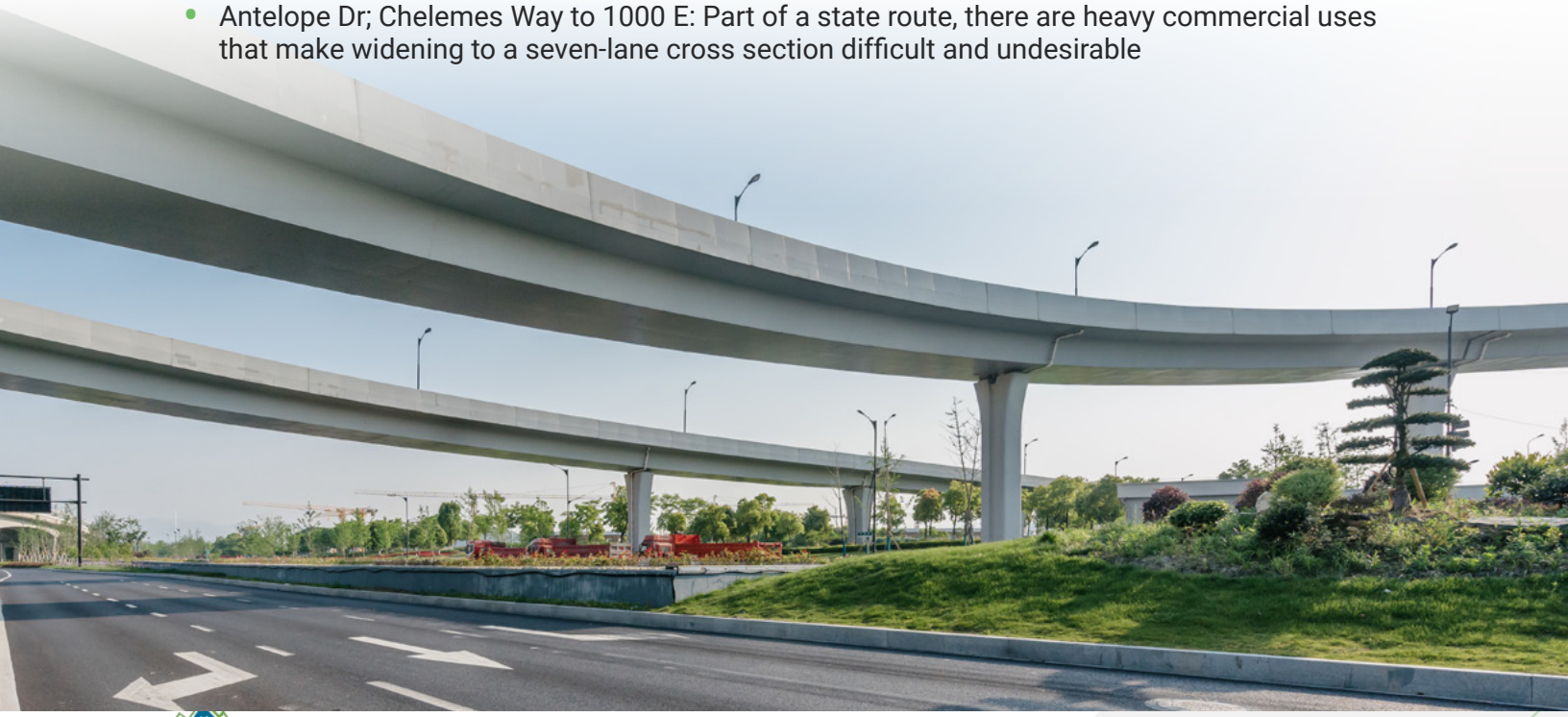
- 1000 West; Antelope Drive (SR-108) to 800 North
- 300 North; 200 West to Main Street
- SR-193; 1000 West to Center Street
- Center Street; SR-193 to 300 West
- State Street (SR-126); Center Street to 650 North/M Avenue
- Antelope Drive (SR-108); 1000 West to 1000 East
- 1000 East; 2200 South to 1450 South
- SR-193; 1000 East to University Park Boulevard
- Frontage Road; SR-193 to 200 South
- 1450 South; 1000 East to State Street (SR-126)

2050 BUILD SCENARIO

The 2050 Build scenario provides an analysis of traffic conditions after implementation of roadway projects identified to improve areas of unacceptable LOS from the 2050 No-Build scenario. Projects shown in Phase 2 (2034–2043) and Phase 3 (2043–2050) of **Table 4** and **Figure 23** of the Roadway Projects section are recommended to increase roadway capacity and accommodate projected 2050 traffic volumes. The 2050 Build scenario LOS is shown below in **Figure 22**.

As shown in the 2050 Build scenario, all roadways are expected to operate at an acceptable LOS D or higher with the exception of the following roadways which are expected to operate at LOS E:

- SR-193; near Center Street: Part of a state route, widening beyond a seven-lane cross section isn't recommended for an arterial
- Antelope Dr; Chelemes Way to 1000 E: Part of a state route, there are heavy commercial uses that make widening to a seven-lane cross section difficult and undesirable



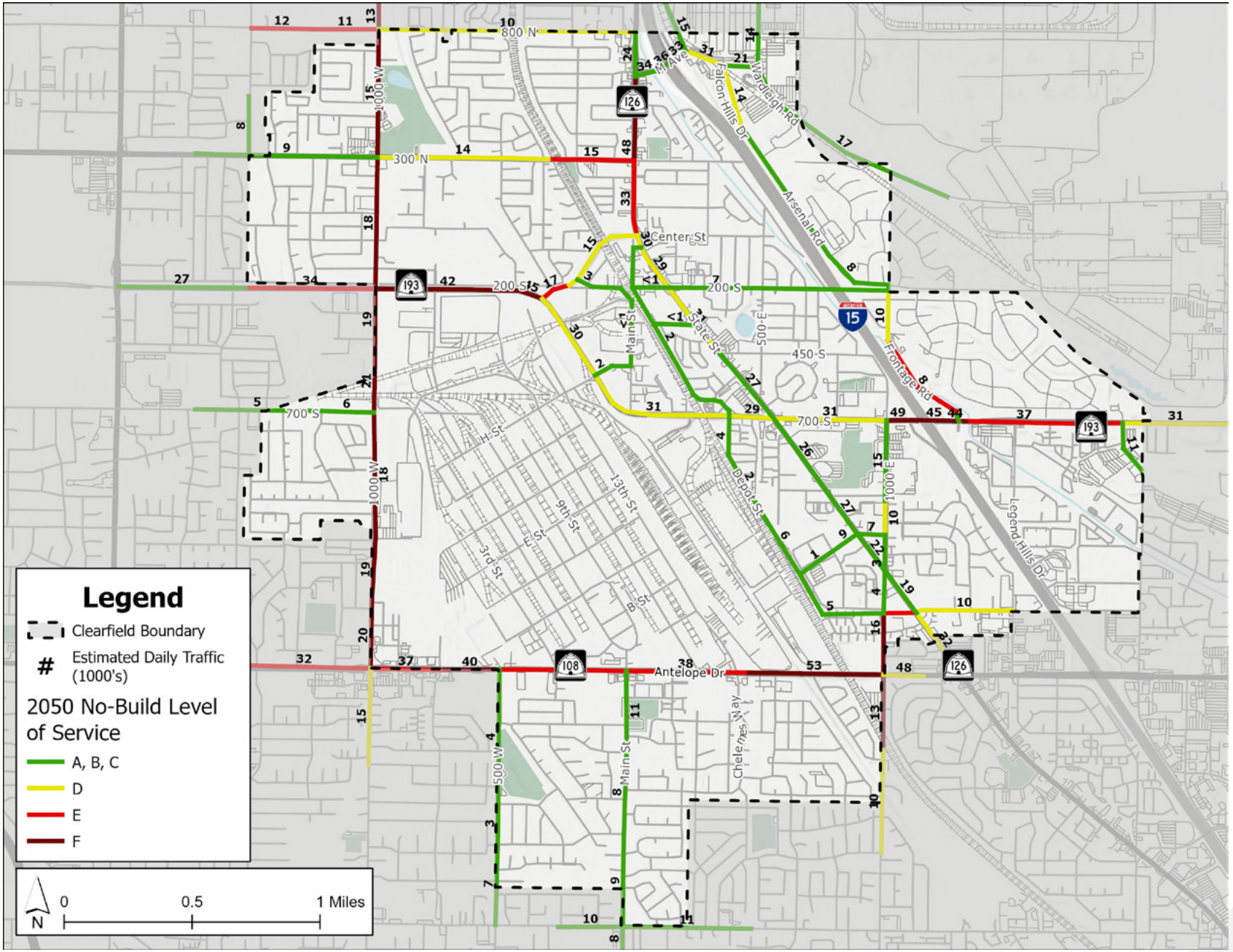


Figure 21: Future (2050) LOS and ADT—No-Build

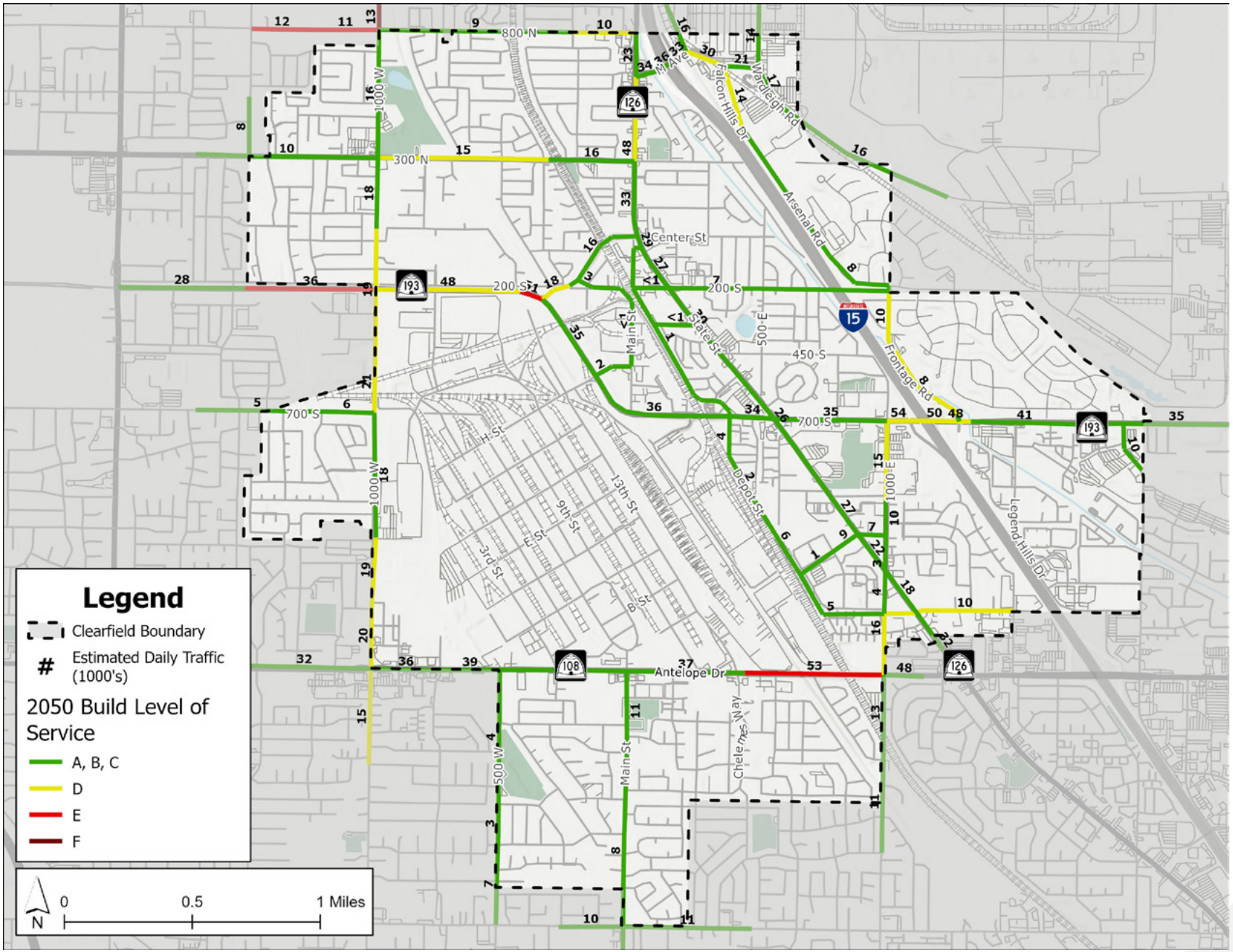


Figure 22: Future (2050) LOS and ADT—Build

I. ROADWAY AND INTERSECTION PROJECTS

Figure 23 below summarizes the planned roadway and intersection projects that were discussed previously in the 2034 and 2050 travel demand modeling analysis and that are necessary to increase roadway capacity and accommodate future development. Project numbers listed in **Table 4, Table 5**, and **Figure 23** include the project phase followed by an additional number or letter. These numbers are for identification only and are no indication of project prioritization. WFRC projects listed in the RTP 2024–2050 guided the initial selection of projects added to the Build scenario analysis. Roadway projects are categorized as either being "new roadway", "operational improvements", "widening", or "restriping" projects and indicate the proposed number of lanes, which correspond with typical cross sections shown above and defined in the most recent Clearfield Standard Drawings.

Signal warrant analyses are to be performed prior to installing a traffic signal. The intersection improvement projects provided in the TMP are high-level in nature and, thus, further analysis should be performed before initiating any projects to add additional turn lanes.

Intersection improvement scopes for the following projects are described as:

- **1-B1, 1-B2, 1-B3; Intersection Improvements - State Street from Station Boulevard to 1450 South:** These projects will need to be constructed in close succession. The signal at 1000 East will be removed and replaced with a raised median to enforce left-turn prohibitions into and out of the side streets. This will support operations at new signals, one at the Station Boulevard entrance to the Transit-Oriented Development district and one at 1450 South. These projects cannot be constructed until development in the station area progresses and traffic volumes at Station Boulevard meet signal warrants.
- **2-B; SR-193 & Center Street:** Add an additional left-turn pocket on Center Street in the southwest-bound direction to increase capacity.
- **2-C; 1450 South & 1000 East:** Projected volumes for 2044 exceed the typical capacity for the current configuration. Further analysis will be needed to determine the best configuration and type of control for this intersection.
- **3-A, 3-B; 1000 West & 300 North, 800 North:** Add right-turn pockets and dedicated left-turn phasing to the northbound and southbound approaches on 1000 West to support the operational improvements planned for the roadway.
- **3-C; Center Street & State Street:** Add an additional left-turn pocket to Center Street in the eastbound direction.
- **3-D; 300 North & State Street:** Add a right-turn picket to 300 North in the eastbound direction.

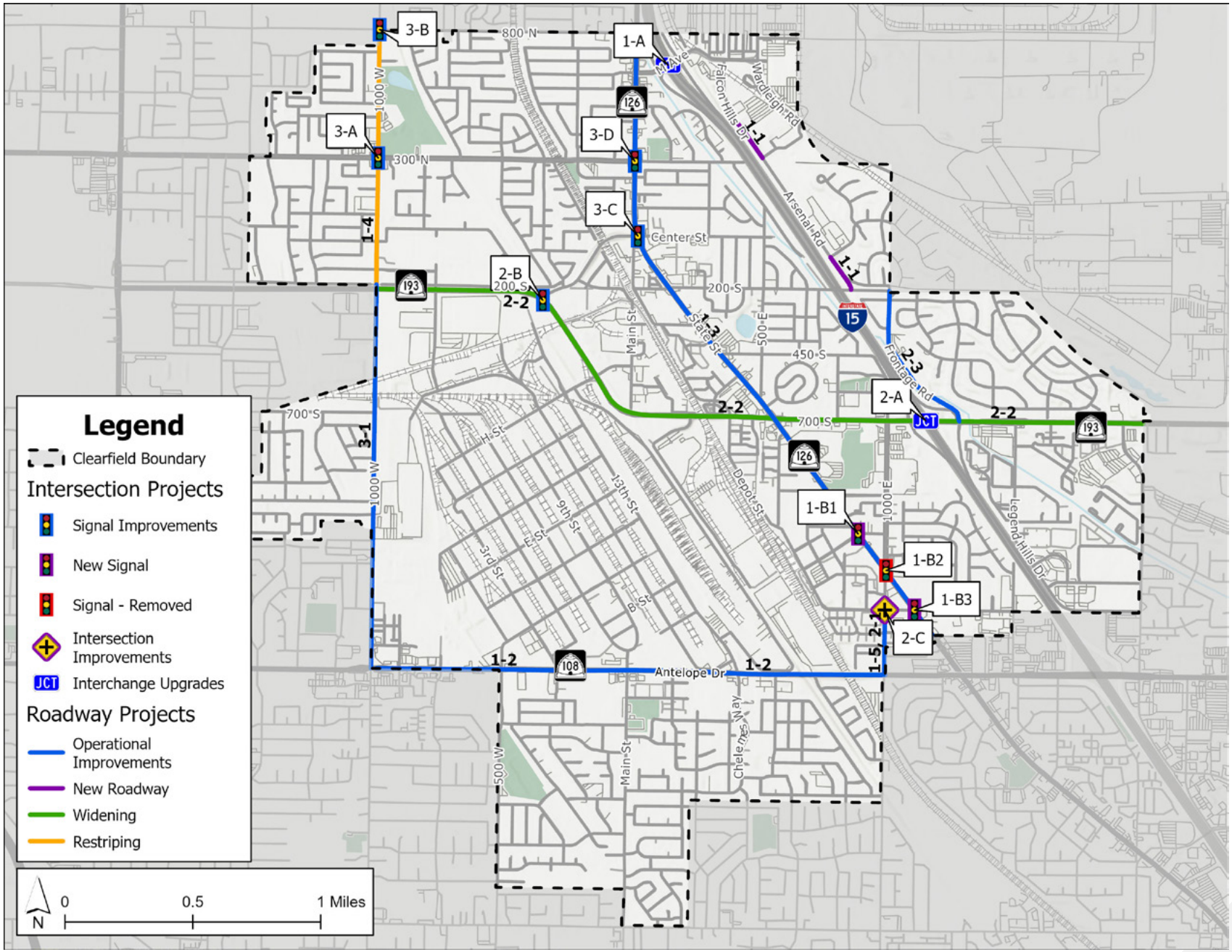


Figure 23: Roadway and Intersection Projects

Table 4: Future Roadway Projects

Project Number	Description	Responsibility	Improvement Scope	# of Lanes	
				2024	Proposed
Phase #1 (2024-2033)					
1-1	Falcon Hills Dr Connections	MIDA	New Roadway	0	3
1-2	Antelope Drive (SR-108) Operations	UDOT	Operational Improvements	5	5
1-3	State Street (SR-126) Operations	UDOT	Operational Improvements	5	5
1-4	1000 West Restriping (North of SR-193)	WFRC, Clearfield	Restriping	2	3
1-5	1000 East Restriping (South of 1450 S)	Clearfield, WFRC, UDOT	Restriping	2	3
Phase #2 (2034-2043)					
2-1	1000 East Operations (South of 1450 S)	Clearfield, WFRC, UDOT	Operational Improvements	3	3
2-2	SR-193 Widening (With Project 2-B)	UDOT	Widening	5	7
2-3	Frontage Road Operational Improvements	Clearfield	Operational Improvements	2	2
Phase #3 (2044-2050)					
3-1	1000 West Operations (South of SR-193)	WFRC, Clearfield	Operational Improvements	3	3

Table 5: Future Intersection Projects

Project Number	Description	Responsibility	Improvement Scope	Estimated Cost
Phase #1 (2024-2033)				
1-A	I-15 Interchange — 650 North	UDOT	Interchange Upgrades	$100,000,000
1-B1	Station Boulevard & State St Signal	Clearfield, UDOT	New Signal	$820,000
1-B2	1000 E to RIRO with Raised Median	Clearfield, WFRC, UDOT	Signal - Removed	$750,000
1-B3	1450 S & State St Signal and Turn Lanes	Clearfield, UDOT	New Signal	$1,200,000
Phase #2 (2034-2043)				
2-A	I-15 Interchange — SR-193	UDOT	Interchange Upgrades	$100,000,000
2-B	SR-193 and Center St Dual SB LTL (With Project 2-2)	UDOT	Signal Improvements	$950,000
2-C	1450 S & 1000 E Intersection Improvements	Clearfield	Intersection Improvements	$1,500,000
Phase #3 (2044-2050)				
3-A	1000 W and 300 N RTL, Left Turn Phasing	Clearfield	Signal Improvements	$1,200,000
3-B	1000 W and 800 N RTL, Left Turn Phasing	Clinton, Clearfield	Signal Improvements	$1,500,000
3-C	Center St and State St (SR-126) Dual EB LTL	Clearfield, UDOT	Signal Improvements	$2,100,000
3-D	300 N Dual EB LTL @ State Street	Clearfield, UDOT	Signal Improvements	$1,550,000

III. PUBLIC TRANSIT

A. EXISTING TRANSIT SERVICE

UTA is the primary public transit service provider along the Wasatch Front, operating six bus routes and one commuter rail line that pass through Clearfield. The FrontRunner station is Clearfield's busiest transit stop, averaging 661 weekday boardings at this stop alone. Bus ridership in the city is relatively low compared to the region, with the highest volumes also at the FrontRunner station. State Street stops have the second highest bus ridership in the city, averaging 11–20 weekday boardings. Overall, ridership remains below pre-pandemic levels, with stop-level boardings peaking at 1,350 for FrontRunner and 497 for buses serving the station in 2019 , compared to today's averages of 661 and 388 respectively. Service frequency, route-wide, and route level ridership details for each route are provided in **Table 6**.

Most routes serving Clearfield operate on regular 30–60-minute frequencies throughout the day, except for the regional commuter Route 472, which operates with three AM and PM runs. Note that Route 472 does not currently make stops in Clearfield, instead keeping to I-15. All other UTA routes serving Clearfield include a stop at the Clearfield FrontRunner Station. As the highest capacity and most regional service, FrontRunner garners an average daily ridership of more than 17,000. The Ogden-SLC Intercity route (Route 470) is the second highest-ridership route in Clearfield, with approximately 2,900 boardings. **Figure 24** shows the routes that currently run through Clearfield, including stop locations and ridership information.

Table 6: UTA Routes Serving Clearfield City

Route Number	Route Name	Frequency	Route Type	Avg Weekday Boardings (Route-Wide) [1]
470	Ogden-SLC Intercity	30 min	Commuter Bus	2,934
472	Riverdale-SLC Express	30 min peak	Commuter Bus	109
626	West Roy – Clearfield Station	20-60 min	Local Bus	214
627	WSU Davis – DTC	30-90 min	Local Bus	339
628	Midtown Trolley	30 min	Local Bus	500
640	Layton Hills Mall – WSU Ogden	30 min	Local Bus	787
750	FrontRunner	30-60 min	Commuter Rail	17,245
Source: UTA, 2024				

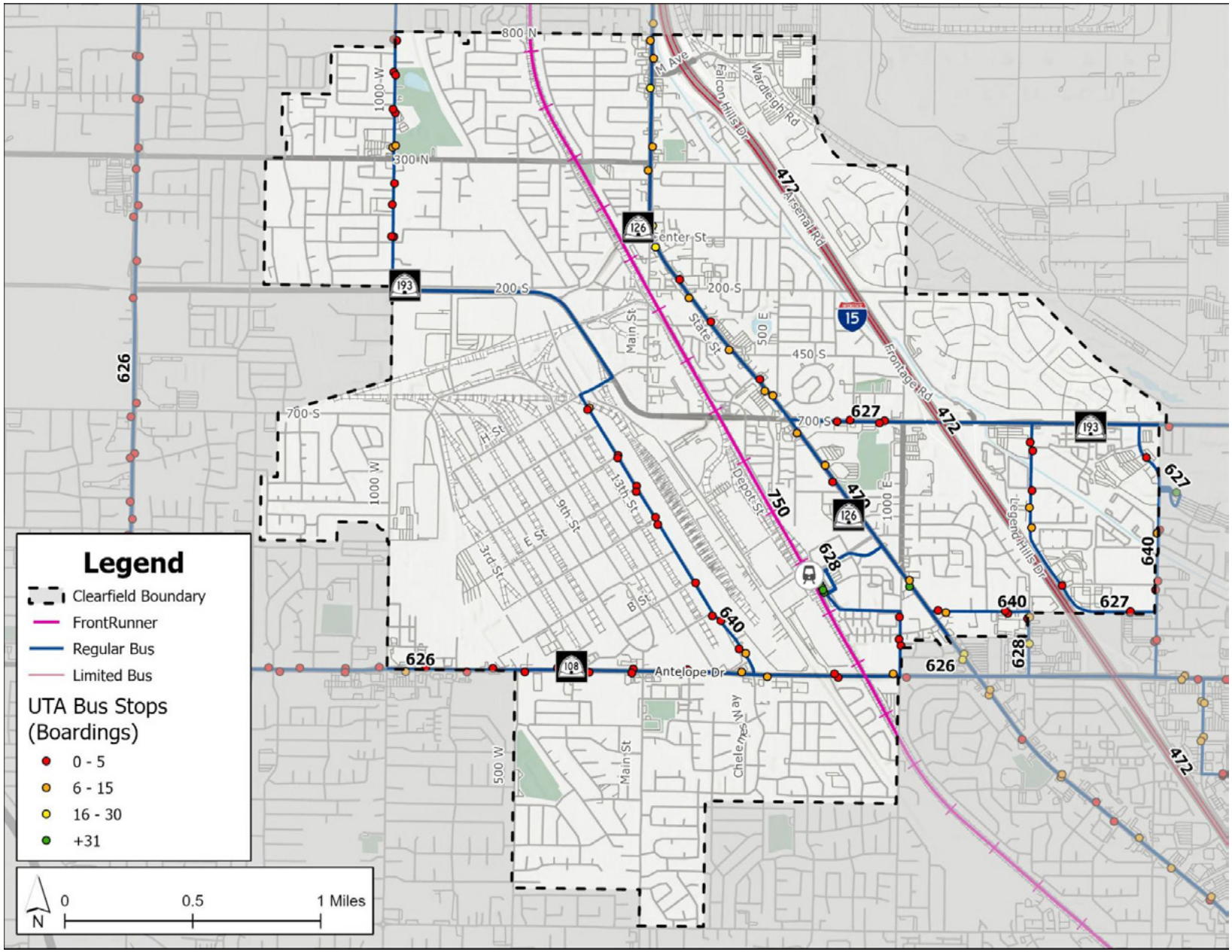


Figure 24: Clearfield Existing Transit

Source: UTA & WFRC

B. FUTURE TRANSIT SERVICE AND PROJECTS

UTA recently finalized its new Five-Year Service Plan that lays out service changes expected by 2029. Changes impacting service within Clearfield City are shown in **Table 7**. The WFRC RTP also documents planned future transit improvements in Clearfield that go beyond this 5-year horizon. Key changes identified in the RTP include the double tracking and electrification of the FrontRunner Commuter Rail and the development of two other high-frequency bus routes (Route 600 along Main Street and Route 629 between Roy and HAFB). Both of these planned high-frequency routes would have 15-minute frequency or better and connect to the Clearfield FrontRunner Station. **Figure 25** summarizes all planned transit service changes within the City through 2050, including frequency updates and new routes. **Table 8** summarizes these major changes by phase.

Table 7: Changes to UTA Routes Serving Clearfield Proposed in 5-Year Service Plan

Route Number	Route Name	Status	Alignment
470	Ogden-SLC Intercity	Discontinued	-
472	Riverdale-SLC Express	Unchanged	-
600	Main Street Weber/Davis	New Route	Service between Farmington and Ogden, serving Clearfield's FrontRunner Station.
626	West Roy – Clearfield Station	Discontinued	-
627	WSU Davis – DTC	Adjusted	Serving Main Street between Clearfield Station and Layton Station.
628	Midtown Trolley	Discontinued	-
640	Layton Hills Mall – WSU Ogden	Adjusted	Ending at Roy Station and incorporating service to Layton Station that was previously provided by 628.
642	North Davis Neighborhood Connector	New Route	Connecting the Clearfield Station to Roy Station via 2000 West.
750	FrontRunner	Unchanged	-

Source: UTA

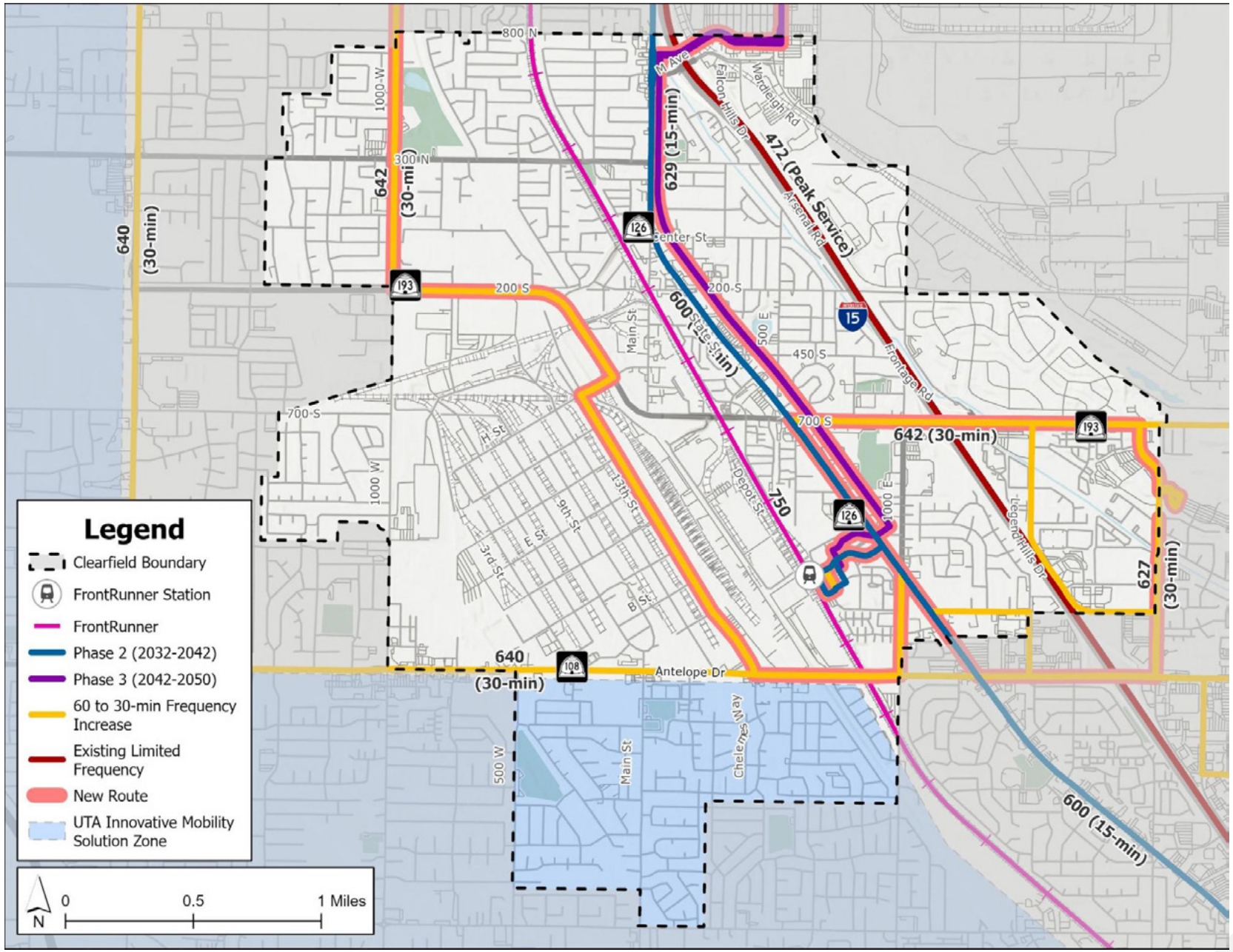


Figure 25: Clearfield Future Transit Facilities

Source: UTA & WFRC

Table 8: Future Transit Projects by Phase

Project Number	Description	Improvement Scope
Phase # 1 (2024-2033)		
T1-1	Farmington Innovative Mobility Zone	New Mobility Zone
T1-2	Route 642, North Davis Neighborhood Connector	New route, up to 30-min freq
T1-3	FrontRunner Forward Investment Package I	Doubletracking
T1-4	Hill AFB Transit Connectivity Study	Study
Phase #2 (2034-2043)		
T2-1	Route 600, Main Street	Freq increase to 15-min or less
T2-2	FrontRunner Forward Investment Package II	Doubletracking
Phase #3 (2044-2050)		
T3-1	Route 629, Roy - Hill AFB, Clearfield	New route,15-min freq or less
T3-2	Transit Connections to Hill AFB	New route
Unconstrained Vision		
TU-1	Route 626, West Roy - Clearfield Station	Freq increase up to 30-min
TU-2	Route 627, WSU Davis - DTC	Freq increase up to 30-min
TU-3	Route 628, Midtown Trolley	Freq increase up to 30-min
TU-4	Route 640, WSU-WSU Davis	Freq increase up to 30-min

IV. ACTIVE TRANSPORTATION

A. EXISTING FACILITIES

Active transportation encompasses all human-powered modes of travel including walking, biking, and the use of mobility-assistive devices. This section provides an overview of the major existing and proposed bicycle and pedestrian facility types in Clearfield. Existing facilities tracked by the City are mapped in **Figure 26**, primarily comprising multi-use paths. The Clearfield Canal Trail, Denver & Rio Grande Western Rail Trail, and Syracuse Trail represent the most regionally significant active transportation facilities in the city, providing fully paved and separated facilities for users. In addition to these facilities, the City maintains sidewalks on most of its major arterial and collector roadways.

Figure 27 and **Figure 28** illustrate the most recent (2024) update of the WFRC Pedestrian and Bicycle Demand Indices in Clearfield. Each index is an estimate of latent demand (not necessarily usage) in a given area based on land use, population and employment densities, demographic information, and built environment factors such as the accessibility of the existing street network. Latent demand in this case refers to the likelihood that people would walk or bike in a certain location if active transportation infrastructure existed. Roughly, the estimate provides a glimpse of the walkability and bikeability in a given area. According to the estimate, along with neighborhoods south of Antelope Drive alongside Main Street, Downtown Clearfield and the surrounding neighborhoods host the largest concentration of high-scoring areas. On the other hand, the Freeport Center represents the lowest-scoring area.

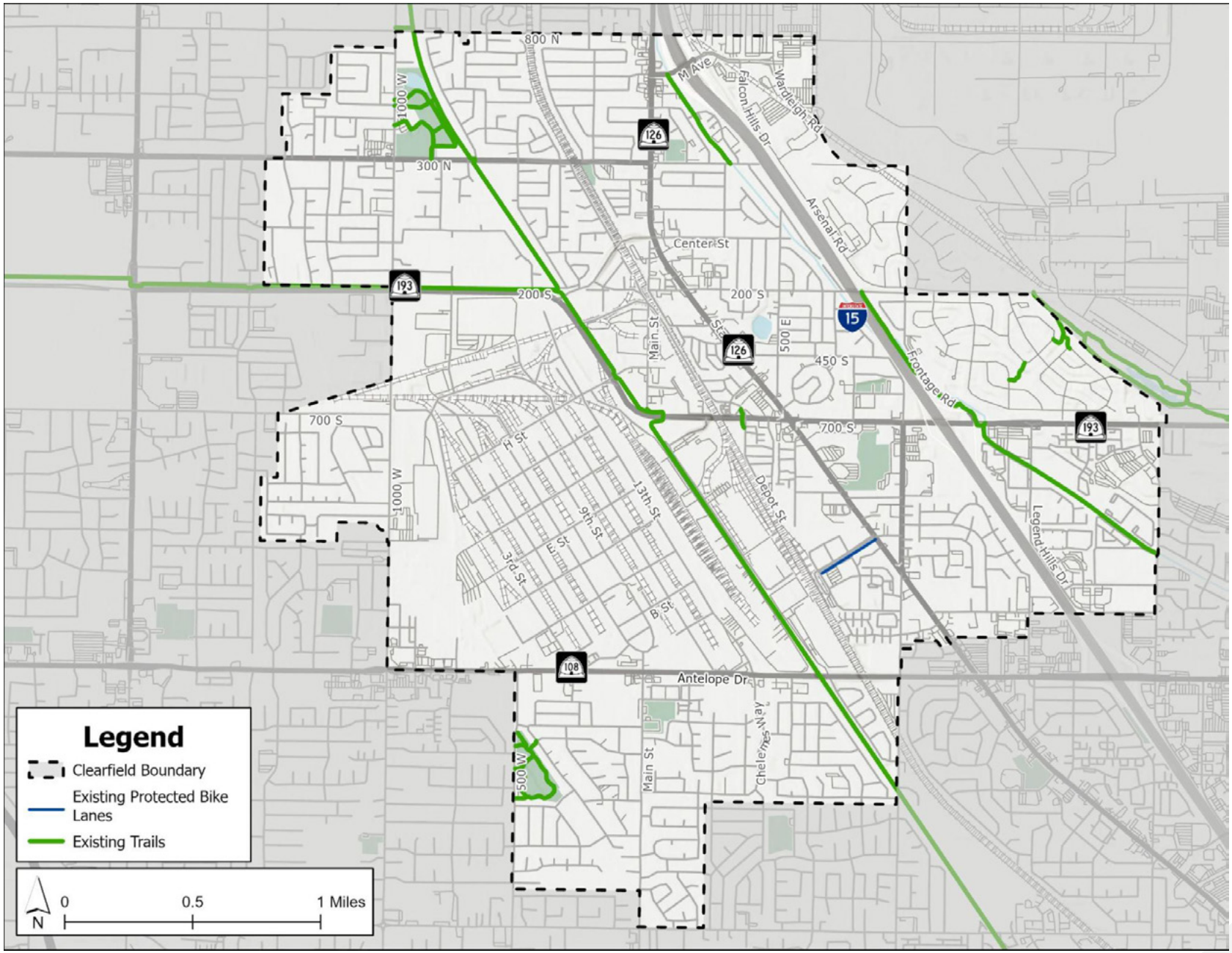


Figure 26: Existing Clearfield Active Transportation Facilities

Source: UTA & WFRC

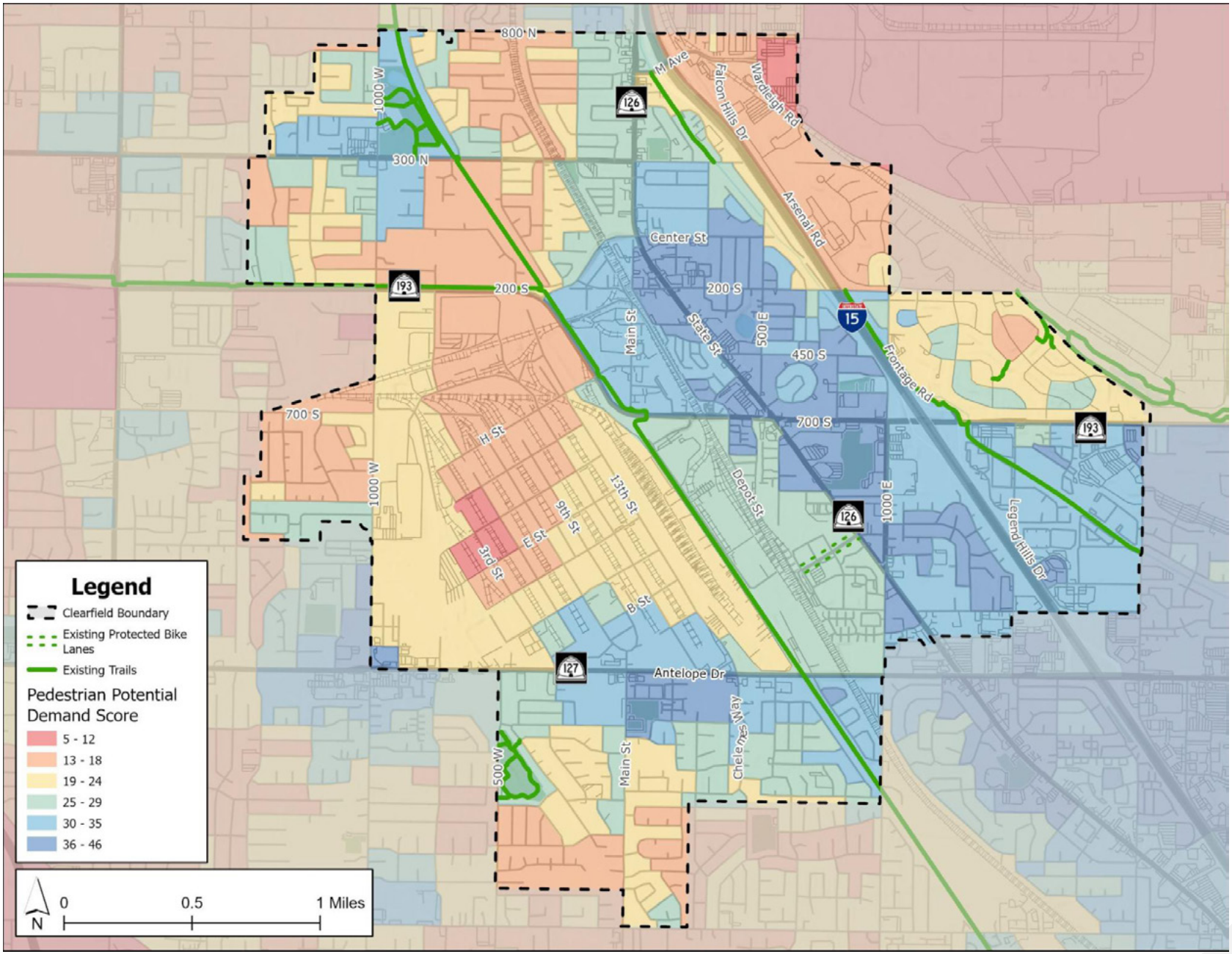


Figure 27: Clearfield Pedestrian Potential Demand Score

Source: UTA & WFRC

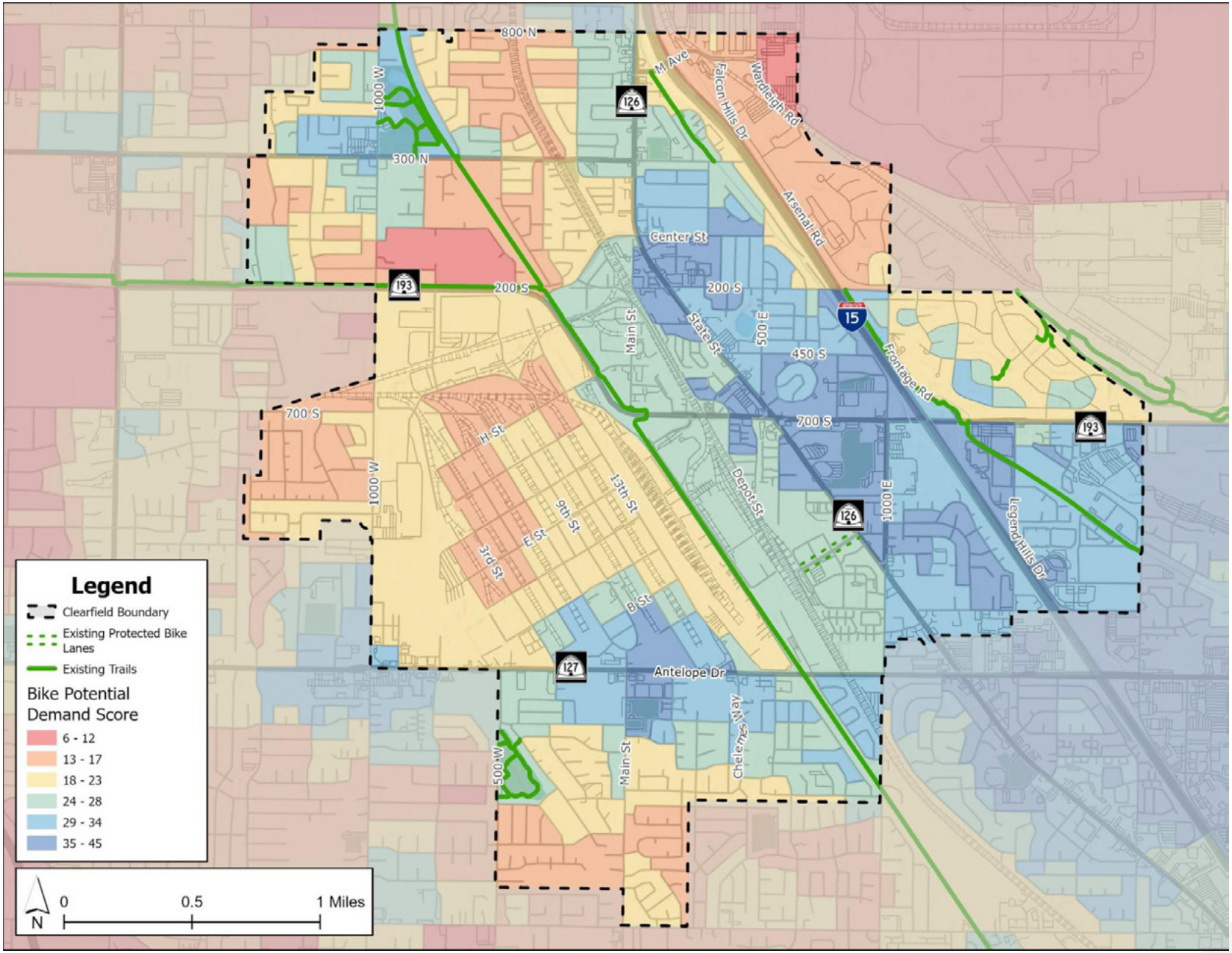


Figure 28: Clearfield Bike Potential Demand Score

Source: UTA & WFRC

B. FUTURE PROJECTS

Figure 29 shows existing active transportation infrastructure in Clearfield alongside the City's planned active transportation projects. Though several robust active transportation facilities exist in Clearfield, there are several regional gaps evident in the overall City network, most visibly along the Canal Trail. The City's project list includes projects that address these gaps, such as the 3-Gate Trail (intended to connect the Canal Trail to the wider region) and Antelope Drive Shared-Use Path (under construction as of Fall 2024). The list also includes projects such as bike lanes, buffered bike lanes, and both grade-separated and at-grade crossings for roadways and railways. **Table 9** shows proposed active transportation crossing facilities broken out by phase, while **Table 10** shows proposed path facilities.

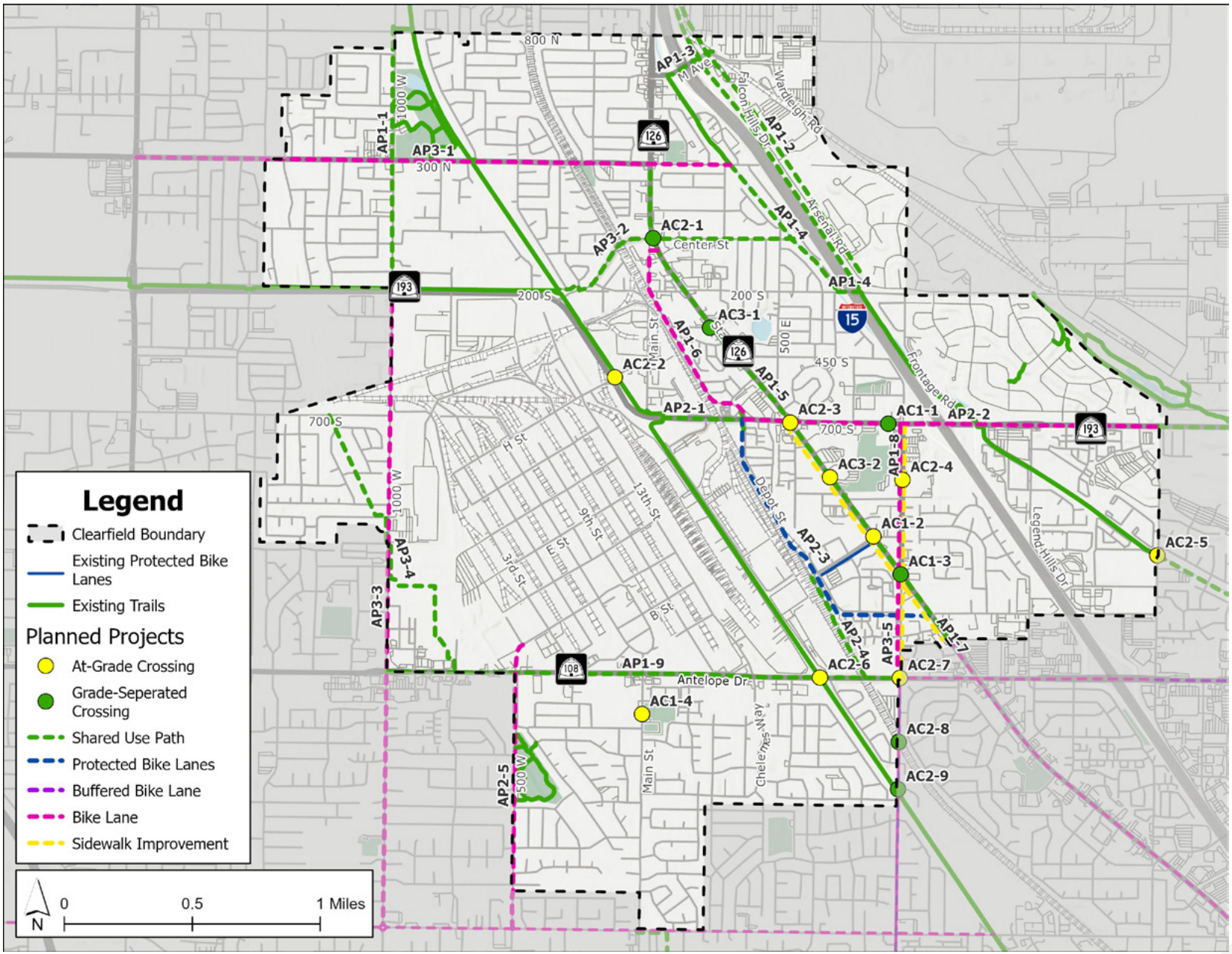


Figure 29: Clearfield Active Transportation Network (Existing & Future Facilities)

Source: WFRC & UGRC & Clearfield Station Area Plan

Table 9: Active Transportation Crossing Projects by Phase

Project Number	Description	Responsibility	Improvement Scope	Estimated Cost
Phase # 1 (2024-2033)				
AC1-1	1000 East Grade-Separated Crossing	UDOT, Clearfield	Grade-Separated	$2,433,306
AC1-2	1150 South At-Grade Crossing	Developer, Clearfield	At-Grade	$2,400,000
AC1-3	State Street & 1000 East Crossing	UDOT, Clearfield	Grade-Separated	-
AC1-4	Antelope Elementary Crossing	Clearfield	At-Grade	-
Phase #2 (2034-2043)				
AC2-1	State Street & Center Crossing	UDOT, Clearfield	Grade-Separated	-
AC2-2	Denver & Rio Grande Western Rail Trail At-Grade Crossing	WFRC, Clearfield	At-Grade	$2,400,000
AC2-3	State Street & 700 South Crossing Improvement	UDOT, Clearfield	At-Grade	-
AC2-4	1000 East and High School Crossing Traffic Calming Improvements	Clearfield	At-Grade	-
AC2-5	Davis Weber Canal Trail Crossing		At-Grade	$360,189
AC2-6	SR-108 / Antelope Drive At-Grade Crossing	UDOT, Clearfield	At-Grade	$360,000
AC2-7	SR-108 / Antelope Drive At-Grade Crossing	UDOT, Clearfield	At-Grade	$360,000
AC2-8	2200 West Grade-Separated Crossing	WFRC, Clearfield	Grade-Separated	$8,940,000
AC2-9	D&RGW Rail Trail Crossing	WFRC, Clearfield	Grade-Separated	$8,938,619
Phase #3 (2044-2050)				
AC3-1	State Street & 450 S Crossing	UDOT, Clearfield	Grade-Separated	-
AC3-2	State Street & 1000 South Crossing Traffic Calming Improvements	UDOT, Clearfield	At-Grade	-

Table 10: Active Transportation Path Projects by Phase

Project Number	Description	Responsibility	Improvement Scope	Estimated Cost
Phase # 1 (2024-2033)				
AP1-1	1000 West Shared Use Path	Clearfield	Shared Use Path	-
AP1-2	3 Gates Trail Shared Use Path	WFRC	Shared Use Path	$10,950,000
AP1-3	650 North Shared Use Path	WFRC, Clearfield	Shared Use Path	$1,200,000
AP1-4	Clearfield Canal Extension	Clearfield	Shared Use Path	-
AP1-5	State Street / Main Street Shared Use Path	UDOT, Clearfield	Shared Use Path	$340,000
AP1-6	Depot Street Bike Lane	Developer	Bicycle Lane	$230,000
AP1-7	State Street Sidewalk Improvements	Developer, Clearfield	Sidewalk	-
AP1-8	1000 East Sidewalk Improvements	Clearfield	Sidewalk	-
AP1-9	Antelope Drive Shared Use Path	UDOT, Clearfield	Shared Use Path	$2,980,000
Phase #2 (2034-2043)				
AP2-1	700 South Shared Use Path Spur	UDOT, Clearfield	Shared Use Path	-
AP2-2	700 South Shared Use Path	UDOT, Clearfield	Shared Use Path	-
AP2-3	Station-Area Depot Street Protected Bike Lanes	Developer	Bicycle Lane	-
AP2-4	Clearfield FrontRunner Trail Shared Use Path	Clearfield, UTA	Shared Use Path	$360,000
AP2-5	500 West Bike Lane	Clearfield	Bicycle Lane	$250,000
Phase #3 (2044-2050)				
AP3-1	300 North Bike Lane	Clearfield	Bicycle Lane	$2,560,000
AP3-2	Center Street / 200 East Shared Use Path	Clearfield	Shared Use Path	$160,000
AP3-3	1000 West Bike Lane	Clearfield	Bicycle Lane	$1,070,000
AP3-4	Powerline Trail Connection	Clearfield	Shared Use Path	-
AP3-5	1000 East Bike Lane	Clearfield	Bicycle Lane	$320,000

V. CITY TRANSPORTATION SYSTEM MANAGEMENT

A. PURPOSE

The City Transportation System Management section discusses best practices to ensure the City develops and maintains a safe and efficient transportation network. This section includes the following:

- Transportation safety analysis
- Access management standards
- Connectivity
- Freight
- Traffic impact study standards

B. TRANSPORTATION SAFETY ANALYSIS

A safety analysis was performed for all roadways within Clearfield City. The most recent six full years of available crash data (January 1, 2019 to December 31, 2024) from UDOT Traffic & Safety were used to perform the analysis. Crashes that occurred on I-15 are excluded from this analysis. Crash patterns were analyzed within Clearfield City to develop project and policy recommendations.

In total there were 2,725 crashes reported within Clearfield City between January 1, 2019 and December 31, 2024. Of these, 71 (2.60%) involved suspected serious injuries and seven (0.26%) were fatal. **In 2024 there were eleven suspected serious injury crashes and one fatal crash. Figure 30** shows total crashes and severe crashes year-to-year. There is an upward trend in total crashes since 2020. There has been a slight decrease in severe crashes since 2022.

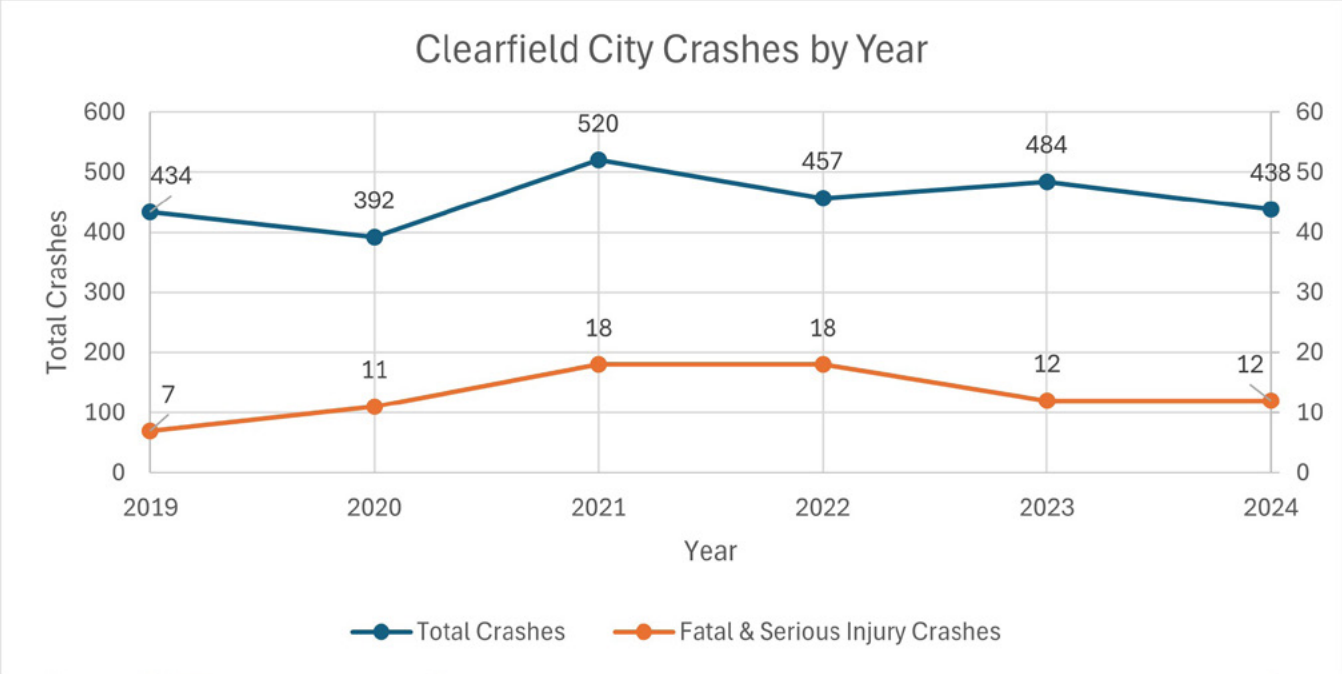


Figure 30: 2019 to 2023 Clearfield City Crash Trends

Comparisons between crash rates in Clearfield City and Davis County as a whole are listed in **Table 11**. Crashes that occurred on I-15 are excluded from all parts of the analysis.

Table 11: Percent of Crashes (2019–2024, Excluding I-15)

Category	Clearfield City	Davis County
Total Crashes	2,725	23,432
Percent Fatal & Serious Injury	2.86%	2.46%
Pedestrian or Cyclist Involved	4.33%	3.14%
Intersection Related	57.68%	54.29%

Overall, crash trends in Clearfield City were consistent with other cities in Davis County. About one percent more crashes in Clearfield involved a pedestrian or bicyclist than for the county on average, though the less developed areas of in the county likely skew the average lower because of the lower active transportation usage. The proportion of crashes that were intersection related was over three percent higher in Clearfield than it was for the county as a whole. Crashes in Clearfield represent approximately 12% of all crashes in the County.

Crash severity is reported according to a five-category scale ranging from property damage only to fatality. UDOT, like many other agencies, has taken on the goal of Zero Fatalities. This zero fatalities approach is guided by the Safe System Approach. The Safe System Approach consists of the five elements summarized in **Figure 31**.

Figure 31: The Safe System Approach

Given these goals and the significant cost of severe crashes (both fatal and suspected serious injury), these crash types are the focus of the analysis for project and policy recommendations.

Figure 32 is a heatmap showing the density of crashes at each point in Clearfield City. Figure 33 plots the serious injury and fatal crashes, including highlights for those crashes that occurred on City-owned roadways. **From 2019 to 2024 there were seven fatal crashes and 71 crashes with suspected serious injuries. Of these 77 severe crashes, 55 occurred on UDOT roadways and 23 occurred on Clearfield City roadways.**

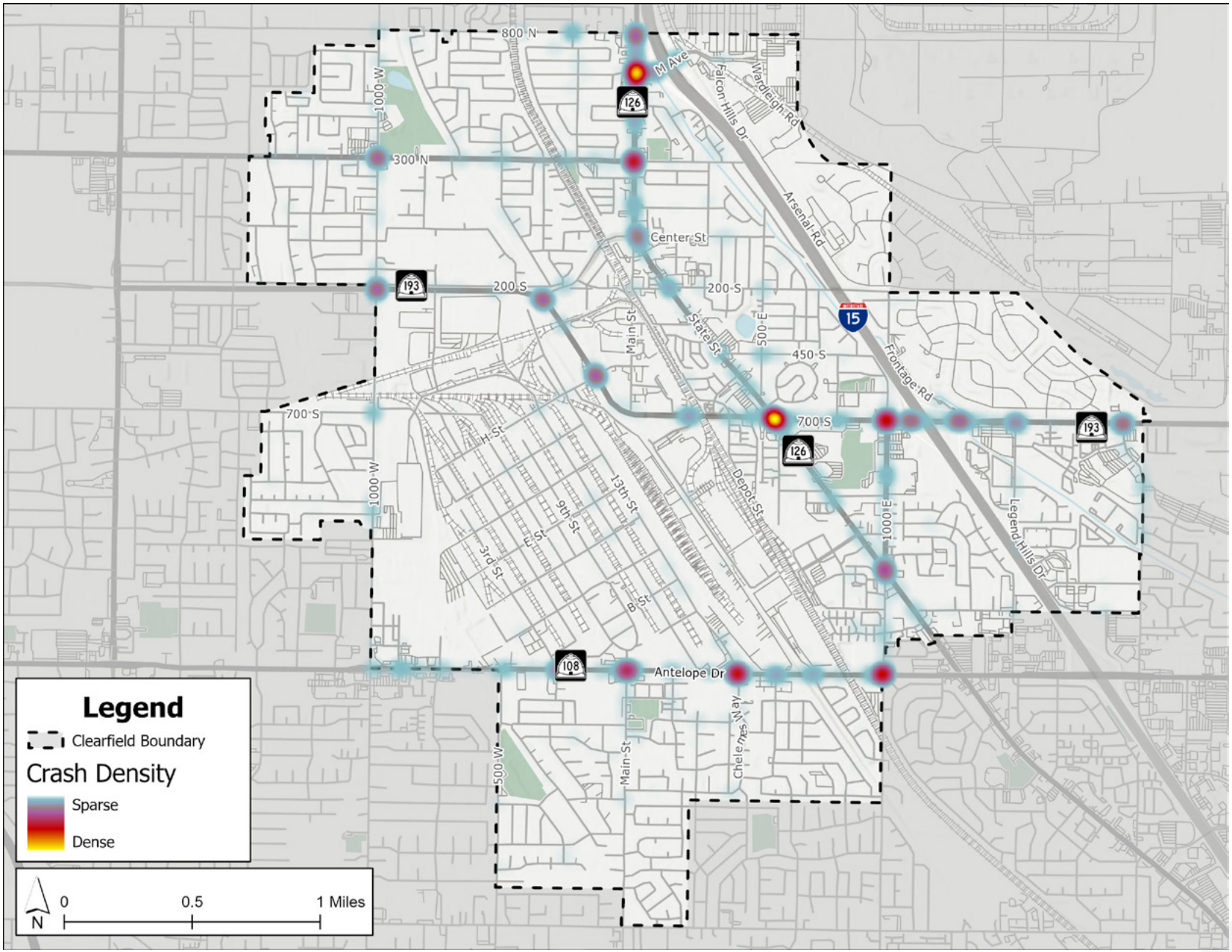


Figure 32: Heat Map of Crashes in Clearfield (2019–2023)

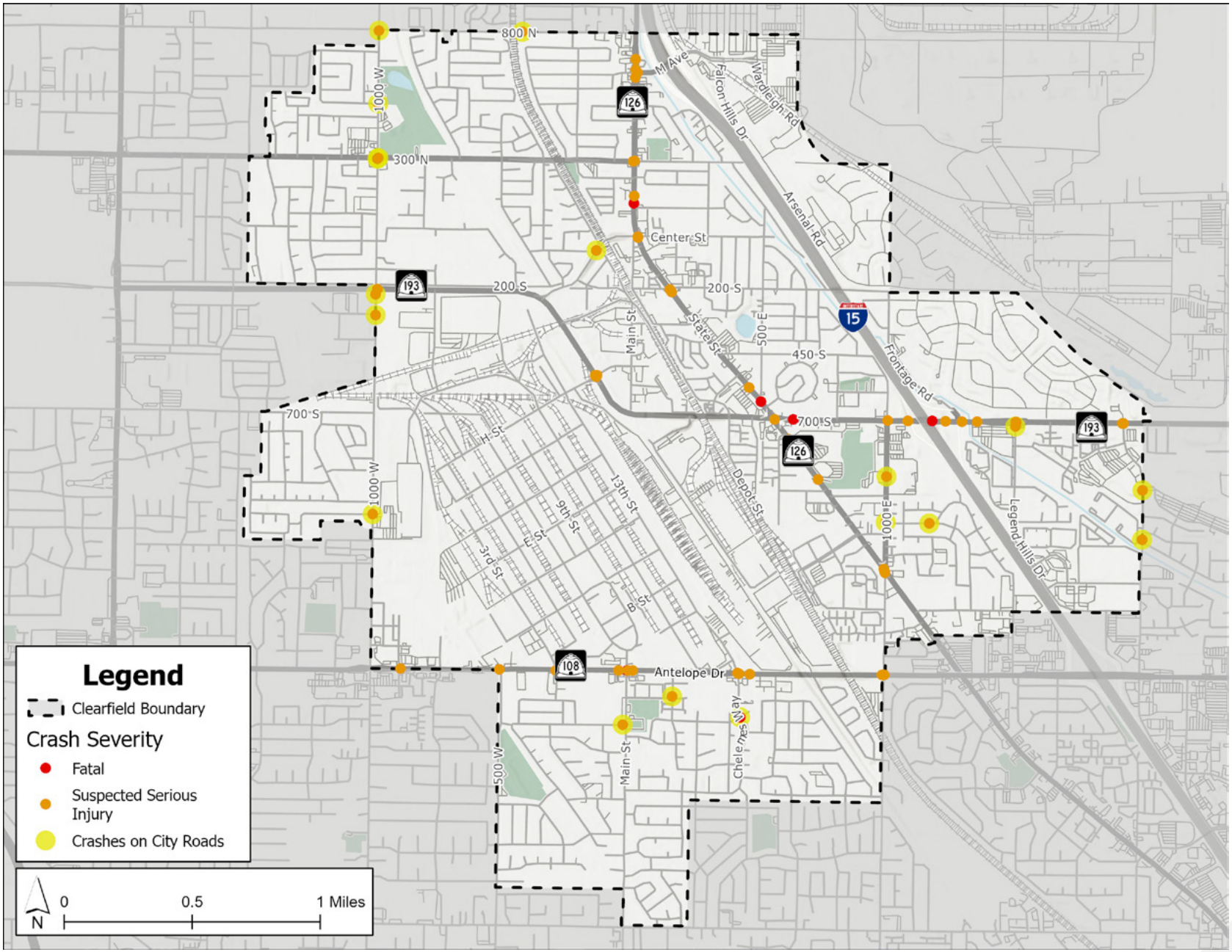


Figure 33: Severe Crashes in Clearfield (2019–2023)

Of Clearfield's 118 crashes involving a bicycle or pedestrian between 2019 and 2024, 48 of them involve a right-turning vehicle. In addition, 38 crashes involving a pedestrian or bicycle occurred at intersections with a gas station on the corner. **As more people are walking near gas stations, safety improvements should be prioritized at these intersections.** These improvements can include bulb-outs, improved lighting, raised intersections, and leading pedestrian intervals. Additionally, right turns can be restricted at intersections with higher pedestrian volumes, preventing vehicles from turning right on red while a pedestrian may be crossing the intersection.

The WFRC Comprehensive Safety Action Plan (2024) sets a cohesive regional safety vision and fulfills the road safety requirement for local jurisdictions to apply for SS4A grants. As part of this Safety Action Plan, several safety recommendations are included within Davis County and Clearfield City. These recommendations are summarized in **Table 12**.

Table 12: WFRC CSAP Recommendations

Project ID	Description of Improvements	Location(s)
6.21.1.1	Raised medians, driver feedback speed limit signs, adjusted speed limits, updates to access management, protected intersections, protected left-turns, and removal of permissive yellow left turns.	• 1000 West & 700 South • Center Street & 700 South • Industrial Pathway & 700 South • State Street & 700 South • 800 East & 700 South • 1000 East & 700 South • Frontage Road & 700 South • 700 South from 1000 West to US-89
6.21.3	Traffic calming via narrowed lanes, Safe Routes to School, adjusted speed limits, reduced lanes, RRFBS, bulb-outs, raised crosswalks, protected intersections, and dedicated right-turn lanes.	• State Street & 1000 East
6.23.4.1	Raised medians, updated intersection controls, protected intersections, and removal of permissive yellow left turns.	• 700 South from 1000 West to US-89
6.25.1.1	Raised medians, sidewalks/walkways, bicycle improvements at intersections, buffered bike lanes, adjusted speed limits, and removal of permissive yellow left turns.	• Main Street from 800 North to 6000 South • 800 North & Main Street

Details for each project are included in Appendix C. A GIS StoryMap showing the locations of these projects and other supplemental information is found here.

In addition to the recommendations presented in the WFRC Safety Action Plan, WCG recommends the following:

1. **Prohibit right turn on red (RTOR) at the following intersections:**
   - Southbound right turns at the 1000 East / Antelope Drive (SR-108) intersection
   - 400 East / Antelope Drive (SR-108)

     Six crashes involving a right-turning vehicle and a pedestrian occurred at each of these intersections. Prohibiting RTOR eliminates this conflict point.
2. **Add bulb-outs at the following intersections:**
   - 1000 West / 300 North

     Two crashes involving a pedestrian occurred at this intersection. Installing a bulb-out at this location shortens the asphalt distance for a pedestrian to cross.
   - Main Street / 300 North

     Five crashes involving a pedestrian at this intersection. Installing a bulb-out at this location shortens the asphalt distance for a pedestrian to cross.
3. **Install improved lighting for northbound vehicles at the 1000 West / SR-193 intersection**
   - Two serious injury front-to-rear crashes involving northbound vehicles occurred on the south leg of this intersection. One of these crashes involved a motorcycle.
4. **Request a pedestrian study from UDOT near Lakeside Square on SR-126**
   - A total of 14 crashes involving a pedestrian have occurred between 200 South and 700 South along SR-126. UDOT can complete a pedestrian study upon request to determine if a pedestrian crossing is feasible within this location. It is recommended that a study be requested from UDOT.

C. ACCESS MANAGEMENT STANDARDS

The Transportation Research Board defines access management as "the systematic control of the location, spacing, design, and operation of driveways, median openings, interchanges, and street connections to a roadway" (TRB Access Management Manual, 2nd Edition, 2014). Access management is a key element in transportation planning, helping to make transportation corridors operate more efficiently and carry more traffic without costly road widening projects. Access management offers local governments a systematic approach to decision-making: applying principles uniformly, equitably, and consistently throughout the jurisdiction.

Access management has been documented to provide the following safety and operational benefits:

- Lower crash rates
- Lower crash severity
- Increased traffic signal efficiency
- Decreased delay
- Increased capacity

Positive economic benefits can also result from proper access management, which may improve travel times and congestion. This makes locations more desirable to patrons (Federal Highway Administration, Safe Access is Good for Business, 2006).

In Clearfield, all of the arterial roadways are owned by UDOT and, therefore, access to them is controlled by UDOT's access management requirements. UDOT has established state highway access management requirements as part of Administrative Rule R930-6. All Utah state roadways are assigned an access category between 1 and 10. Each access category has varying spacing requirements, with lower access category numbers having stricter spacing.

All other roadways are managed by Clearfield, so it is up to City staff to ensure that access is managed along these roadways. This may include making changes to the current roadways to address existing problems as well as requiring good access management as new roads and/or developments are planned.

An access management program must address the balance between access and mobility. Where the functional classification of a road implies the level of priority for access versus mobility, access management requirements define exactly how that balance is to be maintained. Freeways move vehicles over long distances at high speeds with very controlled access and great mobility. Conversely, residential streets offer high levels of access but at low speeds and with little mobility. Access management standards must account for these different functions of various facilities as no facility can operate at peak efficiency and provide unlimited property access at the same time. The Clearfield City Code and page R4 of the City's Standard Drawings (Public Works Standards, Appendix F) each establish minimum access spacing requirements for roadways in the city. For greater clarity, it is recommended that the City consolidate all relevant requirements into a single place in the Public Works Standards, with a reference to this section to be included in the City Code.

D. TRAFFIC IMPACT STUDIES

As the City continues to grow and develop, traffic-related impacts will need to be addressed. This can be accomplished by requiring future developments to complete a Traffic Impact Study (TIS). The TIS is an important document that informs City staff how a development will impact the traffic in the project area. The scope of a TIS is dependent on the size and type of new land uses proposed by a development, which determine the number of trips that will be generated by the project. Appendix C of the City's Public Works Standards defines minimum requirements for TIS scope based on these characteristics.

WCG conducted a review of the City's TIS requirements to provide feedback on how they can be made clearer and better fit to the City's needs. Interested parties can refer to the Public Works Standards as discussed above for up-to-date requirements.

E. CONNECTIVITY

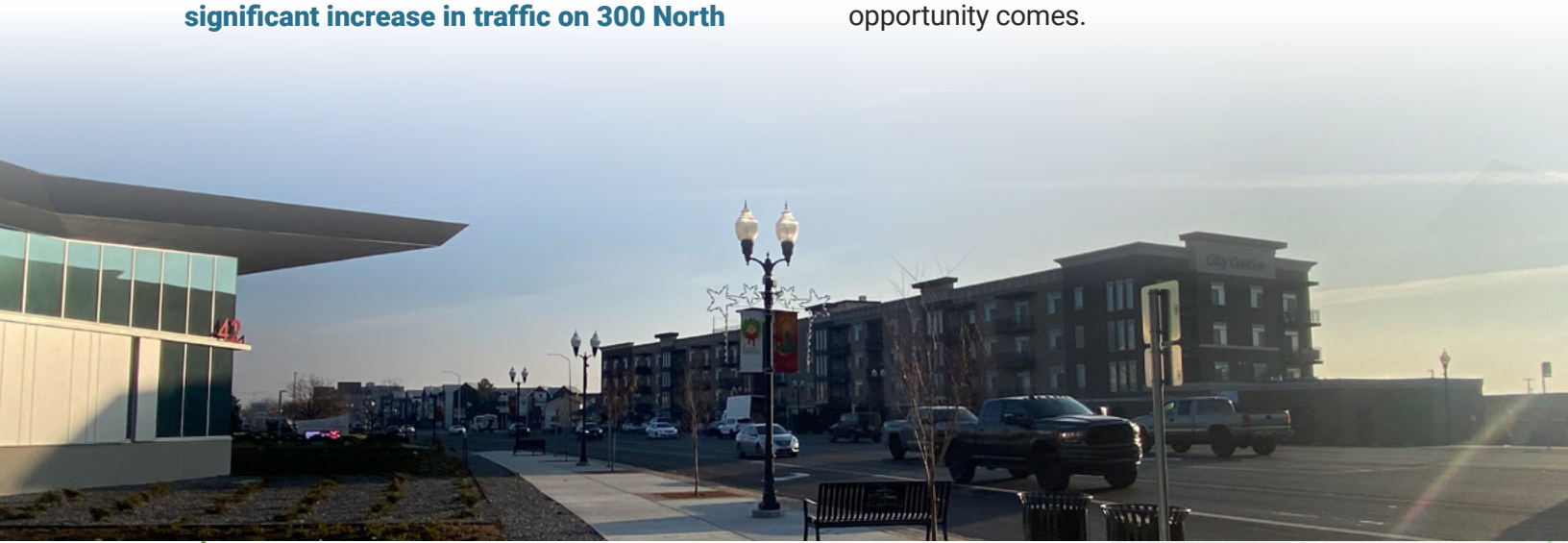
Connectivity refers to an interconnected roadway, bikeway, and walkway network that allows for multiple routes for travel. A system with excellent connectivity allows people multiple options when traveling between points within a city. A well-connected local street network allows short trips to be completed on local roadways rather than relying on regional collectors and arterials. A well-connected regional road network improves access, reduces travel times for all users, and can reduce the need for future roadway widening. Good network connectivity also improves emergency access and response times and allows multiple exit routes in the event of emergencies.

REGIONAL CONNECTIVITY AND MAJOR BARRIERS

The size and location of the Freeport Center has historically made it difficult to provide a variety of connections across the city. Additionally, the city area is crisscrossed by other physical barriers that make maintaining connectivity difficult, including several rail lines and I-15. Opportunities to bridge these barriers should be sought out. The Utah Legislature recently passed Senate Bill SB0195, which states in Section 1, Chapter 10-8-87 that, as part of the development of a transportation master plan, municipalities shall "identify priority connections to remedy physical impediments… that would improve circulation and enhance vehicle, transit, bicycle, or pedestrian access to… priority

destinations". The intention of the bill is to provide an avenue for cities to enlist State assistance in approaching regional connectivity improvements within their boundaries that would otherwise be cost-prohibitive to undertake. To this end, the City has identified a set of projects as opportunity connections across major barriers. These are shown and numbered in **Figure 34** and described below:

1. The railroad bridge on 300 North (**Connection 1**) represents one of the City's few connections across the tracks; however, traffic demand on the bridge is expected to exceed capacity by 2050 and the bridge is expected to be due for reconstruction by 2040 (see the Bridge Maintenance and Improvements Plan). The cost for the reconstruction is expected to exceed the City's entire 2025 budget at $40 million and will thus need State funds and careful planning to complete. **This was identified as a priority project by the City.**
2. 300 North currently dead-ends at I-15. This was discussed as a potential location for a new connection over I-15 (**Connection 2**). This would provide a desirable alternative to the 650 North/M Avenue interchange for accessing the MIDA development area and the HAFB gate and would likely alleviate pressure on Center Street, SR-126, and other routes that carry traffic destined for the air force base area. An alternative Build analysis for the 2050 condition was conducted in the travel demand model with this link in place. It was found that **constructing this connection would alleviate congestion at the 650 North/M Avenue interchange without causing a significant increase in traffic on 300 North or Center Street west of SR-126; as such, it is recommended that the City present this project to UDOT as an opportunity to benefit both parties.**
3. As traffic increases on both SR-193 and SR-126 through 2050, the Center Street bridge between the two facilities (**Connection 3**) will increasingly become a barrier for traffic wishing to cross the railroad tracks and travel between the two state highways. A project to increase the capacity of the bridge while preserving active transportation accessibility would require a similar investment to the 300 North bridge reconstruction, and is **thus similarly identified as a priority connection** on which to enlist state assistance.
4. Once the Falcon Hills Road connections are constructed, the Frontage Road east of I-15 between SR-193 and 200 South will provide a valuable alternative to SR-126 for north-south connectivity, particularly for vehicles accessing HAFB. However, the southbound travel lane on this road currently ends north of SR-193 due to the recent consolidation of the Frontage Road with the I-15 northbound on-ramp. This was necessary to preserve operations on SR-193 with the current configuration of the interchange, but the City wishes to explore opportunities to restore southbound access to SR-193 on the frontage road in the future (**Connection 4**). During discussions with UDOT, it was concluded that restoring full connectivity at this location could be possible when this interchange is fully reconstructed, so to this end **the City is identifying this location as a priority connection** to explore when that opportunity comes.



- Alternatively, a potential connection across I-15 was identified at 1000 East (**Connection 5**). This would provide an alternative connection to the SR-193 interchange for traffic coming southbound from the base; however, this connection was judged to be counterproductive to the City's goal of deemphasizing 1000 East for through-traffic. The raised median on SR-126 that will enforce a right-in/right-out configuration at 1000 East would diminish the utility of a connection over I-15 to the north; as such, it is not recommended that this alternative be pursued.

5. The Clearfield FrontRunner Station is located relatively close to a major employment destination in the Freeport Center, which occupies a significant portion of the half-mile station area studied in the station area plan. Additionally, the Denver and Rio Grande (D&RG) Rail Trail is a major regional facility for active transportation trips which runs along the eastern edge of the Freeport Center and passes through the station area. There is currently no direct connection to the Freeport Center or to the D&RG Rail Trail from the station platform, instead, D&RG trail users who wish to access the FrontRunner station or Freeport Center employees who wish to take transit to work must travel far out of their way via 1000 East and Antelope Drive in order to travel between the two locations. It was to this end that a pedestrian bridge and trail connection between Clearfield Station and the D&RG Trail (**Connection 6**) was proposed as part of the Future Active Transportation portion of this TMP (see Project AP2-3). Due to the rail alignment and heavy industrial uses along the path, this connection will be difficult to implement, but **it has nevertheless been identified as a high-value project for improving regional connectivity and access**.
6. A few possible alignments were identified for a connection across I-15 at 1500 East (**Connection 7**). After assessing the effect this connection would have in the travel demand model, it was determined that it would provide a valuable alternative to the nearby interchange at Antelope Drive, so the City could keep this in mind as a project to pursue in the future; however, the potential crossing at 300 North (Connection 2) was identified as a higher priority for the City to pursue at this time.

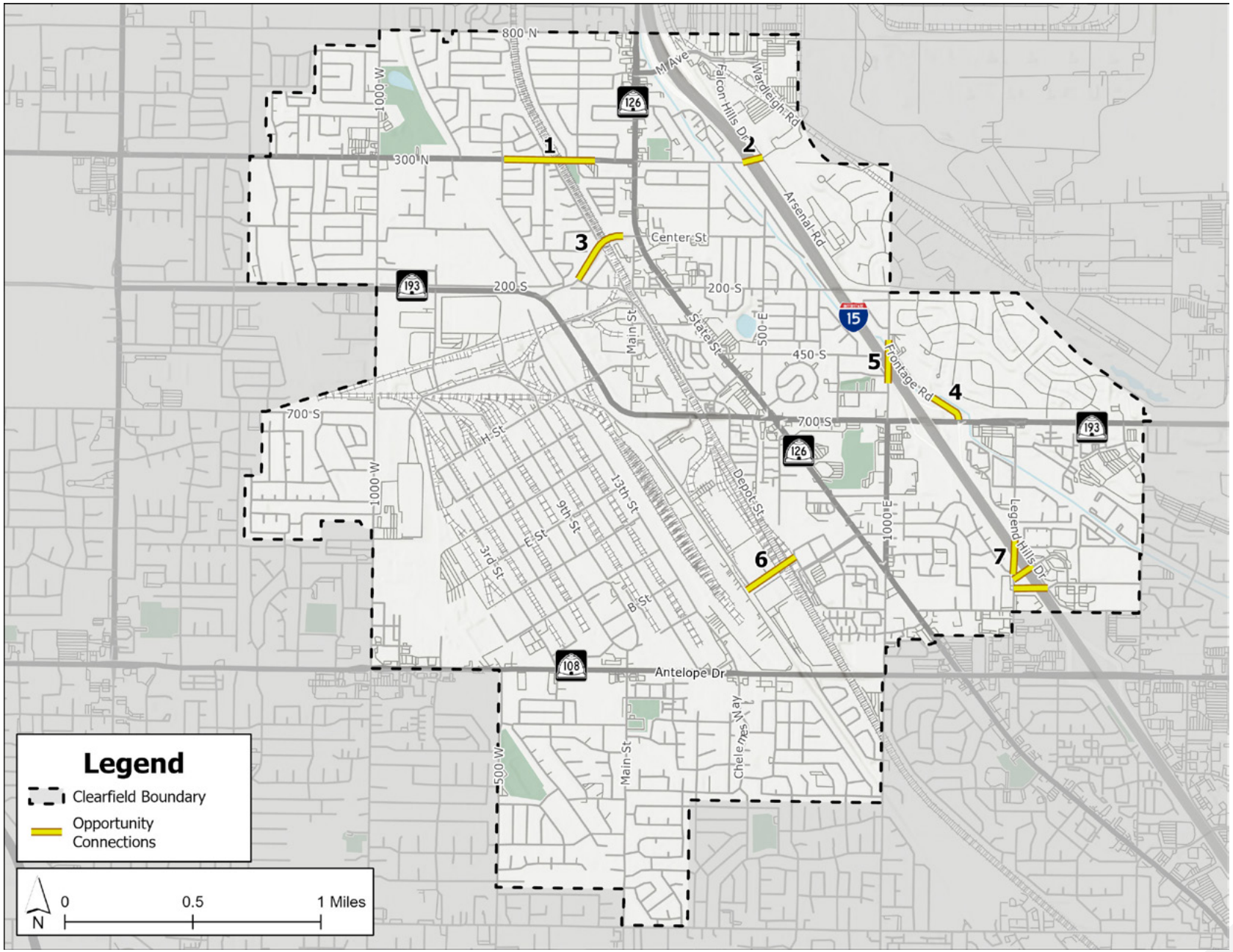


Figure 34: Opportunity Connections Across Major Barriers

LOCAL CONNECTIVITY

New development should be designed and approved with connectivity in mind. This can be done by minimizing the use of cul-de-sacs where possible and connecting stub roads with infill projects. Opportunities should also be taken to provide greater connectivity for active transportation users beyond the roadway network, like building mid-block trail connections between neighboring streets or linking cul-de-sacs with pathways. Disconnected streets, which oftentimes include cul-de-sacs and dead ends, are a major factor in increasing auto dependency and traffic on collectors and arterials. The City should keep locations with dead ends, cul-de-sacs, T-intersections, and stub roads in mind for new connections, at least for active modes if not for motor vehicles, as properties come up for sale.

One opportunity of note is on the northern edge of Oakstone Apartments along the newly constructed 1450 South. Now that this roadway is constructed, it is recommended that the City work with apartment management to open a more direct active transportation connection north to 1450 South, which will greatly improve residents' ability to access and utilize the transit system. Outside of this location, stub roads that terminate at the boundary of undeveloped lots throughout the City have been identified. **Figure 35** depicts proposed roadways or pedestrian connections that would connect these stub roads to the existing network and maximize connectivity going forward.

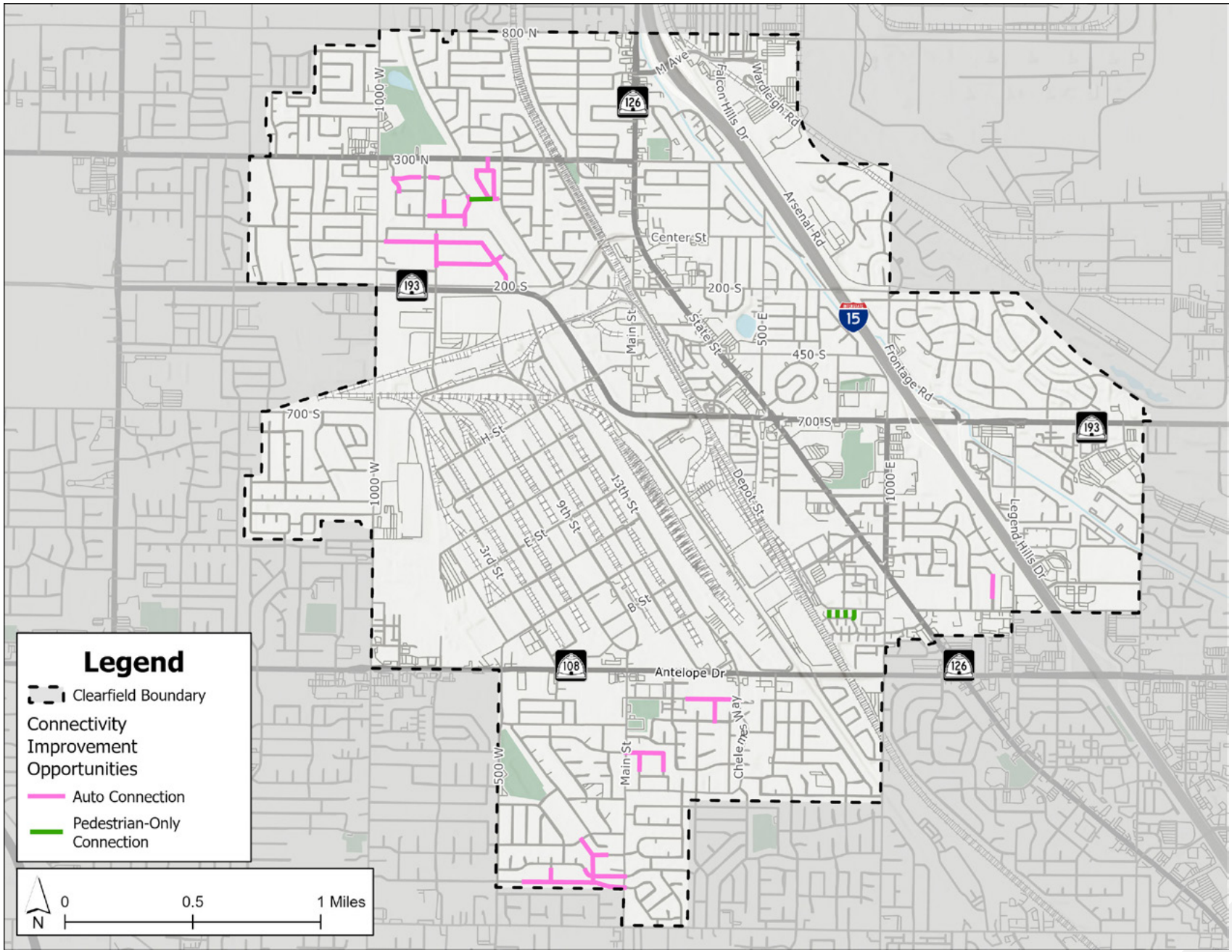


Figure 35: Local Connectivity Improvement Opportunities

G. FREIGHT

With the Freeport Center lying within city limits just west of I-15 at Exits 332 and 334 and representing such a major regional hub for freight and warehousing, the efficient movement of freight is an essential consideration for Clearfield City. Truck traffic should be accommodated to the maximum extent possible while also considering the comfort of residents and the load capacity/impact on City roads. In section 7-4-3 of the City Code, Clearfield has designated certain roadways within city limits as truck routes. Outside of certain circumstances, truck traffic should follow these routes and not depart from them. This minimizes the excess noise and safety concerns that accompany heavy freight vehicle cut-through traffic on local roads. The City's designated truck routes are mapped in **Figure 36**.

One concern that was raised during the development of the plan was the volume of truck traffic that uses Center Street (a City-owned and maintained road) to access SR-193 from SR-126, or vice-versa. Some turning radii on this facility are challenging for trucks to navigate, which results in damage to roadside signage. Per federal law, cities cannot prohibit truck traffic on facilities that have been built with federal aid; however, the City could post signage recommending that trucks avoid Center Street and in any other locations where truck cut-through traffic is not desired.

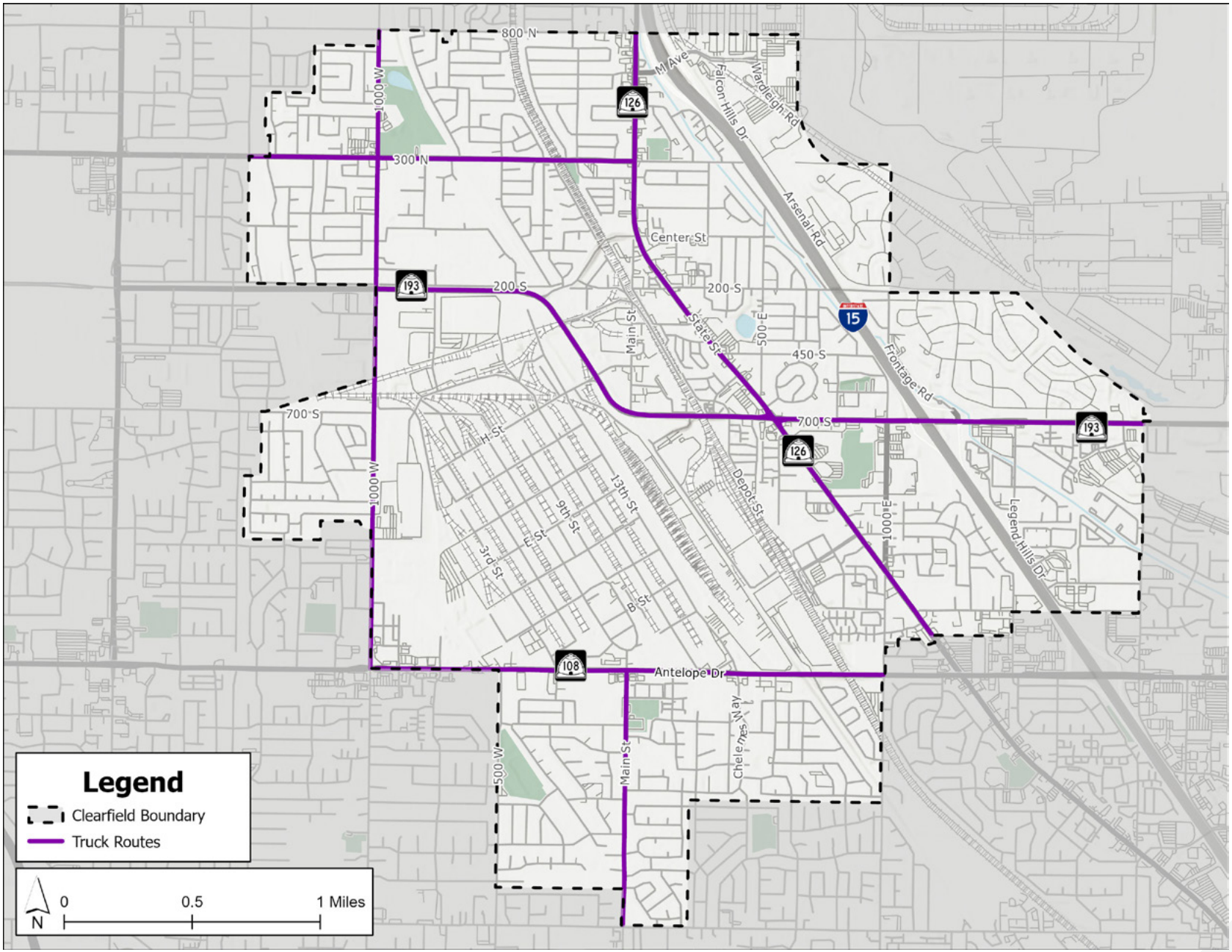


Figure 36: Clearfield City Designated Truck Routes

F. BRIDGE INVENTORY, MAINTENANCE AND IMPROVEMENTS PLAN

A map inventory was developed of existing bridges located within Clearfield City Boundaries. This inventory includes documentation of the bridge age, existing conditions, and an indication of upgrades and improvements to serve all travel modes. A timeline of when these bridges may need to be reconstructed or rehabilitated is presented and recommendations for how these bridges can be upgraded to serve all modes is provided. The objective of this plan is to guide City bridge investment through the future to ensure safety and ongoing maintenance. A map of all bridges within Clearfield City is shown in **Figure 37**.

The following bridges are owned by Clearfield City:

- 800 North
- Bruce Street
- 300 North over railroad tracks
- 300 North over Weber Davis Canal
- Center Street

The following bridges are owned by UDOT:

- 700 South (SR-193)
- Antelope Drive (SR-108)

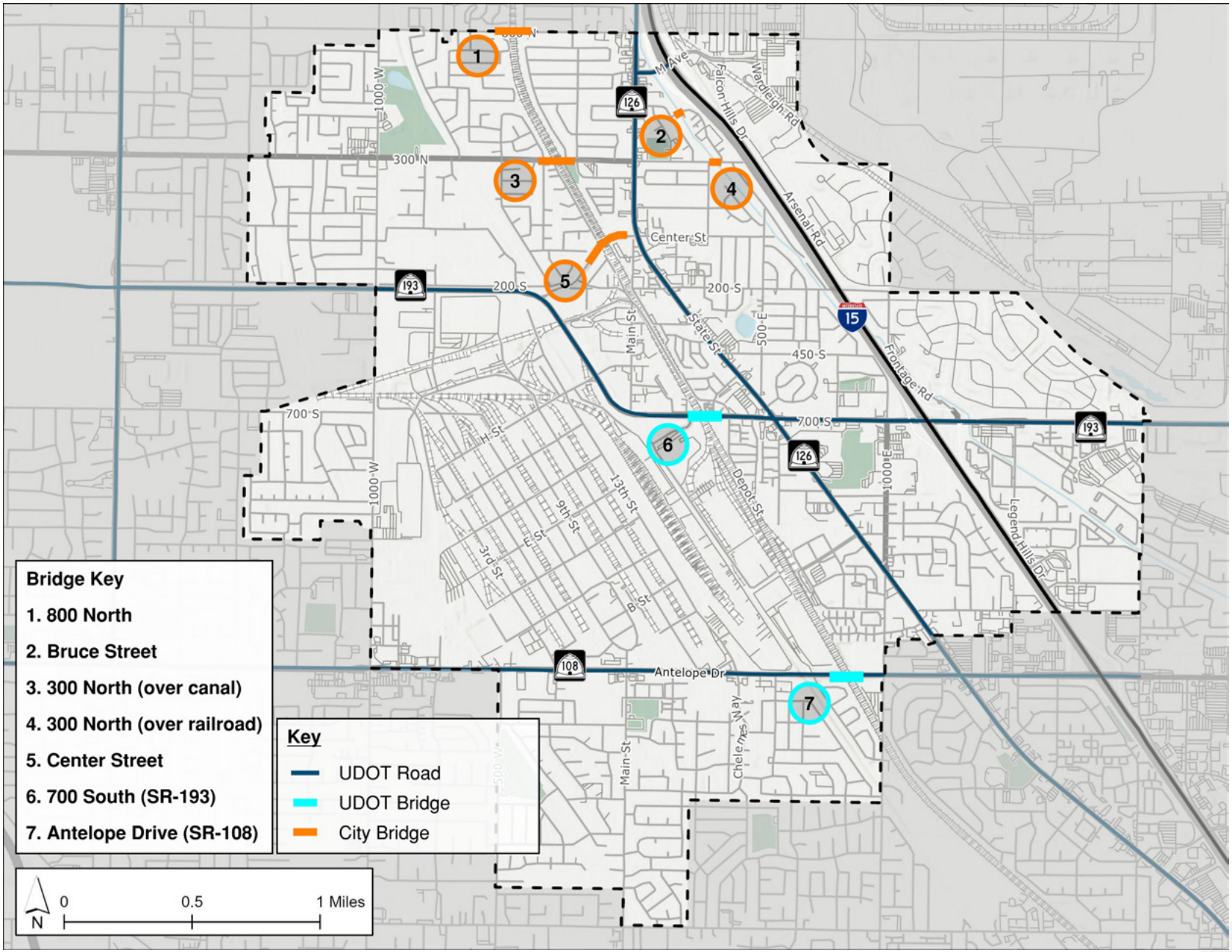


Figure 37: Bridges within Clearfield City

UDOT completes inspections of these bridges every two years and sends these inspections to the City. The inspection contains information on the conditions of various bridge elements, including the deck, superstructure, and substructure. The most recent inspection available was used to establish the existing conditions.

UDOT's method for determining when bridges need to be rehabilitated or replaced is based on bridge design life, current bridge conditions, and the amount of time in that condition. Generally, bridges built before 2000 have a design life of 50 years. Bridges built after 2000 are built to more current standards and generally have a design life of 75 years. Regular inspection and maintenance can extend the life of the structure. The UDOT Structures Design and Detailing Manual (SDDM) details preventative treatments and timings of these treatments to optimize lifecycle costs of the bridges. Treatments may only be for part of the structure, such as the deck. Bridges should continue to be monitored at regular intervals to determine a more exact timeline for replacement or rehabilitation.

The bridges owned by Clearfield City are described below, including their existing conditions as reported by UDOT and an estimated timeline for when the bridge would need to be replaced or rehabilitated. Recommendations are given regarding improvements to be made when the bridges are replaced so they can better serve all modes.

800 NORTH

Constructed in 1985 and spanning approximately 120 feet, this bridge spans four sets of railroad tracks on the north border of Clearfield. It has a single travel lane in either direction and carried an average of 9,000 vehicles per day in 2024. There is a sidewalk on the north side of the bridge. Based on the most recent inspection, this bridge is currently in fair condition. As this bridge was constructed before 2000, it has a design life of 50 years. Thus, the anticipated timeline for this bridge to be replaced is sometime between 2035 and 2050. Clearfield should continue to coordinate with UDOT to determine an exact timeline for when the bridge will be replaced.

When this bridge is replaced, the following improvements can be added to better serve all travel modes:

- Sidewalk on the south side of the bridge—this should connect with the sidewalk on the south side of 800 North

Improved lighting on the north side of the bridge on the approach slabs

BRUCE STREET

Constructed in 1974, this bridge spans the Weber Davis Canal. It has a single travel lane in either direction and a sidewalk on the south side of the bridge. This bridge is adjacent to the Clearfield Canal Trail. This bridge was reconstructed as a box culvert in 2023. As it was reconstructed after 2000, the anticipated design life is 75 years. Thus, the anticipated timeline for this culvert to be replaced is sometime between 2090 and 2095. Regular inspection and maintenance can extend the design life of the structure.

When this culvert is replaced, the following improvements can be added to better serve all travel modes:

- Sidewalk on the north side of the culvert
- Improved lighting on the north or south side of the culvert

300 NORTH (OVER RAILROAD TRACKS)

Built in 1974, this long bridge runs 0.25 miles over the railroad tracks on the north side of Clearfield. Originally built by UDOT and then gifted to the City,

this bridge spans six sets of tracks including the Union Pacific Rail Road and UTA's FrontRunner Commuter rail and carried an average of 12,000 vehicles per day in 2024. A portion of this bridge was rehabilitated in 2015. Based on the most recent inspection, this bridge is currently in fair condition. As this bridge was constructed before 2000, it has a design life of 50 years. Thus, the anticipated timeline for this bridge to be replaced is sometime between 2025 and 2040. This bridge is the highest priority for replacement in Clearfield.

Clearfield City should work with UDOT to better understand the expected lifespan and approach to rehabilitation/replacement of their bridges. The City should begin discussions with UDOT's Director of Region One, Region One Program Manager, and Local Government Program to best determine the appropriate course of action. Replacement costs could be as much as the City's entire 2025 annual budget at approximately $40M.

When this bridge is replaced, the following improvements can be added to better serve all travel modes:

- Bike lanes on the north and south sides of the bridge
- Improved lighting on the south side of the bridge

300 NORTH (OVER CANAL)

This bridge spans the Weber Davis Canal on the east side of Clearfield. This bridge was built in 1965. It has a single travel lane in either direction and sidewalks on both the north and south sides. This bridge was reconstructed as a box culvert in 2023. As it was reconstructed after 2000, the anticipated design life is 75 years. Thus, the anticipated timeline for this culvert to be replaced is sometime between 2090 and 2095.

When this culvert is replaced, the following improvements can be added to better serve all travel modes:

- Improved lighting on the north and south sides of the culvert
- Raised trail crossing on the west side as part of the Clearfield Canal Trail

CENTER STREET

Built in 2000, this bridge is constructed over the railroad tracks in the center of the City. Spanning approximately 245 feet, this bridge has a single travel lane in either direction and carried an average of 10,000 vehicles per day in 2024. There is a sidewalk on the north side of the bridge. Based on the most recent inspection, this bridge is currently in fair condition. Since this bridge was constructed with updated design standards, the anticipated design life is 75 years. Thus, the anticipated timeline for this bridge to be replaced is sometime between 2070 and 2075.

When this bridge is replaced, the following improvements can be added to better serve all travel modes:

- Bike lanes on the north and south sides of the bridge
- A sidewalk on the south side of the bridge—this should connect with the sidewalk on the south side of Center Street
- Improved lighting on the south side of the bridge

A summary of the Clearfield City bridge inventory is shown in **Table 13**.

Table 13: Bridge Inventory

Bridge	Year Built (Age)	Bridge Condition	Timeline for Replacement	Improvements to serve all modes
800 North	1985 (40 years)	Fair	2035 - 2050	• Sidewalk on south side of bridge to connect with sidewalk on south side of 800 North • Improved lighting on north side of bridge on approach slabs
Bruce Street	1974 (51 years)	Fair	2090 - 2095	• Sidewalk north of the culvert • Improved lighting north or south of the culvert • Raised trail crossing west of the culvert
300 North over railroad	1974 (51 years) Reconstructed as box culvert in 2023 (2 years)	Fair	2025 - 2040	• Bike lanes on both sides of the bridge • Improved lighting on the south side of the bridge
300 North over Weber Davis Canal	1965 (60 years) Reconstructed as box culvert in 2023 (2 years)	Fair	2090 - 2095	• Improved lighting on the north and south sides of the culvert • Raised trail crossing on the west side as part of the Clearfield Canal Trail
Center Street	2000 (25 years)	Fair	2070 - 2075	• Bike lanes on both sides of the bridge • Sidewalk on the south side of the bridge connecting to Center Street • Improved lighting on the south side of the bridge

VI. CAPITAL FACILITIES AND IMPLEMENTATION PLAN

A. CAPITAL FACILITIES PLAN

As shown in the previous sections, future growth due to new development requires Clearfield to make improvements to their transportation network to provide residents with a safe and efficient transportation network and maintain an acceptable LOS. Specific intersection and roadway improvements are listed below in **Table 14**, while active mode projects are listed in **Table 15**. All Capital Facilities Plan (CFP) projects are summarized below in **Figure 38**. The project numbers listed in the table are for identification only and are no indication of project prioritization. Each project cost estimate represents 2023 costs and is not adjusted for inflation; therefore, estimates will need to be regularly updated by the City as project scopes may change as development occurs. Only roadway improvements to arterials and collectors are identified, as local roads are typically built by future development. Details for each project cost estimate can be found in the **Appendix B**.

Table 14: CFP Vehicle Capacity Projects

Project Number	Description	Responsibility	Improvement Scope	# of Lanes		Estimated Cost
				2024	Proposed	
Phase #1 (2024-2033)						
1-1	Falcon Hills Dr Connections	MIDA	New Roadway	0	3	$14,693,939
1-2	Antelope Drive (SR-108) Operations	UDOT	Operational Improvements	5	5	$6,979,896
1-3	State Street (SR-126) Operations	UDOT	Operational Improvements	5	5	$9,712,853
1-4	1000 West Restriping (North of SR-193)	WFRC, Clearfield	Restriping	2	3	$260,000
1-5	1000 East Restriping (South of 1450 S)	Clearfield, WFRC, UDOT	Restriping	2	3	$85,000
1-A	I-15 Interchange — 650 North	UDOT	Interchange Upgrades			$100,000,000
1-B1	Station Boulevard & State St Signal	Clearfield, UDOT	New Signal			$820,000
1-B2	1000 E to RIRO with Raised Median	Clearfield, WFRC, UDOT	Signal - Removed			$750,000
1-B3	1450 S & State St Signal and Turn Lanes	Clearfield, UDOT	New Signal			$1,200,000

Table 15: CFP Active Transportation Projects

Project Number	Description	Responsibility	Improvement Scope	Estimated Cost
Phase # 1 (2024-2033)				
AC1-1	1000 East Grade-Separated Crossing	UDOT, Clearfield	Grade-Separated	$2,433,306
AC1-2	1150 South At-Grade Crossing	Developer, Clearfield	At-Grade	$2,400,000
AC1-3	State Street & 1000 East Crossing	UDOT, Clearfield	Grade-Separated	-
AC1-4	Antelope Elementary Crossing	Clearfield	At-Grade	-
AP1-1	1000 West Shared Use Path	Clearfield	Shared Use Path	-
AP1-2	3 Gates Trail Shared Use Path	WFRC	Shared Use Path	$10,950,000
AP1-3	650 North Shared Use Path	WFRC, Clearfield	Shared Use Path	$1,200,000
AP1-4	Clearfield Canal Extension	Clearfield	Shared Use Path	-
AP1-5	State Street / Main Street Shared Use Path	UDOT, Clearfield	Shared Use Path	$340,000
AP1-6	Depot Street Bike Lane	Developer	Bicycle Lane	$230,000
AP1-7	State Street Sidewalk Improvements	Developer, Clearfield	Sidewalk	-
AP1-8	1000 East Sidewalk Improvements	Clearfield	Sidewalk	-
AP1-9	Antelope Drive Shared Use Path	UDOT, Clearfield	Shared Use Path	$2,980,000

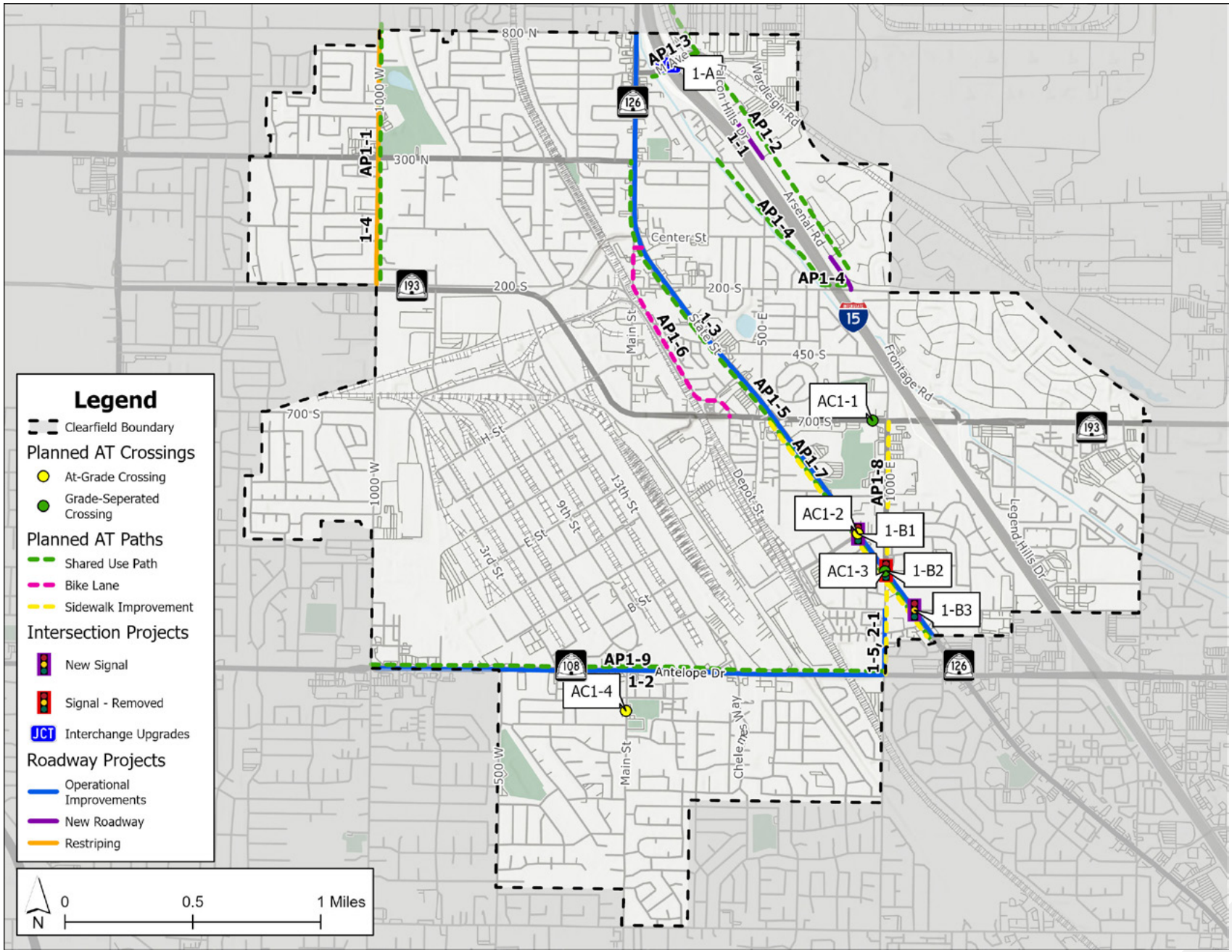


Figure 38: Future Projects—Capital Facilities Plan

B. ADDITIONAL TRANSPORTATION STRATEGIES

In addition to the capital projects identified in the CFP and the previous sections, the City has identified several non-capital strategies that could be implemented to further meet the goals and objectives identified in Section I. These include:

COORDINATION:

- Perform quarterly coordination with UDOT to institutionalize regular communication, ensure UDOT projects meet community needs, and that multimodal needs are incorporated into UDOT roadway projects as applicable
- Perform annual coordination with UTA and WFRC on regional active transportation, roadway, transit and safety projects to ensure community projects align with regional priorities and planning
- Perform annual coordination with the Davis County School District to identify, install, and maintain safe walkways, crossings, and connections along defined routes to schools and other district-maintained amenities

FACILITIES:

- Where feasible, retrofit existing roadways to be consistent with the cross sections proposed in this plan on roadways designated minor collectors or greater
- Where feasible, replace or repair broken or damaged sidewalks
- Where feasible, ensure pedestrian and bicycle corridors have sufficient lighting to provide a safe nighttime walking environment

PLAN DEVELOPMENT:

- Consider development of city-wide wayfinding and/or transportation demand management plans to encourage multimodal travel to and from businesses within and around the City's downtown area

C. PERFORMANCE METRICS

The long-term identity and effectiveness of the Clearfield transportation network should reflect the goals and objectives described in Section I. As part of the Clearfield TMP's implementation, the City has identified the following metrics to measure overall efficacy of the plan and the progress the City is making in meeting the goals and objectives it has set:

1. **Implementation of Projects and Strategies:** The projects and strategies identified throughout the Clearfield TMP are the CIty's principal means to achieving its goals and objectives. As part of implementation of this plan, City staff will annually:
   - Track which projects have been completed for each transportation mode identified in this plan
   - Track which strategies have been implemented
   - Identify which projects or strategies should be a priority for the coming year based on input received and/or data collected over the prior year
2. **Regular Inventories of Roadway and Active Mode Facilities:** The City already maintains an inventory of its roadway facilities and overarching trails network. As part of implementing the Clearfield TMP, this inventory will be expanded to include sidewalks, bicycle lanes, and shared-use paths. This inventory will serve to measure the mix of multimodal facilities that the City maintains, and will be updated periodically based on staff availability.
3. **Reviews of Parking Code Compliance:** In addition to reviewing development compliance with City parking code and regulations as part of entitlement of the development, the City may perform periodic reviews of existing on- and off-street parking facilities and identify any areas where facilities are not meeting parking demand. These reviews will be done on a case-by-case basis according to community or staff input and will serve to measure the overall effectiveness of the City's parking code and regulations.

VII. CONCLUSION

A. OVERVIEW

The purpose of the Clearfield TMP is to plan the future transportation needs of Clearfield City. The following tasks were completed as part of this TMP:

- Traffic data was analyzed to help establish existing conditions in the City.
- Future traffic volumes were developed for future planning years 2034 and 2050.
- A travel demand analysis based on existing and future land use was performed.
- A list of needed future roadway and intersection projects was created.
- City street functional classifications were updated based on the future roadway projects.
- The active transportation plan was updated with recommendations for project phasing.
- UTA's most recent plans for future transit projects were summarized.
- A safety analysis was performed.
- Connectivity improvement opportunities were identified.
- The access management and traffic impact study (TIS) standards were reviewed.
- Truck routes were identified and mapped.
- An inventory was taken of all bridges within City limits, including the age and condition.
- Utah State Code Requirements for the transportation and traffic circulation elements were met.
- An analysis was conducted to determine the feasibility of charging impact fees.
- An ArcGIS Online StoryMap was created that summarized the analysis performed in this TMP.

B. NEXT STEPS

As a result of this TMP, there are several opportunities for Clearfield City staff to apply the recommendations in the coming months and years. It is recommended that Clearfield City complete the following when possible:

- Continue to monitor and collect traffic data to inform transportation planning decisions.
- Work to get funding for projects that are not currently funded.
- Acquire funding for the Phase 1 active transportation projects.
- Work with staff from Layton City and WFRC to apply for funding to conduct a study on the potential for transit service onto Hill Air Force Base.
- Monitor crash trends to find discernible patterns.
- In addition to projects listed in the WFRC Comprehensive Safety Action plan, implement the following safety improvements:
  - Prohibit RTOR at the following intersections:
    - Southbound right turns at the 1000 East / Antelope Drive (SR-108) intersection
    - 400 East / Antelope Drive (SR-108)
  - Install bulb-outs at the following intersections:
    - 1000 West / 300 North
    - Main Street / 300 North
  - Install improved lighting for northbound vehicles at the 1000 West / SR-193 intersection
  - Request a pedestrian study from UDOT near Lakeside Square on SR-126
- Install signage directing truck traffic onto designated truck routes.
- Work with WFRC, UDOT, and other relevant entities to propose the priority projects identified in **Figure 34** to connect across major barriers in the region:
  - **Connection 1:** Reconstruct the 300 North railroad bridge with increased capacity.
  - **Connection 2:** Construct a roadway bridge across I-15 connecting 300 North to Falcon Hills Drive.
  - **Connection 3:** Reconstruct the Center Street railroad bridge with increased capacity.
  - **Connection 4:** Consider options to restore southbound access to SR-193 from the Frontage Road when the interchange is reconstructed.
  - **Connection 6:** Construct a pedestrian connection across the railroad between the FrontRunner station and the D&RG Rail Trail.
- Improve connectivity as development continues by making key connections as shown in **Figure 35** when appropriate.
- Coordinate with UDOT for continued maintenance and replacement of City bridges, particularly 300 North over the railroad tracks.
- Coordinate regularly with UTA and WFRC on implementation of and connection to the regional transit and active transportation networks.
- Update the City's roadway/trail facility inventories to include sidewalks, bicycle lanes, and shared-use paths.
- Follow the best practices as outlined in Section III. City Transportation Management.
- Consider updates to the TIS requirements as discussed in a memorandum shared with the City
- Consolidate all access management guidelines into the Public Works Standards and reference them in the City Code.

VIII. APPENDIX

APPENDIX A — COST ESTIMATES
APPENDIX B — WFRC COMPREHENSIVE SAFETY ACTION PLAN PROJECTS

ENGINEER'S ESTIMATE (2024 COSTS)
Station Boulevard & State St Signal

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	7.00%	$32,800.00
Public Information Services	1	lump	0.50%	$2,400.00
Traffic Control	1	lump	4.50%	$21,100.00
Survey	1	lump	2.00%	$9,400.00
				$65,700.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	250	ft	$ 12.00	$3,000.00
Remove Concrete Sidewalk	300	sq yd	$ 28.00	$8,400.00
Roadway Excavation (Plan Quantity)	700	cu yd	$ 24.00	$16,800.00
Granular Borrow (Plan Quantity)	300	cu yd	$ 35.00	$10,500.00
Untreated Base Course	300	Ton	$ 40.00	$12,000.00
Remove Concrete Driveway	50	sq yd	$ 28.00	$1,400.00
HMA - 1/2 inch	200	Ton	$ 150.00	$30,000.00
Pavement Marking Paint	60	gal	$ 80.00	$4,800.00
Pavement Message (Preformed Thermoplastic)	30	Each	$ 250.00	$7,500.00
Concrete Curb and Gutter Type B1	300	ft	$ 45.00	$13,500.00
Perpendicular/Parallel Pedestrian Access Ramp	6	Each	$ 4,000.00	$24,000.00
Concrete Sidewalk	250	sq ft	$ 15.00	$3,750.00
Chip Seal Coat, Type II		sq yd	$ 5.00	$0.00
Micro-Surfacing	5,000	sq yd	$ 3.00	$15,000.00
Concrete Flatwork, 6 inch Thick	200.00	sq ft	$ 15.00	$3,000.00
				$153,650.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"	200	ft	$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	2	Each	$ 5,000.00	$10,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	2	Each	$ 2,000.00	$4,000.00
				$39,000.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
New signal	1	lump	$250,000.00	$250,000.00
				$250,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$25,000.00	$25,000.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$25,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping		Lump	$50,000.00	$0.00
				$0.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall		Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$533,350.00**
Contingency 30% $	**$160,005.00**
BID ITEMS TOTAL $	**$693,355.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project		sq ft	$3.00	$0.00
Potential full right of way takes		each	$600,000.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$69,335.50	$69,335.50
				$69,335.50

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$55,468.40	$55,468.40
				$55,468.40

BID ITEMS TOTAL	**$693,355.00**
NON-BID ITEMS TOTAL	**$124,803.90**
TOTAL	**$818,158.90**

ENGINEER'S ESTIMATE (2024 COSTS)
1000 E to RIRO with Raised Median

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	5.00%	$21,600.00
Public Information Services	1	lump	0.50%	$2,200.00
Traffic Control	1	lump	4.00%	$17,300.00
Survey	1	lump	2.00%	$8,700.00
				$49,800.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter		ft	$ 12.00	$0.00
Remove Concrete Sidewalk		sq yd	$ 28.00	$0.00
Roadway Excavation (Plan Quantity)		cu yd	$ 24.00	$0.00
Granular Borrow (Plan Quantity)		cu yd	$ 35.00	$0.00
Untreated Base Course	300	Ton	$ 40.00	$12,000.00
Remove Concrete Driveway		sq yd	$ 28.00	$0.00
HMA - 1/2 inch		Ton	$ 150.00	$0.00
Pavement Marking Paint	70	gal	$ 80.00	$5,600.00
Pavement Message (Preformed Thermoplastic)	15	Each	$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	1,500	ft	$ 45.00	$67,500.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	$ 4,000.00	$8,000.00
Concrete Sidewalk		sq ft	$ 15.00	$0.00
Chip Seal Coat, Type II		sq yd	$ 5.00	$0.00
Micro-Surfacing	6,500	sq yd	$ 3.00	$19,500.00
Concrete Flatwork, 6 inch Thick	2,000.00	sq ft	$ 15.00	$30,000.00
				$146,350.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"	845	ft	$ 125.00	$105,625.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	6	Each	$ 5,000.00	$30,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$135,625.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Existing signal removal	1	lump	$85,000.00	$85,000.00
				$85,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$15,000.00	$15,000.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$15,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$50,000.00	$50,000.00
				$50,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall		Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$481,775.00**
Contingency 30% $	**$144,532.50**
BID ITEMS TOTAL $	**$626,307.50**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project		sq ft	$3.00	$0.00
Potential full right of way takes		each	$600,000.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$62,630.75	$62,630.75
				$62,630.75

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$50,104.60	$50,104.60
				$50,104.60

BID ITEMS TOTAL	**$626,307.50**
NON-BID ITEMS TOTAL	**$112,735.35**
TOTAL	**$739,042.85**

ENGINEER'S ESTIMATE (2024 COSTS)
1450 S & State St Signal and Turn Lanes

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	7.00%	$45,600.00
Public Information Services	1	lump	1.00%	$6,600.00
Traffic Control	1	lump	5.00%	$32,600.00
Survey	1	lump	2.00%	$13,100.00
				$97,900.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	200	ft	$ 12.00	$2,400.00
Remove Concrete Sidewalk	500	sq yd	$ 28.00	$14,000.00
Roadway Excavation (Plan Quantity)	700	cu yd	$ 24.00	$16,800.00
Granular Borrow (Plan Quantity)	300	cu yd	$ 35.00	$10,500.00
Untreated Base Course	350	Ton	$ 40.00	$14,000.00
Remove Concrete Driveway		sq yd	$ 28.00	$0.00
HMA - 1/2 inch	300	Ton	$ 150.00	$45,000.00
Pavement Marking Paint	70	gal	$ 80.00	$5,600.00
Pavement Message (Preformed Thermoplastic)	50	Each	$ 250.00	$12,500.00
Concrete Curb and Gutter Type B1	360	ft	$ 45.00	$16,200.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	$ 4,000.00	$8,000.00
Concrete Sidewalk	1,000	sq ft	$ 15.00	$15,000.00
Chip Seal Coat, Type II		sq yd	$ 5.00	$0.00
Micro-Surfacing	6,500	sq yd	$ 3.00	$19,500.00
Concrete Flatwork, 6 inch Thick		sq ft	$ 15.00	$0.00
				$179,500.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"	845	ft	$ 125.00	$105,625.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	6	Each	$ 5,000.00	$30,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$135,625.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
New Signal	1	lump	$250,000.00	$250,000.00
				$250,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$35,000.00	$35,000.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$35,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$50,000.00	$50,000.00
				$50,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall		Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$748,025.00**
Contingency 30% $	**$224,407.50**
BID ITEMS TOTAL $	**$972,432.50**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project		sq ft	$3.00	$0.00
Potential full right of way takes		each	$600,000.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$97,243.25	$97,243.25
				$97,243.25

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$77,794.60	$77,794.60
				$77,794.60

BID ITEMS TOTAL	**$972,432.50**
NON-BID ITEMS TOTAL	**$175,037.85**
TOTAL	**$1,147,470.35**

ENGINEER'S ESTIMATE (2024 COSTS)
SR-193 and Center St Dual SB LTL (With Project 2-2)

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$51,500.00
Public Information Services	1	lump	1.00%	$5,200.00
Traffic Control	1	lump	10.00%	$51,500.00
Survey	1	lump	2.00%	$10,300.00
				$118,500.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	1,000	ft	$ 12.00	$12,000.00
Remove Concrete Sidewalk	56	sq yd	$ 28.00	$1,555.56
Roadway Excavation (Plan Quantity)	1,000	cu yd	$ 24.00	$24,000.00
Granular Borrow (Plan Quantity)	444	cu yd	$ 35.00	$15,555.56
Untreated Base Course	580	Ton	$ 40.00	$23,200.00
Remove Concrete Driveway	120	sq yd	$ 28.00	$3,360.00
HMA - 1/2 inch	536	Ton	$ 150.00	$80,325.00
4 inch Pavement Marking Tape - White	100	ft	$ 5.00	$500.00
Pavement Message (Preformed Thermoplastic)	30	Each	$ 250.00	$7,500.00
Concrete Curb and Gutter Type B1	1,000	ft	$ 45.00	$45,000.00
Perpendicular/Parallel Pedestrian Access Ramp		Each	$ 5,000.00	$0.00
Concrete Sidewalk	500	sq ft	$ 15.00	$7,500.00
Micro-Surfacing	8,000	sq yd	$ 5.00	$40,000.00
Pavement Marking Paint	50	gal	$ 80.00	$4,000.00
				$264,496.11

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"	100	ft	$ 125.00	$12,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	4	Each	$ 5,000.00	$20,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	4	Each	$ 2,000.00	$8,000.00
				$40,500.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	1	lump	$150,000.00	$150,000.00
				$150,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	0	lump	$100,000.00	$0.00
Street Lighting relocation	1	lump	$10,000.00	$10,000.00
				$10,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$50,000.00	$50,000.00
				$50,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall	0	Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$633,496.11**
Contingency 25% $	**$158,374.03**
BID ITEMS TOTAL $	**$791,870.14**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
	0	sq ft	$3.00	$0.00
		each	$600,000.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$79,187.01	$79,187.01
				$79,187.01

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$63,349.61	$63,349.61
				$63,349.61

BID ITEMS TOTAL	**$791,870.14**
NON-BID ITEMS TOTAL	**$142,536.63**
TOTAL	**$934,406.76**

ENGINEER'S ESTIMATE (2023 COSTS)
1450 S & 1000 E Intersection Improvements

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	$59,500.00
Public Information Services	1	lump	2.00%	$12,600.00
Traffic Control	1	lump	10.00%	$62,600.00
Survey	1	lump	5.00%	$31,300.00
				$166,000.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	200	ft	$ 12.00	$2,400.00
Remove Concrete Sidewalk	200	sq yd	$ 28.00	$5,600.00
Roadway Excavation (Plan Quantity)	1,219	cu yd	$ 24.00	$29,248.00
Granular Borrow (Plan Quantity)	1,219	cu yd	$ 35.00	$42,653.33
Untreated Base Course	1,621	Ton	$ 40.00	$64,826.99
Remove Concrete Driveway	0	sq yd	$ 28.00	$0.00
HMA - 1/2 inch	855	Ton	$ 150.00	$128,256.84
Pavement Marking Paint	100	gal	$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	15	Each	$ 250.00	$3,750.00
Concrete Curb and Gutter Type B1	800	ft	$ 35.00	$28,000.00
Perpendicular/Parallel Pedestrian Access Ramp	8	Each	$ 4,000.00	$32,000.00
Concrete Sidewalk	4,000	sq ft	$ 9.00	$36,000.00
Concrete Curb and Gutter Type M1	437	ft	$ 25.00	$10,925.00
Concrete Flatwork, 6 inch Thick	3409	sq ft	$ 10.00	$34,092.00
				$425,752.16

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	200	ft	$ 125.00	$25,000.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	8	Each	$ 5,000.00	$40,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	8	Each	$ 2,000.00	$16,000.00
				$81,000.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
None		lump		$0.00
				$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
utility relocates	1	lump	$40,000.00	$40,000.00
Lighting at roundabout (assume 8 lights)	8	Each	$8,000.00	$64,000.00
				$104,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping (assume higher price to landscape medians)	1	Lump	$15,000.00	$15,000.00
				$15,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00

BID ITEMS $	**$791,752.16**
Contingency (30%) $	**$237,525.65**
BID ITEMS TOTAL $	**$1,029,277.81**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Lump estimate for right of way takes for extra space requried for roundabout	7,000	sq ft	$20.00	$140,000.00
Assuming 5' wide construction easement	1,000	sq ft	$3.00	$3,000.00
				$143,000.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$123,513.34	$123,513.34
				$123,513.34

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (12% of Bid Items)	1	lump	$123,513.34	$123,513.34
				$123,513.34

BID ITEMS TOTAL $	**$1,029,277.81**
NON-BID ITEMS TOTAL $	**$390,026.67**
GRAND TOTAL $	**$1,419,304.48**

ENGINEER'S ESTIMATE (2024 COSTS)
1000 W and 300 N RTL, Left Turn Phasing

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$67,300.00
Public Information Services	1	lump	1.00%	$6,800.00
Traffic Control	1	lump	10.00%	$67,300.00
Survey	1	lump	2.00%	$13,500.00
				$154,900.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	500	ft	$ 12.00	$6,000.00
Remove Concrete Sidewalk	100	sq yd	$ 28.00	$2,800.00
Roadway Excavation (Plan Quantity)	400	cu yd	$ 24.00	$9,600.00
Granular Borrow (Plan Quantity)	400	cu yd	$ 35.00	$14,000.00
Untreated Base Course	348	Ton	$ 40.00	$13,920.00
Remove Concrete Driveway	200	sq yd	$ 28.00	$5,600.00
HMA - 1/2 inch	245	Ton	$ 150.00	$36,720.00
Pavement Marking Paint	30	gal	$ 80.00	$2,400.00
Pavement Message (Preformed Thermoplastic)	20	Each	$ 250.00	$5,000.00
Concrete Curb and Gutter Type B1	500	ft	$ 45.00	$22,500.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	$ 5,000.00	$10,000.00
Concrete Sidewalk	1,000	sq ft	$ 15.00	$15,000.00
Micro-Surfacing	2,500	sq yd	$ 3.00	$7,500.00
Concrete Driveway Flared, 7 inch Thick	1,800	sq ft	$ 20.00	$36,000.00
				$187,040.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"		ft	$ 125.00	$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	$ 5,000.00	$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	1	lump	$150,000.00	$150,000.00
				$150,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$250,000.00	$250,000.00
Street Lighting relocation	1	lump	$35,000.00	$35,000.00
				$285,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$50,000.00	$50,000.00
				$50,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall		Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$826,940.00**
Contingency 20% $	**$165,388.00**
BID ITEMS TOTAL $	**$992,328.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	750	sq ft	$25.00	$18,750.00
Assuming 5' wide construction easement required for length of project	2,500	sq ft	$3.00	$7,500.00
Potential full right of way takes		each	$600,000.00	$0.00
				$26,250.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$119,079.36	$119,079.36
				$119,079.36

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$79,386.24	$79,386.24
				$79,386.24

BID ITEMS TOTAL	**$992,328.00**
NON-BID ITEMS TOTAL	**$224,715.60**
TOTAL	**$1,217,043.60**

ENGINEER'S ESTIMATE (2024 COSTS)
1000 W and 800 N RTL, Left Turn Phasing

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$77,200.00
Public Information Services	1	lump	1.00%	$7,800.00
Traffic Control	1	lump	10.00%	$77,200.00
Survey	1	lump	2.00%	$15,500.00
				$177,700.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	500	ft	$ 12.00	$6,000.00
Remove Concrete Sidewalk	100	sq yd	$ 28.00	$2,800.00
Roadway Excavation (Plan Quantity)	400	cu yd	$ 24.00	$9,600.00
Granular Borrow (Plan Quantity)	400	cu yd	$ 35.00	$14,000.00
Untreated Base Course	348	Ton	$ 40.00	$13,920.00
Remove Concrete Driveway	200	sq yd	$ 28.00	$5,600.00
HMA - 1/2 inch	245	Ton	$ 150.00	$36,720.00
Pavement Marking Paint	30	gal	$ 80.00	$2,400.00
Pavement Message (Preformed Thermoplastic)	20	Each	$ 250.00	$5,000.00
Concrete Curb and Gutter Type B1	500	ft	$ 45.00	$22,500.00
Perpendicular/Parallel Pedestrian Access Ramp	3	Each	$ 5,000.00	$15,000.00
Concrete Sidewalk	1,500	sq ft	$ 15.00	$22,500.00
Micro-Surfacing	2,500	sq yd	$ 3.00	$7,500.00
Concrete Driveway Flared, 7 inch Thick	1,500	sq ft	$ 15.00	$22,500.00
				$186,040.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"		ft	$ 125.00	$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	$ 5,000.00	$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	1	lump	$150,000.00	$150,000.00
				$150,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$250,000.00	$250,000.00
Street Lighting relocation	1	lump	$35,000.00	$35,000.00
				$285,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$150,000.00	$150,000.00
				$150,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall		Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$948,740.00**
Contingency 30% $	**$284,622.00**
BID ITEMS TOTAL $	**$1,233,362.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	2,500	sq ft	$25.00	$62,500.00
Assuming 5' wide construction easement required for length of project	2,500	sq ft	$3.00	$7,500.00
Potential full right of way takes		each	$600,000.00	$0.00
				$70,000.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$148,003.44	$148,003.44
				$148,003.44

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$98,668.96	$98,668.96
				$98,668.96

BID ITEMS TOTAL	**$1,233,362.00**
NON-BID ITEMS TOTAL	**$316,672.40**
TOTAL	**$1,550,034.40**

ENGINEER'S ESTIMATE (2024 COSTS)
Center St and State St (SR-126) Dual EB LTL

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$107,200.00
Public Information Services	1	lump	1.00%	$10,800.00
Traffic Control	1	lump	10.00%	$107,200.00
Survey	1	lump	2.00%	$21,500.00
				$246,700.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	500	ft	$ 12.00	$6,000.00
Remove Concrete Sidewalk	100	sq yd	$ 28.00	$2,800.00
Roadway Excavation (Plan Quantity)	400	cu yd	$ 24.00	$9,600.00
Granular Borrow (Plan Quantity)	400	cu yd	$ 35.00	$14,000.00
Untreated Base Course	348	Ton	$ 40.00	$13,920.00
Remove Concrete Driveway	200	sq yd	$ 28.00	$5,600.00
HMA - 1/2 inch	245	Ton	$ 150.00	$36,720.00
Pavement Marking Paint	30	gal	$ 80.00	$2,400.00
Pavement Message (Preformed Thermoplastic)	20	Each	$ 250.00	$5,000.00
Concrete Curb and Gutter Type B1	500	ft	$ 45.00	$22,500.00
Perpendicular/Parallel Pedestrian Access Ramp	3	Each	$ 5,000.00	$15,000.00
Concrete Sidewalk	1,500	sq ft	$ 15.00	$22,500.00
Micro-Surfacing	2,500	sq yd	$ 3.00	$7,500.00
Concrete Driveway Flared, 7 inch Thick	1,500	sq ft	$ 15.00	$22,500.00
				$186,040.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"		ft	$ 125.00	$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	$ 5,000.00	$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	1	lump	$150,000.00	$150,000.00
				$150,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$250,000.00	$250,000.00
Street Lighting relocation	1	lump	$35,000.00	$35,000.00
				$285,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$150,000.00	$150,000.00
				$150,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall	1	Lump	$300,000.00	$300,000.00
				$300,000.00

BID ITEMS $	**$1,317,740.00**
Contingency 30% $	**$395,322.00**
BID ITEMS TOTAL $	**$1,713,062.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	2,500	sq ft	$25.00	$62,500.00
Assuming 5' wide construction easement required for length of project	2,500	sq ft	$3.00	$7,500.00
Potential full right of way takes		each	$600,000.00	$0.00
				$70,000.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$205,567.44	$205,567.44
				$205,567.44

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$137,044.96	$137,044.96
				$137,044.96

BID ITEMS TOTAL	**$1,713,062.00**
NON-BID ITEMS TOTAL	**$412,612.40**
TOTAL	**$2,125,674.40**

ENGINEER'S ESTIMATE (2024 COSTS)
300 N Dual EB LTL @ State Street

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$71,400.00
Public Information Services	1	lump	1.00%	$7,200.00
Traffic Control	1	lump	10.00%	$71,400.00
Survey	1	lump	2.00%	$14,300.00
				$164,300.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	700	ft	$ 12.00	$8,400.00
Remove Concrete Sidewalk	350	sq yd	$ 28.00	$9,800.00
Roadway Excavation (Plan Quantity)	500	cu yd	$ 24.00	$12,000.00
Granular Borrow (Plan Quantity)	500	cu yd	$ 35.00	$17,500.00
Untreated Base Course	435	Ton	$ 40.00	$17,400.00
Remove Concrete Driveway	200	sq yd	$ 28.00	$5,600.00
HMA - 1/2 inch	306	Ton	$ 150.00	$45,900.00
Pavement Marking Paint	30	gal	$ 80.00	$2,400.00
Pavement Message (Preformed Thermoplastic)	20	Each	$ 250.00	$5,000.00
Concrete Curb and Gutter Type B1	500	ft	$ 45.00	$22,500.00
Perpendicular/Parallel Pedestrian Access Ramp	3	Each	$ 5,000.00	$15,000.00
Concrete Sidewalk	3,150	sq ft	$ 15.00	$47,250.00
Micro-Surfacing	2,500	sq yd	$ 3.00	$7,500.00
Concrete Driveway Flared, 7 inch Thick	1,800	sq ft	$ 15.00	$27,000.00
				$243,250.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"		ft	$ 125.00	$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	$ 5,000.00	$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	1	lump	$150,000.00	$150,000.00
				$150,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$250,000.00	$250,000.00
Street Lighting relocation	1	lump	$35,000.00	$35,000.00
				$285,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$35,000.00	$35,000.00
				$35,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall		Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$877,550.00**
Contingency 30% $	**$263,265.00**
BID ITEMS TOTAL $	**$1,140,815.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	5,500	sq ft	$25.00	$137,500.00
Assuming 5' wide construction easement required for length of project	2,500	sq ft	$3.00	$7,500.00
Potential full right of way takes		each	$600,000.00	$0.00
				$145,000.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$136,897.80	$136,897.80
				$136,897.80

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$91,265.20	$91,265.20
				$91,265.20

BID ITEMS TOTAL	**$1,140,815.00**
NON-BID ITEMS TOTAL	**$373,163.00**
TOTAL	**$1,513,978.00**

ENGINEER'S ESTIMATE (2024 COSTS)
Falcon Hills Dr Connections

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.00%	$158,600.00
Public Information Services	1	lump	0.50%	$8,900.00
Traffic Control	1	lump	3.50%	$61,700.00
Survey	1	lump	2.00%	$35,300.00
				$264,500.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	1,000	ft	$ 12.00	$12,000.00
Remove Concrete Sidewalk	267	sq yd	$ 28.00	$7,466.67
Roadway Excavation (Plan Quantity)	5,400	cu yd	$ 24.00	$129,600.00
Granular Borrow (Plan Quantity)	2,400	cu yd	$ 35.00	$84,000.00
Untreated Base Course	3,132	Ton	$ 40.00	$125,280.00
Remove Concrete Driveway	100	sq yd	$ 28.00	$2,800.00
HMA - 1/2 inch	2,892	Ton	$ 150.00	$433,755.00
Pavement Marking Paint	100	gal	$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	30	Each	$ 250.00	$7,500.00
Concrete Curb and Gutter Type B1	3,800	ft	$ 45.00	$171,000.00
Perpendicular/Parallel Pedestrian Access Ramp	4	Each	$ 5,000.00	$20,000.00
Concrete Sidewalk	2,000	sq ft	$ 15.00	$30,000.00
Chip Seal Coat, Type II		sq yd	$ 5.00	$0.00
				$1,031,401.67

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"	1908	ft	$ 125.00	$238,500.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	6	Each	$ 5,000.00	$30,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	6	Each	$ 2,000.00	$12,000.00
				$280,500.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	0	lump	$100,000.00	$0.00
				$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$150,000.00	$150,000.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$150,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$50,000.00	$50,000.00
				$50,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall	1	Lump	$250,000.00	$250,000.00
				$250,000.00

BID ITEMS $	**$2,026,401.67**
Contingency 30% $	**$607,920.50**
BID ITEMS TOTAL $	**$2,634,322.17**

NON-BID ITEMS				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project	9,000	sq ft	$3.00	$27,000.00
Potential full right of way takes		each	$600,000.00	$0.00
				$27,000.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$263,432.22	$263,432.22
				$263,432.22

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$210,745.77	$210,745.77
				$210,745.77

BID ITEMS TOTAL	**$2,634,322.17**
NON-BID ITEMS TOTAL	**$501,177.99**
TOTAL	**$3,135,500.16**

ENGINEER'S ESTIMATE (2024 COSTS)
1000 West Restriping (North of SR-193)

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$15,600.00
Public Information Services	1	lump	1.00%	$1,600.00
Traffic Control	1	lump	10.00%	$15,600.00
Survey	1	lump	2.00%	$3,200.00
				$36,000.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter		ft	$ 12.00	$0.00
Remove Concrete Sidewalk		sq yd	$ 28.00	$0.00
Roadway Excavation (Plan Quantity)	0	cu yd	$ 24.00	$0.00
Granular Borrow (Plan Quantity)	0	cu yd	$ 35.00	$0.00
Untreated Base Course	0	Ton	$ 40.00	$0.00
Remove Concrete Driveway		sq yd	$ 28.00	$0.00
HMA - 1/2 inch	0	Ton	$ 150.00	$0.00
Pavement Marking Paint	350	gal	$ 80.00	$28,000.00
Pavement Message (Preformed Thermoplastic)	150	Each	$ 250.00	$37,500.00
Concrete Curb and Gutter Type B1		ft	$ 45.00	$0.00
Perpendicular/Parallel Pedestrian Access Ramp		Each	$ 5,000.00	$0.00
Concrete Sidewalk		sq ft	$ 15.00	$0.00
Micro-Surfacing	30,000	sq yd	$ 3.00	$90,000.00
				$155,500.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"		ft	$ 125.00	$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	$ 5,000.00	$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	0	lump	$100,000.00	$0.00
				$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	0	lump	$100,000.00	$0.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$0.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	0	Lump	$50,000.00	$0.00
				$0.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall	0	Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$191,500.00**
Contingency 15% $	**$28,725.00**
BID ITEMS TOTAL $	**$220,225.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project	0	sq ft	$3.00	$0.00
Potential full right of way takes		each	$600,000.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (10% of Bid Items)	1	lump	$22,022.50	$22,022.50
				$22,022.50

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$17,618.00	$17,618.00
				$17,618.00

BID ITEMS TOTAL	**$220,225.00**
NON-BID ITEMS TOTAL	**$39,640.50**
TOTAL	**$259,865.50**

ENGINEER'S ESTIMATE (2024 COSTS)
1000 East Restriping (South of 1450 S)

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$4,700.00
Public Information Services	1	lump	1.00%	$500.00
Traffic Control	1	lump	10.00%	$4,700.00
Survey	1	lump	2.00%	$1,000.00
				$10,900.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter		ft	$ 12.00	$0.00
Remove Concrete Sidewalk		sq yd	$ 28.00	$0.00
Roadway Excavation (Plan Quantity)	0	cu yd	$ 24.00	$0.00
Granular Borrow (Plan Quantity)	0	cu yd	$ 35.00	$0.00
Untreated Base Course	0	Ton	$ 40.00	$0.00
Remove Concrete Driveway		sq yd	$ 28.00	$0.00
HMA - 1/2 inch	0	Ton	$ 150.00	$0.00
Pavement Marking Paint	100	gal	$ 80.00	$8,000.00
Pavement Message (Preformed Thermoplastic)	70	Each	$ 250.00	$17,500.00
Concrete Curb and Gutter Type B1		ft	$ 45.00	$0.00
Perpendicular/Parallel Pedestrian Access Ramp		Each	$ 5,000.00	$0.00
Concrete Sidewalk		sq ft	$ 15.00	$0.00
Micro-Surfacing	7,000	sq yd	$ 3.00	$21,000.00
				$46,500.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"		ft	$ 125.00	$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	$ 5,000.00	$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	0	lump	$100,000.00	$0.00
				$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	0	lump	$100,000.00	$0.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$0.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	0	Lump	$50,000.00	$0.00
				$0.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall	0	Lump	$250,000.00	$0.00
				$0.00

BID ITEMS $	**$57,400.00**
Contingency 25% $	**$14,350.00**
BID ITEMS TOTAL $	**$71,750.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project	0	sq ft	$3.00	$0.00
Potential full right of way takes		each	$600,000.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$8,610.00	$8,610.00
				$8,610.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$5,740.00	$5,740.00
				$5,740.00

BID ITEMS TOTAL	**$71,750.00**
NON-BID ITEMS TOTAL	**$14,350.00**
TOTAL	**$86,100.00**

ENGINEER'S ESTIMATE (2024 COSTS)
1000 East Operations (South of 1450 S)

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	9.50%	$30,500.00
Public Information Services	1	lump	1.00%	$3,300.00
Traffic Control	1	lump	2.00%	$6,500.00
Survey	1	lump	2.00%	$6,500.00
				$46,800.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	150	ft	$ 12.00	$1,800.00
Remove Concrete Sidewalk	80	sq yd	$ 28.00	$2,240.00
Roadway Excavation (Plan Quantity)	500	cu yd	$ 24.00	$12,000.00
Granular Borrow (Plan Quantity)	200	cu yd	$ 35.00	$7,000.00
Untreated Base Course	275	Ton	$ 40.00	$11,000.00
Remove Concrete Driveway		sq yd	$ 28.00	$0.00
HMA - 1/2 inch	250	Ton	$ 130.00	$32,500.00
Pavement Marking Paint	50	gal	$ 80.00	$4,000.00
Pavement Message (Preformed Thermoplastic)	30	Each	$ 250.00	$7,500.00
Concrete Curb and Gutter Type B1		ft	$ 35.00	$0.00
Perpendicular/Parallel Pedestrian Access Ramp		Each	$ 5,000.00	$0.00
Concrete Sidewalk	750	sq ft	$ 9.00	$6,750.00
Chip Seal Coat, Type II		sq yd	$ 3.00	$0.00
Micro-Surfacing	12,000	sq yd	$ 9.00	$108,000.00
				$192,790.00

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
24 Inch Irrigation HDPE Pipe	150	ft	$ 125.00	$18,750.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9	2	Each	$ 5,000.00	$10,000.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3	2	Each	$ 2,000.00	$4,000.00
				$32,750.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
				$0.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility contingency	1	lump	$75,000.00	$75,000.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$75,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$20,000.00	$20,000.00
				$20,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
				$0.00

BID ITEMS $	**$367,340.00**
Contingency (30%) $	**$110,202.00**
BID ITEMS TOTAL $	**$477,542.00**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
	0	sq ft	$5.00	$0.00
Assuming 5' wide construction easement required for length of project	0	sq ft	$2.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (15% of Bid Items)	1	lump	$71,631.30	$71,631.30
				$71,631.30

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (10% of Bid Items)	1	lump	$47,754.20	$47,754.20
				$47,754.20

BID ITEMS TOTAL $	**$477,542.00**
NON-BID ITEMS TOTAL $	**$119,385.50**
GRAND TOTAL $	**$596,927.50**

ENGINEER'S ESTIMATE (2024 COSTS)
Frontage Road Operational Improvements

BID ITEMS

GENERAL

Description	Quantity	Unit	Unit Price	Amount
Mobilization	1	lump	10.00%	$78,000.00
Public Information Services	1	lump	1.00%	$7,800.00
Traffic Control	1	lump	10.00%	$78,000.00
Survey	1	lump	2.00%	$15,600.00
				$179,400.00

ROADWAY

Description	Quantity	Unit	Unit Price	Amount
Remove Concrete Curb and Gutter	150	ft	$ 12.00	$1,800.00
Remove Concrete Sidewalk	100	sq yd	$ 28.00	$2,800.00
Roadway Excavation (Plan Quantity)	867	cu yd	$ 24.00	$20,800.00
Granular Borrow (Plan Quantity)	867	cu yd	$ 35.00	$30,333.33
Untreated Base Course	754	Ton	$ 40.00	$30,160.00
Remove Concrete Driveway		sq yd	$ 28.00	$0.00
HMA - 1/2 inch	530	Ton	$ 150.00	$79,560.00
Pavement Marking Paint	50	gal	$ 80.00	$4,000.00
Pavement Message (Preformed Thermoplastic)	10	Each	$ 250.00	$2,500.00
Concrete Curb and Gutter Type B1	250	ft	$ 45.00	$11,250.00
Perpendicular/Parallel Pedestrian Access Ramp	2	Each	$ 5,000.00	$10,000.00
Concrete Sidewalk	1,000	sq ft	$ 15.00	$15,000.00
Micro-Surfacing	7,000	sq yd	$ 3.00	$21,000.00
				$229,203.33

DRAINAGE & IRRIGATION

Description	Quantity	Unit	Unit Price	Amount
18 Inch Irrigation HDPE Pipe"		ft	$ 125.00	$0.00
Concrete Drainage Structure 3 ft to 5 ft Deep - CB 9		Each	$ 5,000.00	$0.00
Rectangular Grate And Frame (Bicycle Safe Grating) - GF 3		Each	$ 2,000.00	$0.00
				$0.00

SIGNAL SYSTEM

Description	Quantity	Unit	Unit Price	Amount
Modify signal	1	lump	$100,000.00	$100,000.00
				$100,000.00

UTILITIES

Description	Quantity	Unit	Unit Price	Amount
Utility Contingency	1	lump	$150,000.00	$150,000.00
Street Lighting (spaced every 200')	0	Each	$8,000.00	$0.00
				$150,000.00

LANDSCAPING				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Landscaping	1	Lump	$50,000.00	$50,000.00
				$50,000.00

Structures				
Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Retaining Wall	1	Lump	$250,000.00	$250,000.00
				$250,000.00

BID ITEMS $	**$958,603.33**
Contingency 30% $	**$287,581.00**
BID ITEMS TOTAL $	**$1,246,184.33**

NON-BID ITEMS

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Right of Way	0	sq ft	$17.00	$0.00
Assuming 5' wide construction easement required for length of project	0	sq ft	$3.00	$0.00
Potential full right of way takes		each	$600,000.00	$0.00
				$0.00

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Design Engineering (12% of Bid Items)	1	lump	$149,542.12	$149,542.12
				$149,542.12

Description	**Quantity**	**Unit**	**Unit Price**	**Amount**
Construction Management (8% of Bid Items)	1	lump	$99,694.75	$99,694.75
				$99,694.75

BID ITEMS TOTAL	**$1,246,184.33**
NON-BID ITEMS TOTAL	**$249,236.87**
TOTAL	**$1,495,421.20**

Project Information Sheet

GFA(s):	**North Davis County**	**Date Prepared:**	**3/14/2024**
Project Name:	**700 South (SR 193) from 1000 West to US 89**	**Prepared By:**	**JSF**
Jurisdiction(s):	**Clearfield, Layton**	**Checked By:**	**BCC**
Emphasis Areas:	**Intersections, Roadway Departures, Teen Driver**		
Equity Priority:	**High**		

Location Description

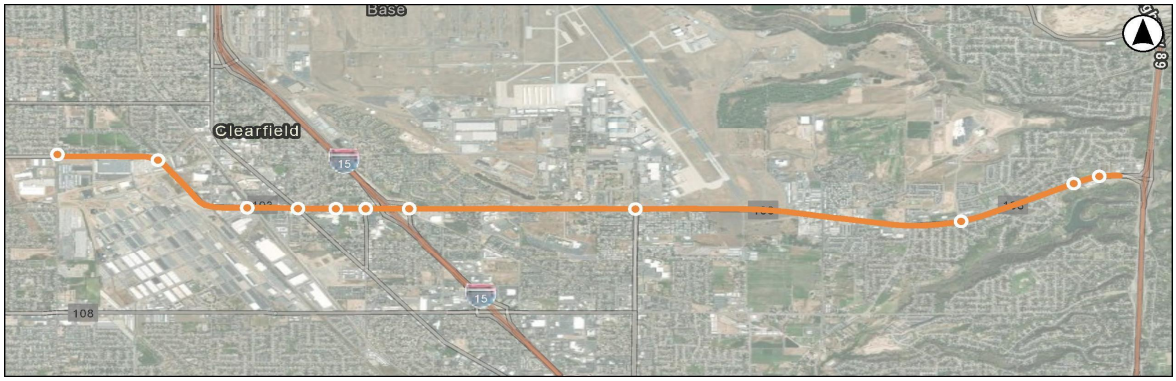
Roadway:	700 South (SR 193)	
From:	1000 West	
To:	US 89	
Length:	7.24	miles

Key Intersection Locations:

800 East	1000 East	State Street	Center Street
Industrial Parkway	3100 North	Frontage Road	1000 West
2650 East	Hill Field Road	2400 East	

Project Location Map

Map ID: 6.21.1.1



Segment Information and Safety Analysis Areas Summary

Roadway Characteristics	Value
Length (miles)	**7.24**
Average Daily Traffic (vehicles per day)	**27,063**
Functional Classification	**Other Principal Arteria**
Roadway Ownership	**State**
Urban/Rural Designation	**Urban**
Number of Key Intersections	**11**

Why Was This Location Identified?	
Composite Safety Score	✓
Historic Crashes	✓
Critical Crash Rate Differential	✓
Crash Profile Risk Score	✓
usRAP - Star Rating (Veh, Ped, Bike)	✓
Local Street Assessment	

Segment Crash History

Crash History (2018 - 2022)	# of crashes
Fatal Crashes (K)	**3**
Suspected Serious Injury Crashes (A)	**3**
Suspected Minor Injury Crashes (B)	**17**
Possible Injury Crashes (C)	**36**
No Injury/PDO Crashes (O)	**175**
Total Crashes	**234**
Total EPDO Crashes	**3,909**

What Crash Types are Over-Represented?			
Fatal	✓	Head On (HO)	✓
Serious Injury	✓	Parked Vehicle (PV)	✓
Pedestrian (Ped)		Single Vehicle	✓
Bicycle (Bike)		Rear to Rear (RR)	
Motorcycle		Rear to Side (RS)	
Angle	✓	Sideswipe (SS)	✓
Front to Rear (FR)	✓	Other/Unknown	✓

Intersection Crash History

									What Crash Types are Over-Represented?							
Intersections	**Signal**	**K**	**A**	**B**	**C**	**O**	**Total**	**EPDO**	K/A	Ped/Bike	Angle	FR	HO	PV	RR/RS	SS
800 East & 700 South		0	0	1	6	4	11	94				✓				✓
Industrial Parkway & 700 South		0	0	2	11	1	14	171				✓				
2650 East & 700 South		0	3	2	5	11	21	394	✓		✓					
1000 East & 700 South	✓	0	0	16	44	34	94	890		✓				✓		
3100 North & 700 South	✓	0	0	1	12	4	17	163				✓				
Hill Field Road & 700 South	✓	0	4	16	82	10	112	1,673				✓				
State Street & 700 South	✓	0	1	30	62	43	136	1,509		✓		✓	✓			
Frontage Road & 700 South	✓	0	0	5	8	2	15	204				✓				
2400 East & 700 South	✓	0	2	1	14	7	24	376	✓			✓				✓
Center Street & 700 South	✓	0	0	9	15	8	32	379				✓	✓			✓
1000 West & 700 South	✓	0	0	9	11	16	36	341					✓			✓

Project Description/How is safety improved?

This project addresses speed management to address front to rear crashes, intersection improvements to reduce left turn crashes, and access management to address sideswipe and head on crashes. Improvements include raised medians along the entire length of the corridor. An Intersection Control Evaluation (ICE) is recommended at locations with high frequency of crashes and at existing High-T configurations (1700 E., 2400 E., Fort Ln., Haven J Barlow Pkwy, 1500 E., Frontage Rd., & H St.). Minor street access should be evaluated to determine locations were access can be managed including consolidation or elimination. Protected intersection are proposed to reduce pedestrian crashes at Fort Ln. and Frontage Rd. Signal upgrades are proposed at Fairfield Rd. Church St. & H St.

This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.

Proposed Proven Safety Countermeasures


Corridor Access Management


Reduced Left-Turn Conflict Intersections

Opinion of Probable Construction Cost

Segment Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Install Raised Medians on Roadways with Existing TWLTL	0.29	All Crashes	7.24	MILE	$ 928,000	$ 6,718,720
Install Driver Feedback Speed Limit Signs	NA	All Crashes	4.00	EACH	$ 10,000	$ 40,000
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -

Intersection Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Perform an Intersection Control Evaluation and Implement	NA	All Crashes	7.00	INT	$ 225,000	$ 1,575,000
Change a 5-section "Doghouse" to Flashing Yellow Arrow	0.75 - 0.93	Left-Turn	1.00	INT	$ 8,000	$ 8,000
Change Permissive Left-Turn to Protected or Protected/Permissive	0.79 - 0.95	Left-Turn	2.00	INT	$ 8,000	$ 16,000
Protected Intersection	NA	All Crashes	2.00	INT	$ 650,000	$ 1,300,000
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -

Improvements Subtotal:		$ 9,657,720
*Mobilization: (% +/-)**	*10%*	$ 75,000
Traffic Control: (% +/-)	*5%*	$ 482,886
Items Not Estimated / Contingency: (% +/-)	*30%*	$ 2,897,316
Estimated Construction Cost:		$ 13,112,922

Local Match†: 20% $ 3,330,800

† *Toward SS4A Implementation Grants*

Preconstruction Engineering/Design	*12%*	$ 1,573,551
*Utilities***		$ -
*ROW***		$ -
Construction Engineering/Management	*15%*	$ 1,966,938
Estimated Project Total:		$ 16,654,000

*Mobilization is 10% +/- of the subtotal with a minimum of $2,500 and a maximum of $75,000
**To be evaluated during feasibility study/design

Additional Potential Improvements

Additional safety improvements could be considered that were not included due to availability of data, need for site-specific information, and/or agency/jurisdiction input. Potential additional countermeasures are listed below. Refer to the ***Countermeasure Toolbox*** for a complete list of safety countermeasures.

Additional Improvements #1: Set Appropriate Speed Limits for All Road Users
Additional Improvements #2:
Additional Improvements #3: Implement 3/4 access at unsignalized locations with median installation where feasible
Additional Improvements #4:
Additional Improvements #5:

Disclaimer:

Disclaimer: The cost estimates provided in this document are for comparison purposes only. Actual project costs will vary. The recommended safety improvement strategies were based on available data and reasonable engineering judgment and a more detailed assessment may suggest additional safety strategies that could be considered.

Project Information Sheet

GFA(s):	**North Davis County**	**Date Prepared:**	**3/14/2024**
Project Name:	**1000 East from 700 South (SR 193) to Antelope Drive (SR 108)**	**Prepared By:**	**MA**
Jurisdiction(s):	**Clearfield**	**Checked By:**	**EMF**
Emphasis Areas:	**Intersections, Roadway Departures, Teen Driver**		
Equity Priority:	**High, Medium**		

Location Description

Roadway: 1000 East
From: 700 South (SR 193)
To: Antelope Drive (SR 108)
Length: 0.99 miles

Key Intersection Locations:
700 South
State Street

Project Location Map

Map ID: 6.21.3

Segment Information and Safety Analysis Areas Summary

Roadway Characteristics	Value
Length (miles)	**0.99**
Average Daily Traffic (vehicles per day)	**749**
Functional Classification	**Major Collector**
Roadway Ownership	**Federal Aid - Local**
Urban/Rural Designation	**Urban**
Number of Key Intersections	**2**

Why Was This Location Identified?	
Composite Safety Score	
Historic Crashes	✓
Critical Crash Rate Differential	✓
Crash Profile Risk Score	
usRAP - Star Rating (Veh, Ped, Bike)	✓
Local Street Assessment	✓

Segment Crash History

Crash History (2018 - 2022)	# of crashes
Fatal Crashes (K)	**0**
Suspected Serious Injury Crashes (A)	**0**
Suspected Minor Injury Crashes (B)	**5**
Possible Injury Crashes (C)	**11**
No Injury/PDO Crashes (O)	**34**
Total Crashes	**50**
Total EPDO Crashes	**270**

What Crash Types are Over-Represented?			
Fatal		Head On (HO)	
Serious Injury		Parked Vehicle (PV)	✓
Pedestrian (Ped)		Single Vehicle	
Bicycle (Bike)		Rear to Rear (RR)	
Motorcycle		Rear to Side (RS)	
Angle		Sideswipe (SS)	
Front to Rear (FR)	✓	Other/Unknown	

Intersection Crash History

									What Crash Types are Over-Represented?							
Intersections	**Signal**	**K**	**A**	**B**	**C**	**O**	**Total**	**EPDO**	K/A	Ped/Bike	Angle	FR	HO	PV	RR/RS	SS
700 South & 1000 East	✓	0	0	15	16	44	75	560		✓				✓		
State Street & 1000 East	✓	0	2	7	6	27	42	439		✓		✓				

Project Description/How is safety improved?

This project includes improvements along 1000 E to address an overrepresentation of rear-end and parked vehicle collisions: lane narrowing through parked area striping and wider lane striping; removal of southbound through lane from 700 S to approximately 900 S; implementation of bulbouts at crossing south of 900 S; RRFB's at Campbell Heights and 1525 S, including bulb outs and raised crossings. The following intersection improvements are recommended to address an overrepresentation of ped/bike, rear-end and parked vehicle collisions: 700 S/1000 E, protected intersection improvements.

This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.

Proposed Proven Safety Countermeasures

Appropriate Speed Limits for All Road Users

Crosswalk Visibility Enhancements

Rectangular Rapid Flashing Beacons (RRFB)

Road Diets (Roadway Configuration)

Opinion of Probable Construction Cost

Segment Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Traffic Calming - Lane Narrowing	0.68	All Crashes	0.99	MILE	$ 39,000	$ 38,610
Traffic Calming - Wider Lane Lines	0.68	All Crashes	0.99	MILE	$ 21,000	$ 20,790
4-Lane to 3-Lane Road Diet Conversion	0.53 - 0.81	All Crashes	0.19	MILE	$ 22,000	$ 4,180
Install a Rectangular Rapid Flashing Beacons (RRFB)	0.526	Pedestrian	2.00	XING (2)	$ 15,000	$ 30,000
Traffic Calming - Bulbouts	0.68	All Crashes	12.00	EACH	$ 36,000	$ 432,000
Install Raised Crosswalk	NA	Pedestrian	2.00	EACH	$ 71,000	$ 142,000
						$ -
						$ -
						$ -
						$ -
						$ -

Intersection Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Protected Intersection	NA	All Crashes	1.00	INT	$ 650,000	$ 650,000
Provide Right-Turn Lanes	0.74 - 0.86	All Crashes	2.00	LANE	$ 150,000	$ 300,000
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -

Improvements Subtotal:		$ 1,617,580
*Mobilization: (% +/-)**	*10%*	$ 75,000
Traffic Control: (% +/-)	*5%*	$ 80,879
Items Not Estimated / Contingency: (% +/-)	*30%*	$ 485,274
Estimated Construction Cost:		$ 2,258,733

Local Match†: 20% $ 573,800

† *Toward SS4A Implementation Grants*

Preconstruction Engineering/Design	*12%*	$ 271,048
*Utilities***		$ -
*ROW***		$ -
Construction Engineering/Management	*15%*	$ 338,810
Estimated Project Total:		$ 2,869,000

*Mobilization is 10% +/- of the subtotal with a minimum of $2,500 and a maximum of $75,000
**To be evaluated during feasibility study/design

Additional Potential Improvements

Additional safety improvements could be considered that were not included due to availability of data, need for site-specific information, and/or agency/jurisdiction input. Potential additional countermeasures are listed below. Refer to the ***Countermeasure Toolbox*** for a complete list of safety countermeasures.

Additional Improvements #1: Set Appropriate Speed Limits for All Road Users
Additional Improvements #2: Safe Routes to School
Additional Improvements #3:
Additional Improvements #4:
Additional Improvements #5:

Disclaimer:

Disclaimer: The cost estimates provided in this document are for comparison purposes only. Actual project costs will vary. The recommended safety improvement strategies were based on available data and reasonable engineering judgment and a more detailed assessment may suggest additional safety strategies that could be considered.

Project Information Sheet

GFA(s):	**North Davis County**	**Date Prepared:**	**3/14/2024**
Project Name:	**700 South (SR 193) from 1000 West to US 89**	**Prepared By:**	**JSF**
Jurisdiction(s):	**Layton, Clearfield**	**Checked By:**	**BC**
Emphasis Areas:	**Intersections, Roadway Departures, Teen Driver**		
Equity Priority:	**High**		

Location Description

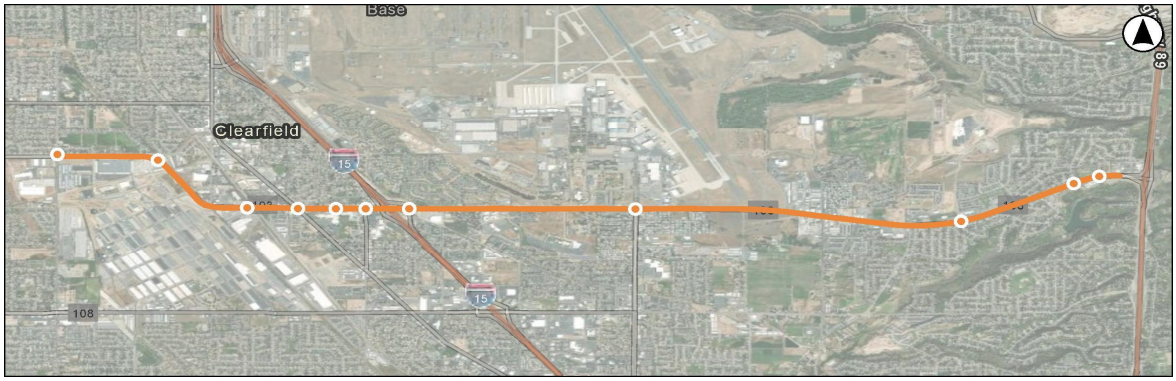
Roadway:	700 South (SR 193)	
From:	1000 West	
To:	US 89	
Length:	7.24	miles

Key Intersection Locations:

800 East	1000 East	State Street	Center Street
Industrial Parkway	3100 North	Frontage Road	1000 West
2650 East	Hill Field Road	2400 East	

Project Location Map

Map ID: 6.23.4.1



Segment Information and Safety Analysis Areas Summary

Roadway Characteristics	Value
Length (miles)	**7.24**
Average Daily Traffic (vehicles per day)	**27,063**
Functional Classification	**Other Principal Arteria**
Roadway Ownership	**State**
Urban/Rural Designation	**Urban**
Number of Key Intersections	**11**

Why Was This Location Identified?	
Composite Safety Score	✓
Historic Crashes	✓
Critical Crash Rate Differential	✓
Crash Profile Risk Score	✓
usRAP - Star Rating (Veh, Ped, Bike)	✓
Local Street Assessment	

Segment Crash History

Crash History (2018 - 2022)	# of crashes
Fatal Crashes (K)	**3**
Suspected Serious Injury Crashes (A)	**3**
Suspected Minor Injury Crashes (B)	**17**
Possible Injury Crashes (C)	**36**
No Injury/PDO Crashes (O)	**175**
Total Crashes	**234**
Total EPDO Crashes	**3,909**

What Crash Types are Over-Represented?			
Fatal	✓	Head On (HO)	✓
Serious Injury	✓	Parked Vehicle (PV)	✓
Pedestrian (Ped)		Single Vehicle	✓
Bicycle (Bike)		Rear to Rear (RR)	
Motorcycle		Rear to Side (RS)	
Angle	✓	Sideswipe (SS)	✓
Front to Rear (FR)	✓	Other/Unknown	✓

Intersection Crash History

									What Crash Types are Over-Represented?							
Intersections	**Signal**	**K**	**A**	**B**	**C**	**O**	**Total**	**EPDO**	K/A	Ped/Bike	Angle	FR	HO	PV	RR/RS	SS
800 East & 700 South		0	0	1	6	4	11	94				✓				✓
Industrial Parkway & 700 South		0	0	2	11	1	14	171				✓				
2650 East & 700 South		0	3	2	5	11	21	394	✓		✓					
1000 East & 700 South	✓	0	0	16	44	34	94	890		✓				✓		
3100 North & 700 South	✓	0	0	1	12	4	17	163				✓				
Hill Field Road & 700 South	✓	0	4	16	82	10	112	1,673				✓				
State Street & 700 South	✓	0	1	30	62	43	136	1,509		✓		✓	✓			
Frontage Road & 700 South	✓	0	0	5	8	2	15	204				✓				
2400 East & 700 South	✓	0	2	1	14	7	24	376	✓			✓				✓
Center Street & 700 South	✓	0	0	9	15	8	32	379				✓	✓			✓
1000 West & 700 South	✓	0	0	9	11	16	36	341					✓			✓

Project Description/How is safety improved?

This projects looks at systemically improving safety along the corridor and addressing intersection related crashes including left turning crashes. This is done by implementing raised medians along the entire length of the corridor and evaluating control at major intersections to determine the best control type. An Intersection Control Evaluation (ICE) is recommended at locations with high crashes total and existing High-T configurations (1700 E., 2400 E., Fort Ln., Haven J Barlow Pkwy, 1500 E., Frontage Rd., & H St.). Minor street access should also be evaluated to determine locations were access can be eliminated. Protected intersection are need to reduce pedestrian crashes Fort Ln. and Frontage Rd. On signal upgrades are also needed (Fairfield Rd. Church St. & H St.).

This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.

Proposed Proven Safety Countermeasures

Medians and Pedestrian Refuge Islands in Urban & Suburban Areas

Opinion of Probable Construction Cost

Segment Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Install Raised Medians on Roadways with Existing TWLTL	0.29	All Crashes	7.24	MILE	$ 928,000	$ 6,718,720
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -

Intersection Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Perform an Intersection Control Evaluation and Implement	NA	All Crashes	7.00	INT	$ 225,000	$ 1,575,000
Change a 5-section "Doghouse" to Flashing Yellow Arrow	0.75 - 0.93	Left-Turn	1.00	INT	$ 8,000	$ 8,000
Change Permissive Left-Turn to Protected or Protected/Permissive	0.79 - 0.95	Left-Turn	2.00	INT	$ 8,000	$ 16,000
Protected Intersection	NA	All Crashes	2.00	INT	$ 650,000	$ 1,300,000
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -

Improvements Subtotal:		$ 9,617,720
*Mobilization: (% +/-)**	*10%*	$ 75,000
Traffic Control: (% +/-)	*5%*	$ 480,886
Items Not Estimated / Contingency: (% +/-)	*30%*	$ 2,885,316
Estimated Construction Cost:		$ 13,058,922

Local Match†: 20% $ 3,317,000

† *Toward SS4A Implementation Grants*

Preconstruction Engineering/Design	*12%*	$ 1,567,071
*Utilities***		$ -
*ROW***		$ -
Construction Engineering/Management	*15%*	$ 1,958,838
Estimated Project Total:		$ 16,585,000

*Mobilization is 10% +/- of the subtotal with a minimum of $2,500 and a maximum of $75,000
**To be evaluated during feasibility study/design

Additional Potential Improvements

Additional safety improvements could be considered that were not included due to availability of data, need for site-specific information, and/or agency/jurisdiction input. Potential additional countermeasures are listed below. Refer to the ***Countermeasure Toolbox*** for a complete list of safety countermeasures.

Additional Improvements #1: Set Appropriate Speed Limits for All Road Users
Additional Improvements #2:
Additional Improvements #3: Implement 3/4 access at unsignalized locations with median installation where feasible
Additional Improvements #4:
Additional Improvements #5:

Disclaimer:

Disclaimer: The cost estimates provided in this document are for comparison purposes only. Actual project costs will vary. The recommended safety improvement strategies were based on available data and reasonable engineering judgment and a more detailed assessment may suggest additional safety strategies that could be considered.

Project Information Sheet

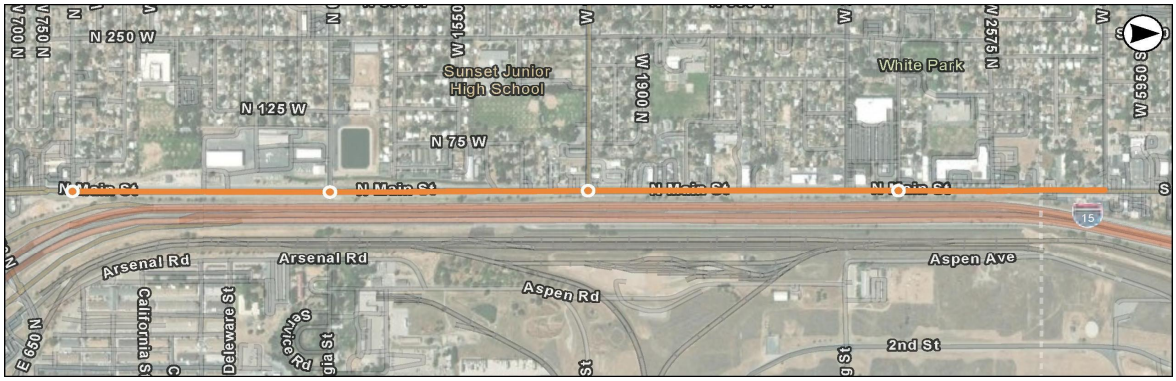
GFA(s):	**North Davis County**	**Date Prepared:**	**3/14/2024**
Project Name:	**Main Street (SR 126) from 6000 South (Roy) to 800 North**	**Prepared By:**	**JSF**
Jurisdiction(s):	**Sunset, Roy**	**Checked By:**	**EJS**
Emphasis Areas:	**Intersections, Roadway Departures, Teen Driver**		
Equity Priority:	**Medium**		

Location Description

Roadway:	Main Street (SR 126)	**Key Intersection Locations:**	
From:	6000 South (Roy)	2400 North	1800 North
To:	800 North	800 North	
Length:	2.01 miles	1300 North	

Project Location Map

Map ID: 6.25.1.1



Segment Information and Safety Analysis Areas Summary

Roadway Characteristics	Value
Length (miles)	**2.01**
Average Daily Traffic (vehicles per day)	**24,754**
Functional Classification	**Other Principal Arteria**
Roadway Ownership	**State**
Urban/Rural Designation	**Urban**
Number of Key Intersections	**4**

Why Was This Location Identified?	
Composite Safety Score	✓
Historic Crashes	✓
Critical Crash Rate Differential	✓
Crash Profile Risk Score	✓
usRAP - Star Rating (Veh, Ped, Bike)	✓
Local Street Assessment	

Segment Crash History

Crash History (2018 - 2022)	# of crashes
Fatal Crashes (K)	**1**
Suspected Serious Injury Crashes (A)	**1**
Suspected Minor Injury Crashes (B)	**12**
Possible Injury Crashes (C)	**19**
No Injury/PDO Crashes (O)	**89**
Total Crashes	**122**
Total EPDO Crashes	**1,554**

What Crash Types are Over-Represented?			
Fatal	✓	Head On (HO)	
Serious Injury		Parked Vehicle (PV)	✓
Pedestrian (Ped)		Single Vehicle	✓
Bicycle (Bike)		Rear to Rear (RR)	
Motorcycle		Rear to Side (RS)	
Angle		Sideswipe (SS)	
Front to Rear (FR)	✓	Other/Unknown	

Intersection Crash History

									What Crash Types are Over-Represented?							
Intersections	**Signal**	**K**	**A**	**B**	**C**	**O**	**Total**	**EPDO**	K/A	Ped/Bike	Angle	FR	HO	PV	RR/RS	SS
2400 North & Main Street		0	0	2	9	8	19	155		✓	✓					
800 North & Main Street	✓	0	0	18	82	39	139	1,372				✓	✓			
1300 North & Main Street	✓	0	0	2	28	9	39	372				✓				✓
1800 North & Main Street	✓	1	2	11	47	45	106	1,900	✓		✓					

Project Description/How is safety improved?

This project improves safety by installing raised medians along the corridor and sidewalk infill on the east side of the corridor. Systemic bicycle improvements include adding bicycle treatments at key intersections along the corridor (800 N., 1300 N., 1800 N., 2300 N., 6000 S.). These countermeasures help address over-represented head-on and pedestrian/bicycle crashes.

This project description represents potential safety improvement strategies that could be implemented at this location, as well as other locations with similar conditions. Additional improvement strategies could be considered subject to engineering analysis.

Proposed Proven Safety Countermeasures


Bicycle Lanes


Corridor Access Management


Walkways

Opinion of Probable Construction Cost

Segment Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Install Raised Medians on Roadways with Existing TWLTL	0.29	All Crashes	2.01	MILE	$ 928,000	$ 1,865,280
Install Sidewalk or Walkways	NA	Pedestrian	1.18	MILE	$ 634,000	$ 747,728
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -

Intersection Improvements

Item Description	CMF	Applicable Crashes	Quantity	Unit	Unit Price	Item Cost
Add Bicycle Treatments at Intersections	NA	All Crashes	5.00	INT	$ 9,000	$ 45,000
Change a 5-section "Doghouse" to Flashing Yellow Arrow	0.75 - 0.93	Left-Turn	1.00	INT	$ 8,000	$ 8,000
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -
						$ -

Improvements Subtotal:		$ 2,666,008
*Mobilization: (% +/-)**	*10%*	$ 75,000
Traffic Control: (% +/-)	*5%*	$ 133,300
Items Not Estimated / Contingency: (% +/-)	*30%*	$ 799,802
Estimated Construction Cost:		$ 3,674,110

Local Match†: 20% $ 933,400

† *Toward SS4A Implementation Grants*

Preconstruction Engineering/Design	*12%*	$ 440,893
*Utilities***		$ -
*ROW***		$ -
Construction Engineering/Management	*15%*	$ 551,117
Estimated Project Total:		$ 4,667,000

*Mobilization is 10% +/- of the subtotal with a minimum of $2,500 and a maximum of $75,000
**To be evaluated during feasibility study/design

Additional Potential Improvements

Additional safety improvements could be considered that were not included due to availability of data, need for site-specific information, and/or agency/jurisdiction input. Potential additional countermeasures are listed below. Refer to the ***Countermeasure Toolbox*** for a complete list of safety countermeasures.

Additional Improvements #1: Set Appropriate Speed Limits for All Road Users
Additional Improvements #2: Remove on street parking to ensure upgrade to buffered bicycle lane fits with existing width
Additional Improvements #3:
Additional Improvements #4:
Additional Improvements #5:

Disclaimer:

Disclaimer: The cost estimates provided in this document are for comparison purposes only. Actual project costs will vary. The recommended safety improvement strategies were based on available data and reasonable engineering judgment and a more detailed assessment may suggest additional safety strategies that could be considered.