



Prepared for:	City of Henderson, Nevada	Project Name:	I-215 Beltway Widening Project – Pecos Road to Stephanie Street
Copy to:	Nevada Department of Transportation		
Prepared by:	Sabra McNeish, Jacobs		
Date:	October 11, 2023		

1. Introduction

The City of Henderson (City) proposes to widen the Interstate 215 Bruce Woodbury Beltway (I-215) from Pecos Road to Stephanie Street in the City of Henderson, Clark County, Nevada. This section of I-215 freeway is one of the primary east-west freeway corridors in the Las Vegas Valley and connects the City of Henderson to the rest of the Las Vegas Valley. The I-215 Beltway Widening Project (Project) involves widening of I-215, ramp reconstruction, and local road improvements to the interchanges with I-215 at Pecos Road/St. Rose Parkway and Green Valley Parkway. The Project would also reconstruct ramps at the Valle Verde Drive and Stephanie Street interchanges. Figure 1-1 shows the Project location and study area.

The Project is being completed with funding from Clark County. However, because I-215 is within Nevada Department of Transportation (NDOT) right-of-way, an NDOT encroachment permit is required to construct the improvements. The interstate system is under the jurisdiction of the Federal Highway Administration (FHWA) providing a federal nexus to prepare an environmental document to comply with the National Environmental Policy Act of 1969 (NEPA). Thus, in compliance with NEPA, the City is preparing documentation to evaluate the potential environmental impacts of the project. This technical memorandum presents potential impacts to social and economic resources associated with the No Action Alternative and the Preferred Alternative and identifies measures to mitigate impacts identified.

2. Project Description

I-215 serves as an important connection between the City of Henderson and the surrounding Las Vegas metropolitan area. The Pecos Road/St. Rose Parkway and Green Valley Parkway interchanges with I-215 provide access to and from the residential and commercial developments at the west edge of the City. Clark County and the City have experienced significant population growth over the last decade. Between 2010 and 2020, Clark County's population grew by over 300,000 residents (an increase of about 20 percent) and the City's population grew by over 60,000 residents (an increase of about 25 percent) (U.S. Census Bureau 2010 and 2020). The regional population is projected to continue to grow.

This segment of I-215 currently experiences congestion due to existing roadway deficiencies and the regional population growth, which has increased current traffic volumes that exceed the roadway's capacity. In addition, existing roadway deficiencies result in increased travel time and contribute to accidents. By 2050, if no improvements are made on I-215 in the Project area, severe congestion with average speeds of less than 15 miles per hour is expected in both the morning and afternoon peak periods in some areas.

The proposed Project would widen I-215 from Pecos Road to Stephanie Street, improve interchanges and ramps, and construct a pedestrian bridge over Green Valley Parkway near Village Walk Drive. The purpose of the Project is to eliminate existing roadway deficiencies and provide transportation improvements to serve existing and future traffic demand.

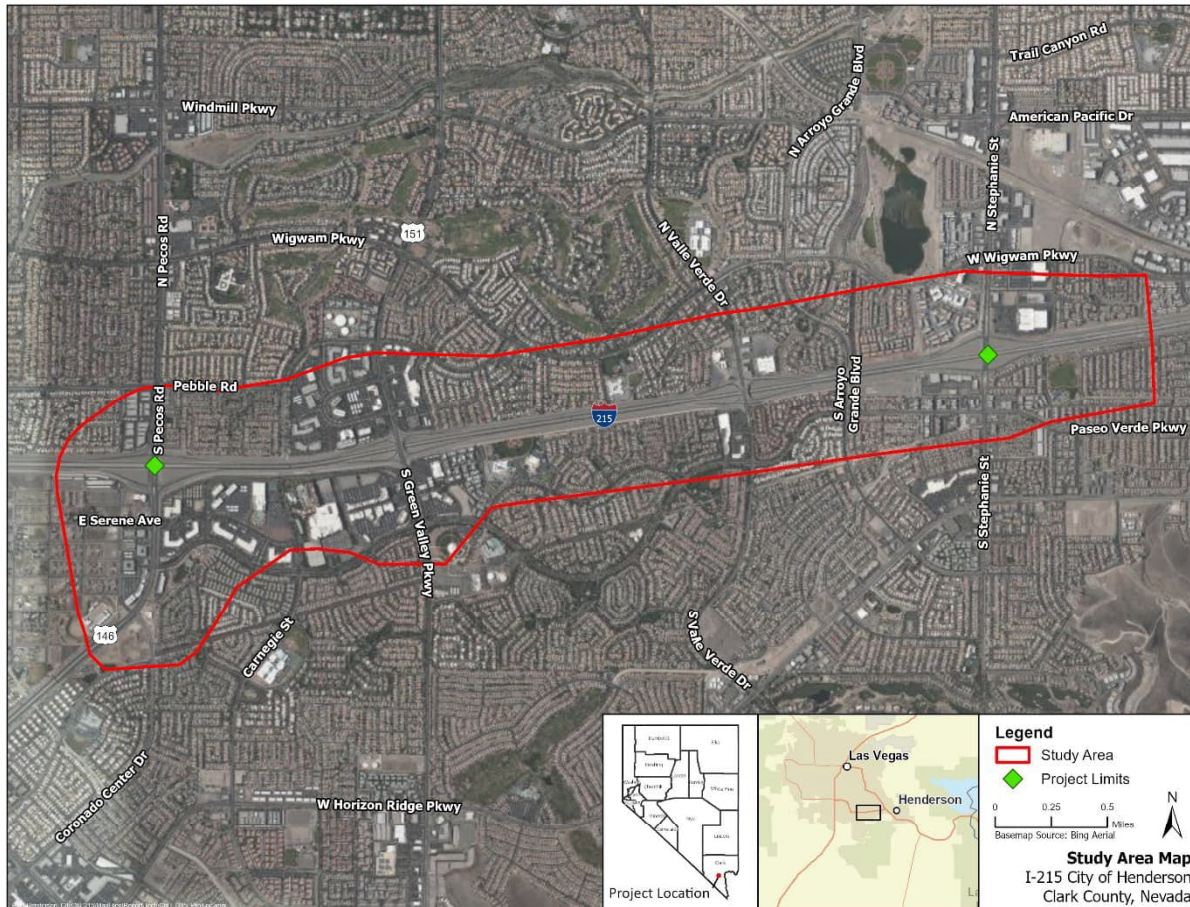


Figure 1-1. Study Area

3. Alternatives Evaluated

Two alternatives were evaluated for impacts, the No Action Alternative and the Preferred Alternative, described in Sections 3.1 and 3.2, respectively.

3.1 No Action Alternative Description

Under the No Action Alternative, none of the improvements included under the Preferred Alternative would be implemented. Only routine maintenance would be performed on I-215. Other planned transportation improvement projects in the area could still move forward. While this alternative would not fulfill the Project's purpose and need, it is included in the analysis as a baseline for comparison.

3.2 Preferred Alternative Description

The Preferred Alternative would widen I-215 with two additional through lanes in each direction (initially four lanes and at ultimate buildout, five lanes in each direction for a total of ten lanes) and an auxiliary lane between each interchange on I-215 from Pecos Road to Stephanie Street. This configuration is consistent with the improvements identified as part of the Henderson (I-11/I-515/I-215) Interchange project located adjacent to the east limit of this study. See Attachment A for a map of the Preferred Alternative.



Other improvements are described as follows:

- Pecos Road/St. Rose Parkway Interchange
 - Eastbound I-215 exit ramp: Construct additional right-turn lane to St. Rose Parkway for a total of two right-turn lanes.
 - Eastbound I-215 entrance ramp: The movement from northbound St. Rose Parkway to the entrance ramp will be free flow. This eastbound entrance ramp will have four receiving lanes: two from the northbound to eastbound movement and two from the southbound to eastbound movement. Eventually, two of the four lanes will drop before merging onto the freeway as a two-lane ramp.
 - Westbound I-215 exit ramp: Widen to two lanes and construct additional left-turn lane, resulting in three left-turn lanes.
 - Along St. Rose Parkway extending to south of the St. Rose Parkway/Paseo Verde Parkway intersection: Extend the northbound outside lane to provide more capacity for vehicles turning right to the I-215 eastbound entrance ramp.
- Green Valley Parkway Interchange
 - Reconstruct interchange as a diverging diamond interchange. Does not require widening of the existing bridge.
 - Reconfigure all ramps to allow for the diverging diamond interchange.
 - Construct one extra approach lane on each exit ramp for a total of two eastbound and two westbound lanes on- and off-ramps.
 - Construct a pedestrian bridge over Green Valley Parkway near Village Walk Drive to remove the east-west at-grade crosswalks (across Green Valley Parkway), enhancing safety for vulnerable road users and improving traffic operations.
- Valle Verde Drive interchange
 - Widen off-ramps from I-215 to two lanes.
- Stephanie Street interchange
 - Widen westbound entrance ramp and eastbound exit ramps to two lanes.

Additionally, the Preferred Alternative would:

- Reconstruct bike trails affected by the Project.
- Reconstruct sound walls and storm drainage facilities, such as storm drain inlets and pipes.
- Construct other ancillary roadway improvements to improve the safety of users of I-215 such as outside shoulders, barrier rails, and retaining walls, as well as pavement markings.
- Install traffic control devices and modify bridge underdeck and ramp lighting.
- Not require any new right-of-way (ROW) along I-215 and all proposed work along I-215 would occur within existing NDOT ROW¹.
- Not convert any existing land uses.

¹ As noted in section 7.2.1, approximately 1.43 acres of right-of-way would be required along Green Valley Parkway and up to 0.26 acre of right-of-way along St. Rose Parkway. These are both City of Henderson streets,



4. Regulatory Context

Community impacts were evaluated in accordance with the following key laws, regulations, and guidance:

- The Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (42 *United States Code* [USC] 4601 as implemented through 49 *Code of Federal Regulations* [CFR] 24) – Establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms.
- Federal Highway Administration (FHWA) Technical Advisory T6640.8A, Guidance for Preparing and Processing Environmental and Section 4(f) Documents, 1987 – Calls for discussing foreseeable economic impacts on the regional and local economy, economic vitality, and business districts.
- Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks, 1997 (62 *Federal Register* 19885) – Directs federal agencies to identify and assess environmental health risks and safety risks that may disproportionately affect children.
- Sections 109(h) and 128, Title 23 of the USC, on Highways (2012) – Assures that community cohesion, availability of public facilities and services, and economic and social effects are assessed during highway development.
- FHWA Community Impact Assessment: A Quick Reference for Transportation (FHWA-PD-96-036), September 1996 (updated 2018) – Increases awareness of the potential effects of transportation actions on the human environment.

5. Methods

The analysis used mapping of businesses and residences; information on neighborhoods, services, and other social amenities from local and regional land use plans, comprehensive plans, and development plans; and demographic and economic information from the most recent Census data (2020 Census and 2016-2020 American Community Survey [ACS] 5-year estimate data). Demographic information is provided for the City of Henderson and Clark County.

Impacts were assessed by evaluating how the Preferred Alternative would change quality of life, influence community cohesion, and affect businesses, residents, and public services by changing access and travel patterns.

The study area for socioeconomic impacts of the Project is 0.25 mile from the existing right-of-way boundary (Figure 1-1). This study area was selected because most of the environmental impacts resulting from the Project would occur in the areas less than 0.25 mile from the freeway. The study area is entirely within the City of Henderson. Demographic information is provided for the study area, City, and Clark County.

6. Existing Conditions

6.1 Population and Trends

The population of Clark County, the City of Henderson, and the study area grew between 2010 and 2020 (Table 6-1). The study area experienced population growth at a faster pace than Clark County and the City with an increase in population of approximately 53 percent between 2010 and 2020. The study area consists of 13 census tracts and 163 census blocks (Figure 6-1).

**Table 6-1. Population Trends**

Area	2010 Population	2020 Population	Percent Change 2010 - 2020
Study Area	8,117	12,417	53%
City of Henderson	249,250	309,955	24%
Clark County	1,895,521	2,228,866	18%

Sources: U.S. Census Bureau 2010 and 2020

According to the State of Nevada's Department of Taxation, Clark County is expected to grow by over 20 percent between 2020 and 2040, resulting in a projected 2040 population of over 2.8 million people (State of Nevada; 2021).

The proportion of the population that is a minority in the study area grew at a faster pace between 2010 and 2020 than within Henderson and Clark County (Table 6-2). However, the overall minority population proportion in the study area is equal to that of Henderson and less than Clark County.

Table 6-2. Minority Population Trends

Area	2010 Minority Population	2010 Percent of Total Population	2020 Minority Population	2020 Percent of Total Population Minority Population	Percent Change 2010 - 2020
Study Area	2,373	29%	4,537	37%	91%
Henderson	73,930	30%	116,133	37%	57%
Clark County	953,707	50%	1,298,663	58%	36%

Sources: U.S. Census Bureau 2010 and 2020

In the study area, Henderson, and Clark County, Hispanics or Latinos are the largest minority population (Figure 6-2). Overall, White alone is the largest population group within the study area, Henderson, and Clark County. Figure 6-3 illustrates the distribution of the minority population throughout the study area.

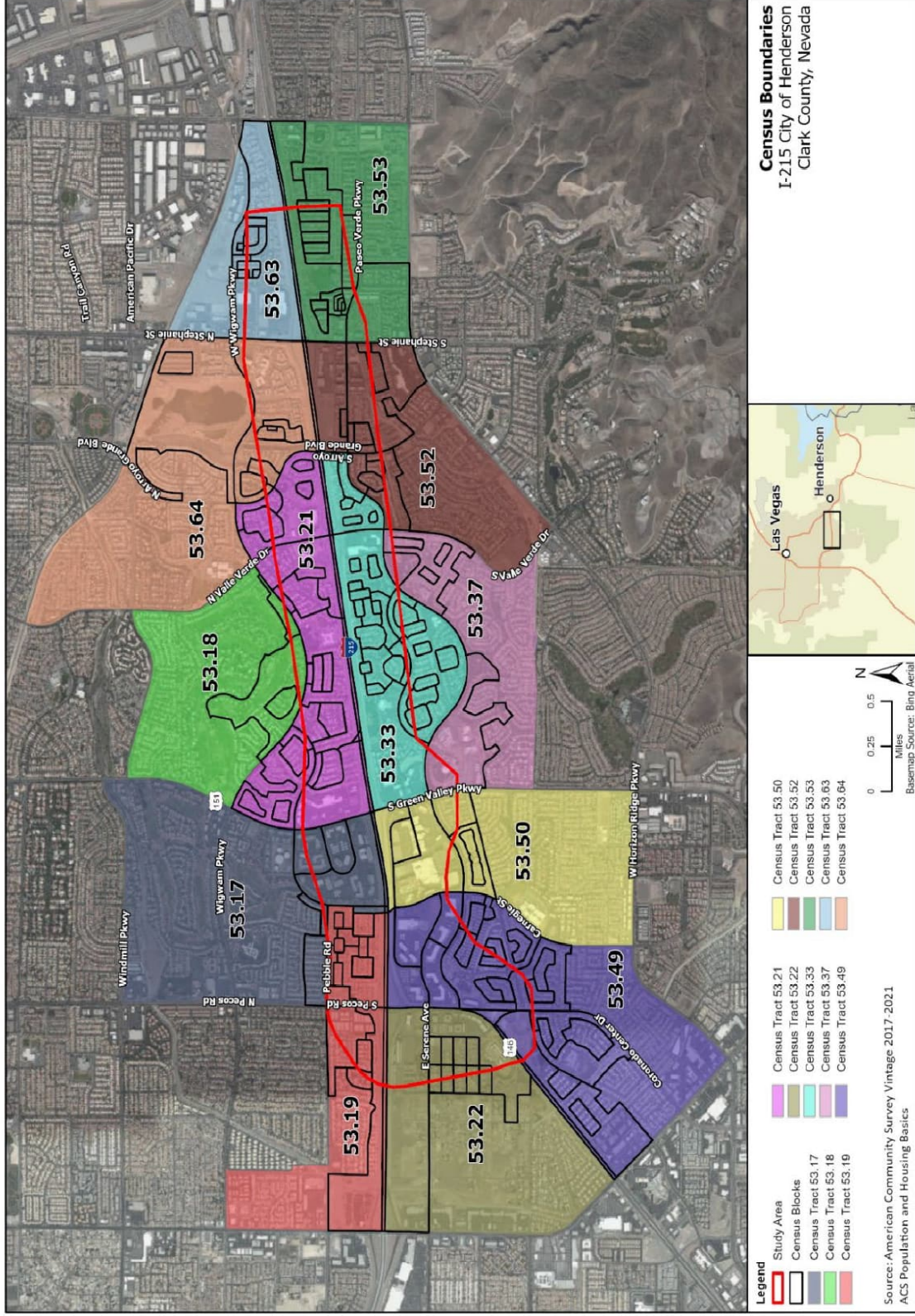


Figure 6-1. Census Boundaries

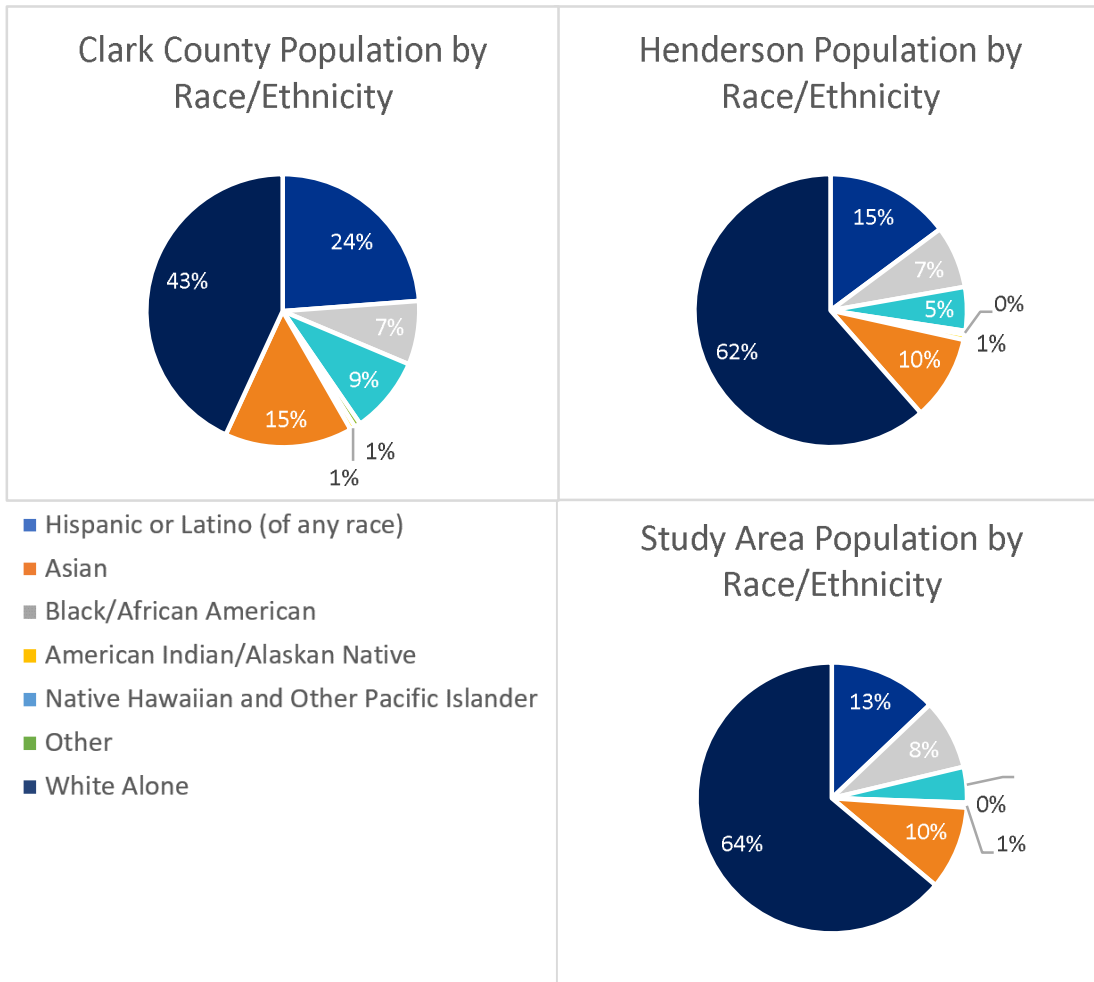


Figure 6-2. Population by Race/Ethnicity



6.2 Income

The median household income in the study area is greater than that of the City of Henderson and Clark County (Figure 6-4). The median household income of the study area is about \$10,000 greater than the median household income for the rest of the City of Henderson and about \$25,000 greater than that of Clark County.

The U.S. Department of Health and Human Services (HHS) annually publishes poverty guidelines to determine financial eligibility for certain programs. According to the HHS guidelines, in 2023 a household with four persons was living in poverty if the total income of the family/household was less than \$30,000 (HHS 2023). As shown on Figure 6-5, the percentage of residents in the study area living in poverty is 7 percent, lower than the City of Henderson and Clark County (U.S. Census Bureau 2020). Figure 6-6 shows the distribution of the population below the poverty level.

6.3 Non-English Speaking

The presence of non-English speaking or English as-a-second language populations may present communication obstacles and limit a person's ability to understand and offer input on changes to their environment. Approximately six percent of the study area residents are considered of limited-English proficiency (U.S. Census Bureau 2020). This percentage is comparable to Henderson residents (6 percent) and lower than that of Clark County residents (12 percent) (U.S. Census Bureau 2020). About 10 percent of the study area speaks Spanish at home (U.S. Census Bureau 2020).

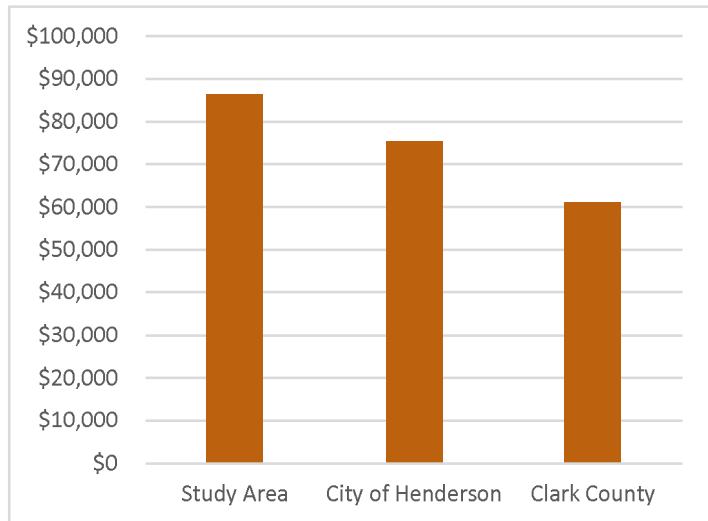


Figure 6-4. Median Household Income

Source: U.S. Census Bureau 2020

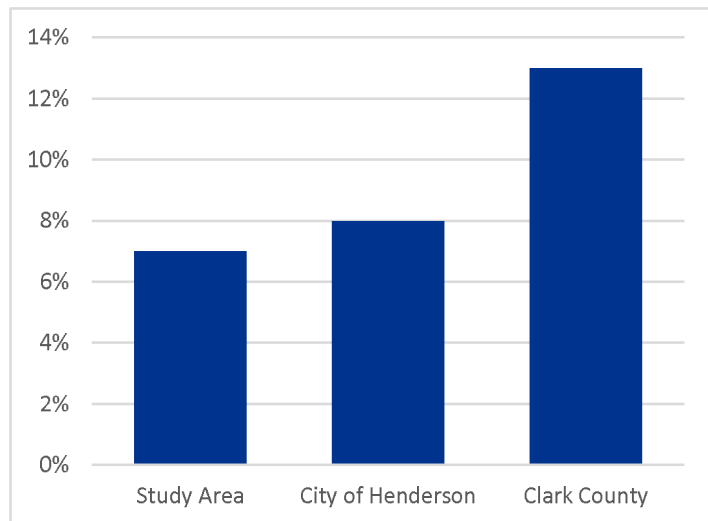


Figure 6-5. Percent of Population Below Poverty Level

Source: U.S. Census Bureau 2020

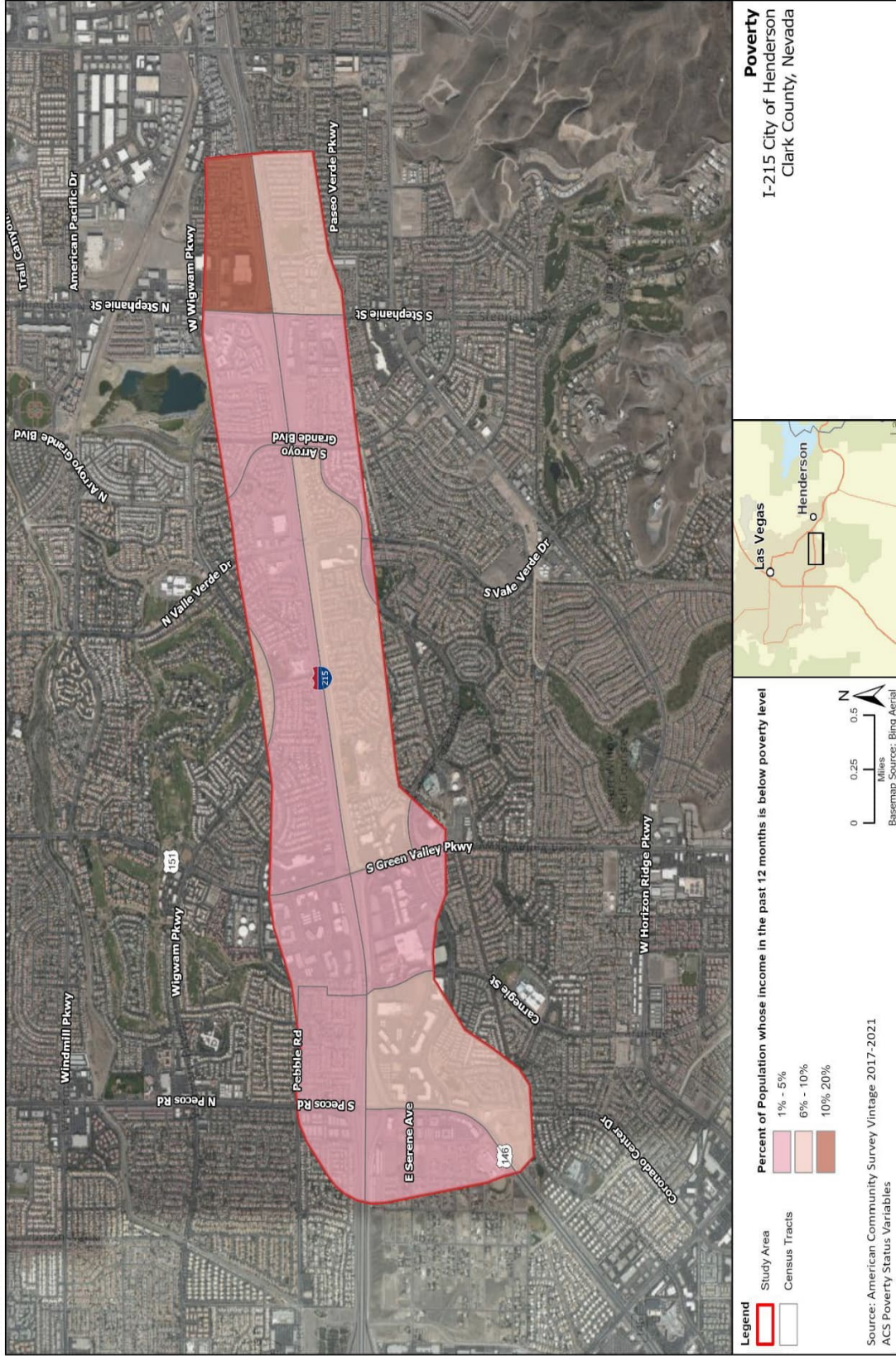


Figure 6-6. Population Below Poverty Level in the Study Area



6.4 Transportation

In the study area, approximately five percent of the households have no vehicle, which is the same as the rest of the City of Henderson and less than Clark County (Figure 6-7). Additionally, the study area has a smaller percentage of residents who use public transportation to commute to work (Figure 6-8).

As shown in Figure 6-9, within the study area:

- 84 percent of workers drive or carpool to work
- 13 percent of workers work from home
- 1 percent bike or walk to work
- 0.4 percent commute by public transportation to work

Within the study area, the percentage of workers that work from home is greater than that within the City of Henderson and Clark County. The percentage of workers that drive or carpool to work is similar, while the percentage of those that use public transportation and bike or walk to work is less than the City of Henderson and Clark County.

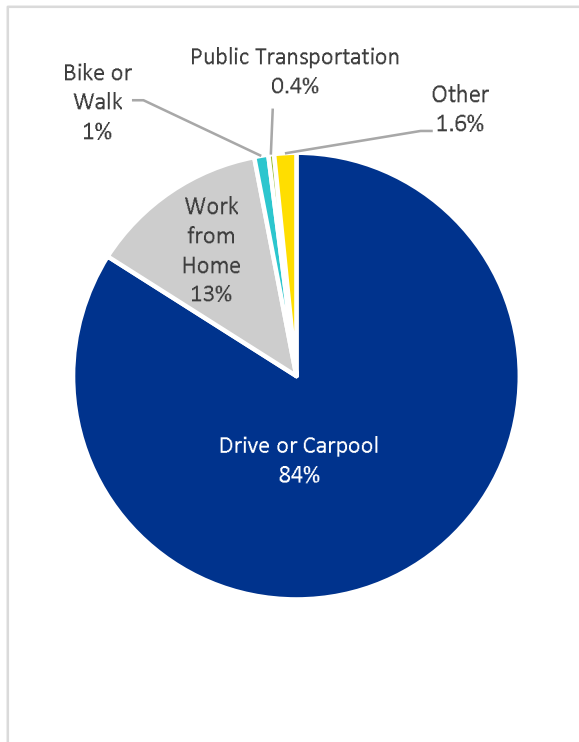


Figure 6-9. Study Area Commute to Work

Source: U.S. Census Bureau 2020

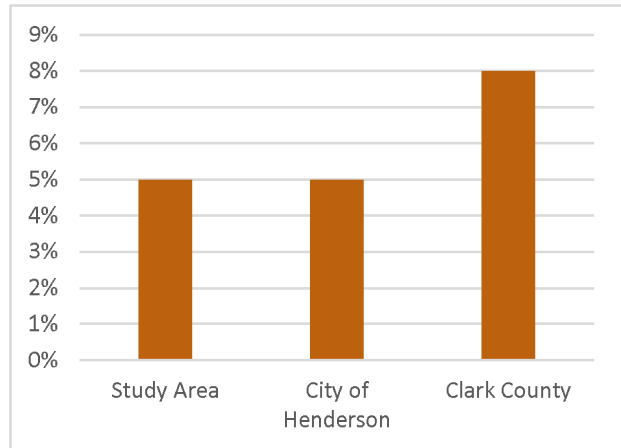


Figure 6-7. Households with No Vehicle

Source: U.S. Census Bureau 2020

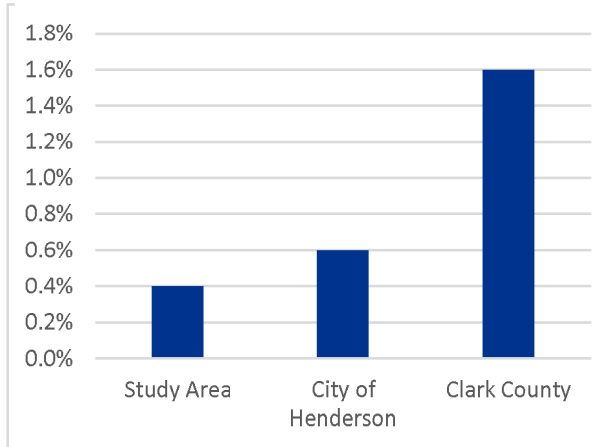


Figure 6-8. Use of Public Transportation to Commute to Work

Source: U.S. Census Bureau 2020



6.5 Employment/Business

Of the working-age civilians in the study area, 5.8 percent are unemployed. This percentage is slightly greater than the City of Henderson (4.4%) and Clark County (4.2%) (Figure 6-10). Businesses in the area include office parks, as well as commercial properties such as the Green Valley Ranch Resort Spa and Casino, restaurants, retail stores, and grocery stores.

6.6 Neighborhoods and Housing

Residences within the Project area are primarily single-family homes. Several large apartment and condominium complexes are within the study area including the Life Time Living Green Valley apartment complex, the Villa Azure Condominiums, Castile Apartments, Traverse Point Condominiums, the Aspire at Paseo Apartments, as well as the Revel Nevada retirement community. Housing stock in the study area is approximately between 20 and 30 years old.

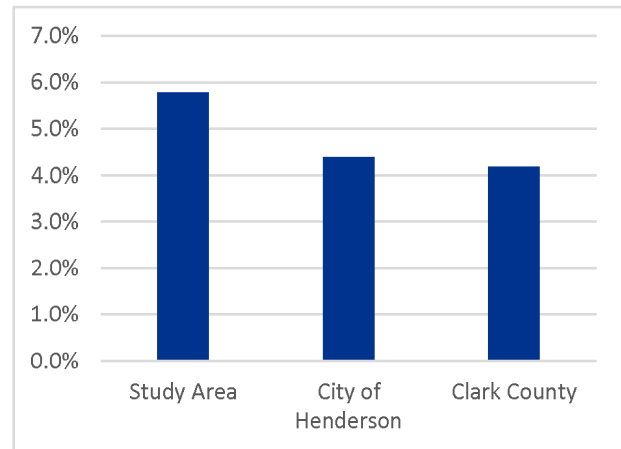


Figure 6-10. Unemployment Rate for Working Age Civilians

Source: U.S. Census Bureau 2020

6.7 Community Facilities and Services

The study area includes three elementary schools (John C. Vandenburg Elementary School, Neil C. Twitchell Elementary School, and Hannah Marie Brown Elementary School); a synagogue and a church; and five City of Henderson parks (Paseo Vista Park, Mountain View Park, Dos Escuelas Park, Paseo Verde Park, and the Reunion Trails Park and Amargosa Trailhead).

There are also Regional Transportation Commission of Southern Nevada (RTC) bus routes throughout the study area. Bus route 111 (Pecos/Green Valley Parkway) has nine bus stops within the study area along Pecos Road, Paseo Verde Parkway, Carnegie Street, Village Park Drive, and Green Valley Parkway (RTC 2023). In addition, bus route 115 (Nellis/Stephanie) has two bus stops within the study area along Stephanie Street (RTC 2023).

6.8 Emergency Services

The Henderson West Community Police Station is located just outside of the study area at the northeast corner of Green Valley Parkway and Benji Drive. There are two fire departments located less than 0.5 mile outside of the study area. Henderson Fire Department Station 95 is located at the northwest corner of Green Valley Parkway and Pebble Road, and Henderson Fire Department Station 97 is located just northeast of the Horizon Ridge Parkway and Amador Lane intersection. The emergency room at Green Valley Ranch is located at the southwestern boundary of the study area and provides general emergency medical support.

6.9 Community Cohesion

Community cohesion is present when people interact with each other in ways that lead to a sense of community. It includes neighborhood population characteristics and linkages with churches, schools, and other community buildings. Cohesive communities often have access and connections to areas that provide opportunities for residents to gather and interact. Altering access and connections and displacing people, businesses, or community resources can adversely affect daily activities and how people interact, thereby affecting community cohesion.

Prior to construction of the existing I-215 Beltway in the early 2000s, the surrounding area was largely undeveloped and there were few adjacent residences. Development of neighborhoods on either side of I-215



gradually increased with adjacent roadway and commercial developments. The District at Green Valley Ranch, a mixed-use development complex with retail stores, restaurants, and the Green Valley Ranch Resort and Spa, draws adjacent residents and community members as well as hosts many events. In addition, the five parks within the study area also offers residents with gathering spaces and recreational opportunities.

7. Impacts Assessment

This section describes impacts identified for the No Action Alternative and the Preferred Alternative.

7.1 No Action Alternative Impacts

Under the No Action Alternative, no new development or construction would occur within the study area. No impacts to socioeconomics would occur. However, pedestrian and bicycle improvements that could enhance community cohesion would not occur.

7.2 Preferred Alternative Impacts

7.2.1 Land Use Impacts

New strips of right-of-way would be acquired along Green Valley Parkway and St. Rose Parkway (Attachment B) to accommodate roadway improvements. Approximately 1.43 acres of right-of-way would be required along Green Valley Parkway. Strips of new right-of-way would be necessary in all four quadrants of the Green Valley Parkway interchange. This land is adjacent to commercial establishments and an office complex. The new right-of-way required is between the edge of pavement of Green Valley Parkway and the parking lots of the businesses. There would be no direct impacts to any existing buildings or parking lots.

At the intersection of Paseo Verde Parkway and St. Rose Parkway, up to 0.26 acre of right-of-way acquisition is necessary in front of two office buildings along St. Rose Parkway. There would be no direct impacts to any existing buildings or parking lots.

7.2.2 Employment/Businesses

The Preferred Alternative would not result in any long-term employment changes or impacts to businesses. No property displacements for any businesses within the study area would occur, nor would any businesses be closed during construction. Detours may be necessary during construction, which could temporarily increase travel times to adjacent businesses.

7.2.3 Neighborhoods and Housing

The Preferred Alternative would not result in property displacements or permanent changes in property access. However, residents adjacent to Project construction would experience a temporary increase in noise and dust during construction. In cases of night work, light pollution also could be a disruption. In addition, detours may be necessary during construction, which could temporarily increase travel times to adjacent residences.

7.2.4 Community Facilities and Services

The Preferred Alternative would not directly impact any community facilities such as places of worship, schools, parks, social services, or government buildings. However, potential detour routes during construction could temporarily alter access to these facilities and potentially increase travel times to and from these facilities.



7.2.5 Emergency Services

The Preferred Alternative could result in delays for emergency services in the study area due to the potential need for detours during construction. Emergency service buildings would not be impacted by the Preferred Alternative because the construction would occur within existing NDOT right-of-way.

7.2.6 Community Cohesion

The impacts of roadway expansion can affect the physical and social settings, community services, and other factors that promote a sense of community among residents in the study area. NDOT would not construct new roadways on new alignments as part of the Project, limiting the Project's impact on neighborhood and community cohesion. Community cohesion is the ability of people to communicate and interact with each other in ways that lead to a sense of community. Community cohesion is reflected in the neighborhood's ability to function and be recognized as a singular unit and includes buildings and services important to the community, such as churches, commercial development, social services, municipal buildings and services, parks, and schools. Displacements of residential and commercial properties can impact community cohesion.

The Preferred Alternative would not create new divisions of any neighborhoods or result in any business or residential displacements. The Preferred Alternative would also not adversely affect transit routes or bicycle or pedestrian facilities. Rather, the Preferred Alternative would improve connectivity and safety for pedestrians and bicyclists, which in turn would facilitate community cohesion by improving pedestrian access with a new pedestrian bridge to the District at Green Valley Ranch and other local businesses, residences, and RTC bus stops.

8. Mitigation Measures

No mitigation is required.

9. References

Regional Transportation Commission of Southern Nevada (RTC). 2023. Interactive Map. <https://gis.rtcsnv.com/InteractiveMap/>.

U.S. Census Bureau. 2010. Decennial Census of Population and Housing. <https://www.census.gov/programs-surveys/decennial-census/decade.2010.html>.

U.S. Census Bureau. 2020. 2016-2020 American Community Survey 5-Year Estimates. https://data.census.gov/table?q=demographics&g=0500000US32003_1600000US3231900&tid=ACSDP5Y2020.DP05.

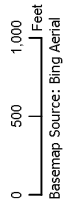
U.S. Department of Health and Human Services (HHS). 2023. HHS Poverty Guidelines for 2023. <https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines>.



Attachment A
Map of Preferred Alternative

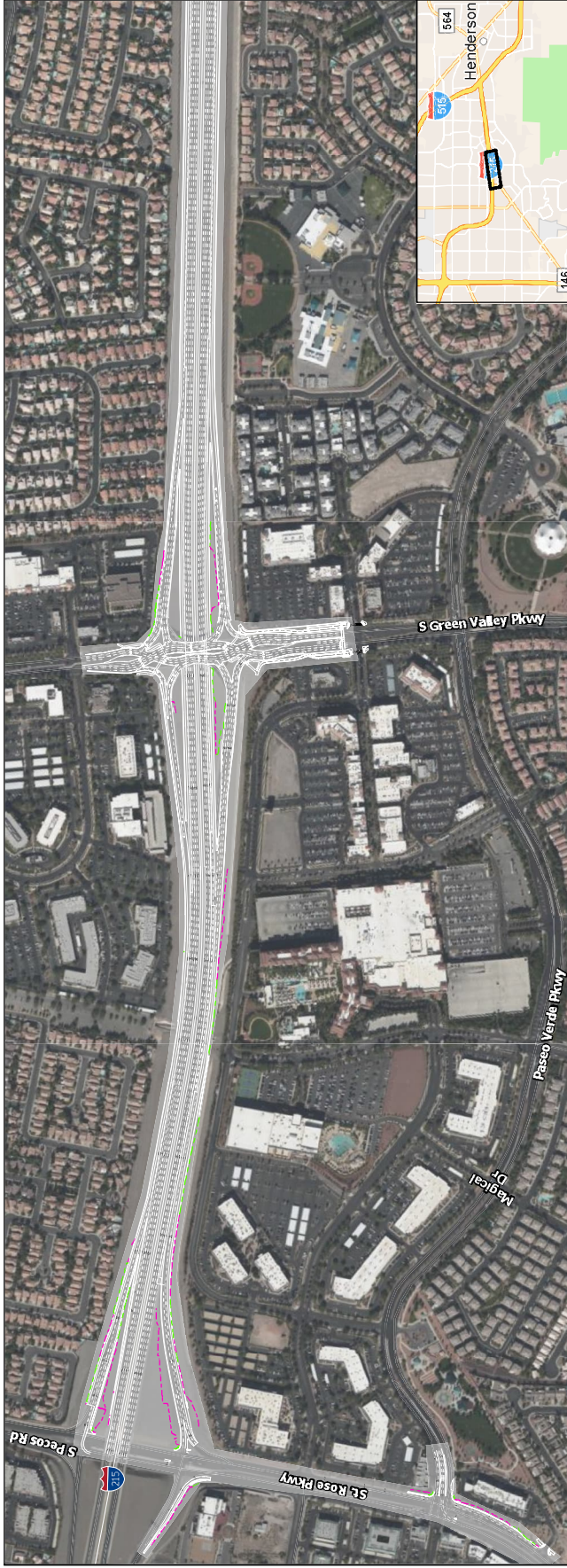
Legend

- Proposed Roadway
- Proposed Cut
- Proposed Fill



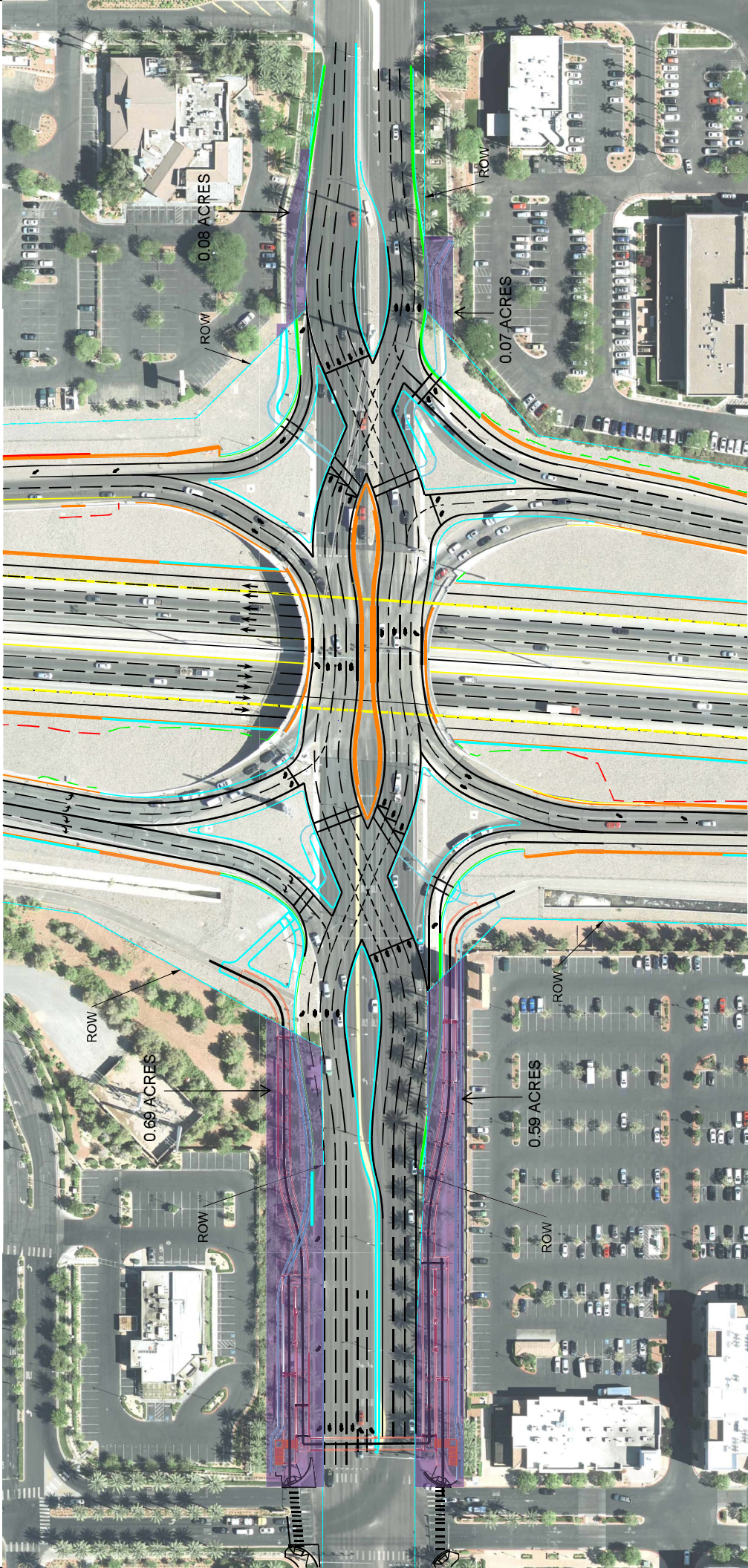
Basemap Source: Bing Aerial

Preferred Alternative
I-215 City of Henderson
Clark County, Nevada

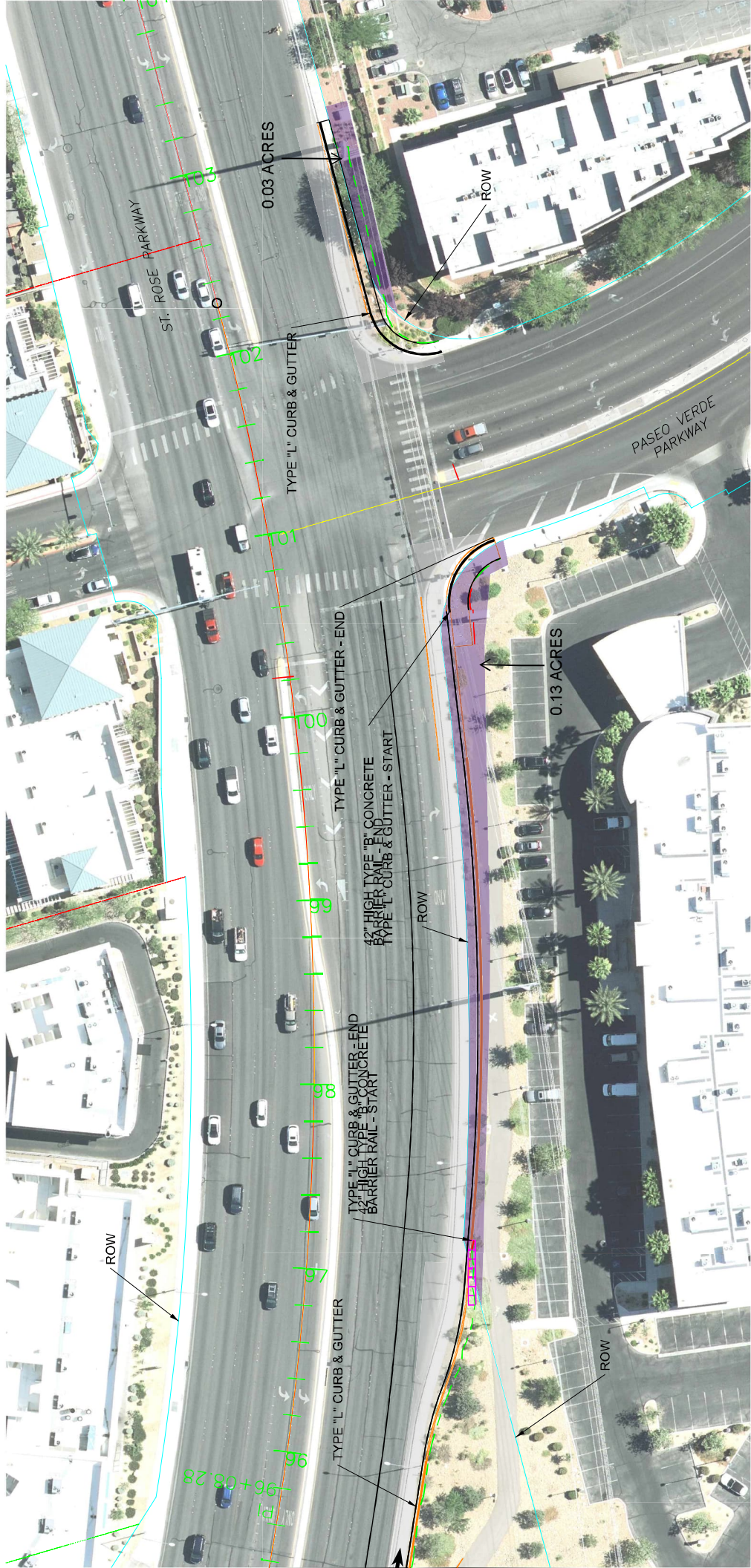




Attachment B
Proposed Right-of-Way Exhibit



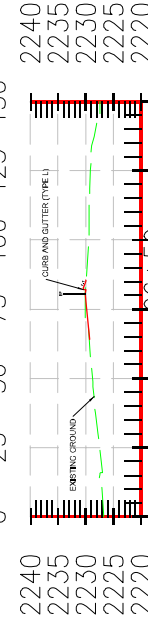
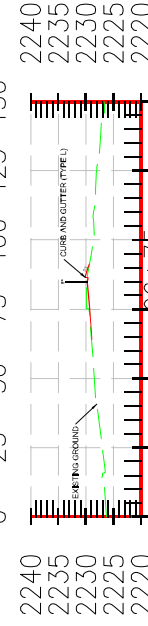
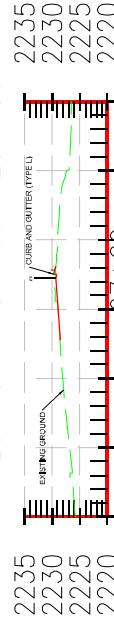
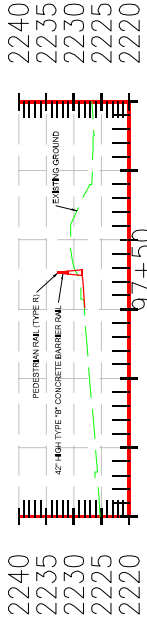
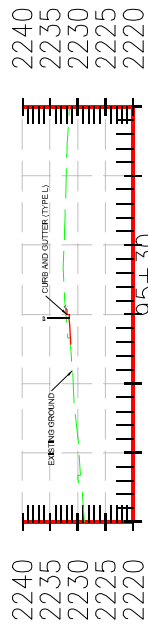
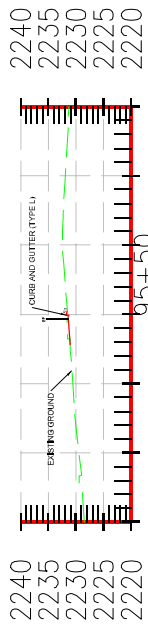
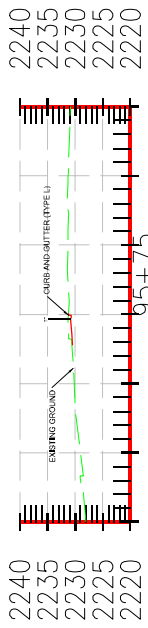
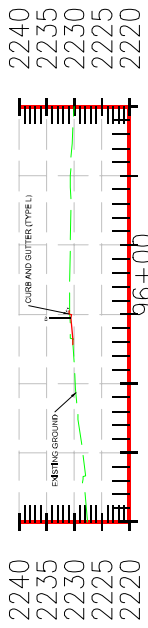
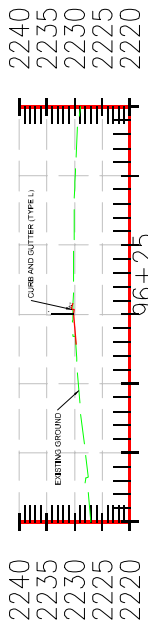
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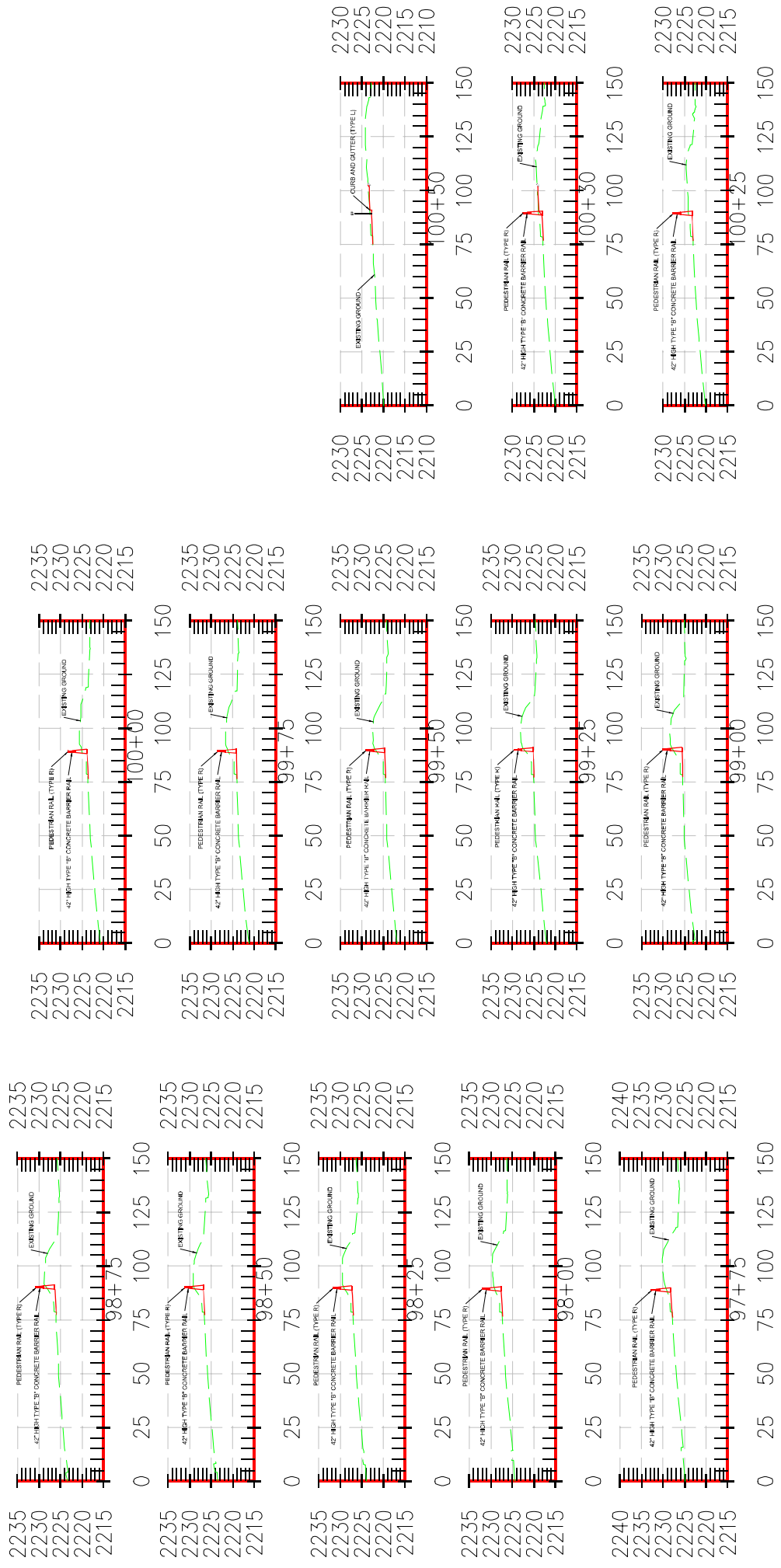
COH - Beltway
 St Rose Pkwy Expansion -
 Barrier
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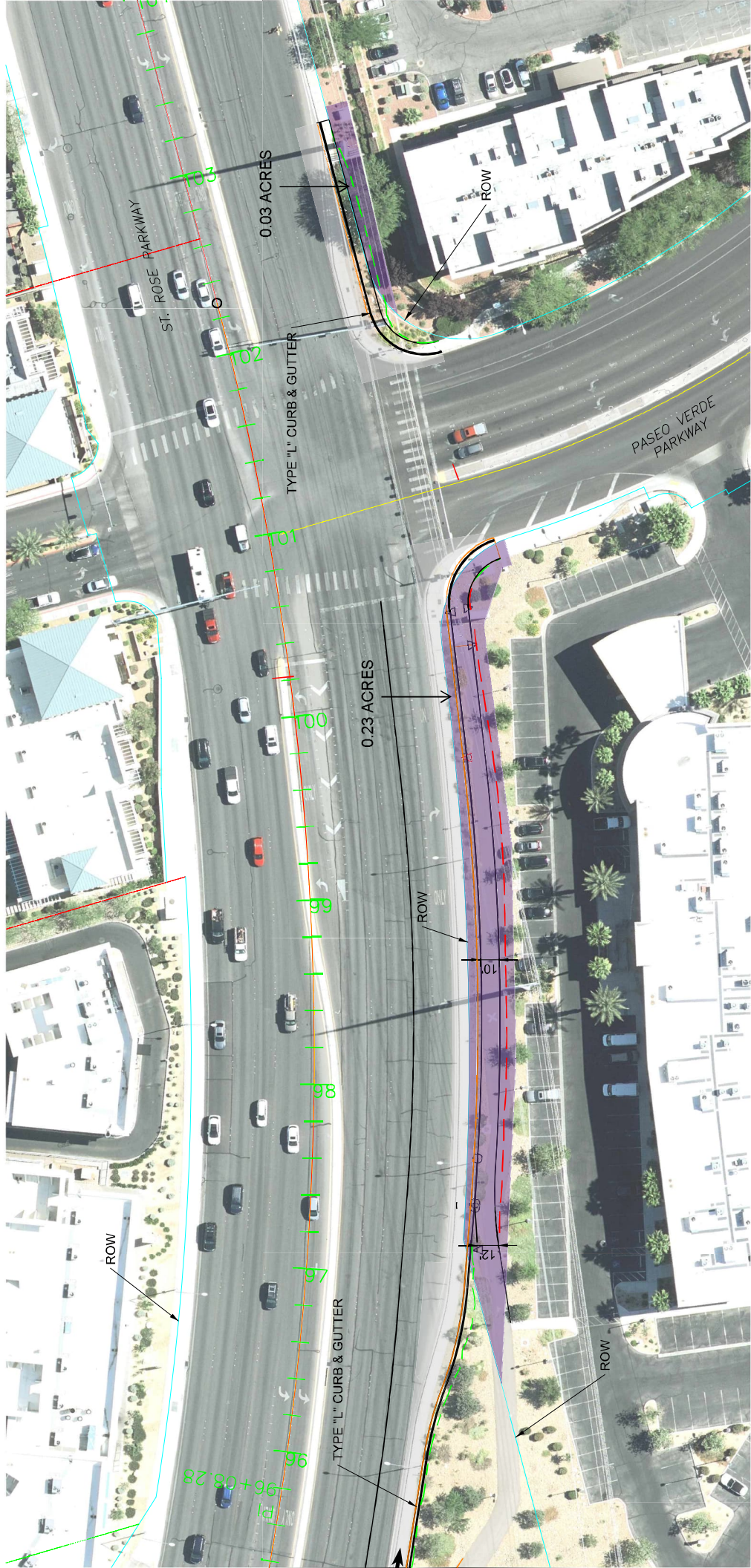
OPTION A

ST ROSE EXTENSION - BARRIER
 CROSS SECTIONS - NOT FOR CONSTRUCTION
 4/1/2023



ST ROSE EXTENSION - BARRIER
 CROSS SECTIONS - NOT FOR CONSTRUCTION
 4/11/2023

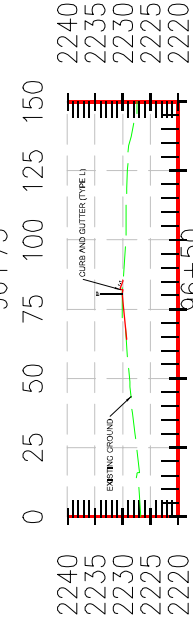
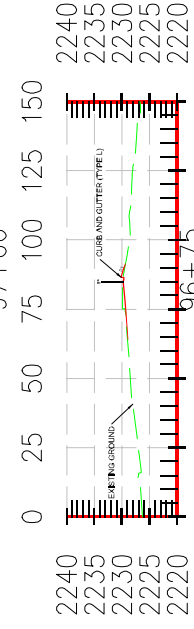
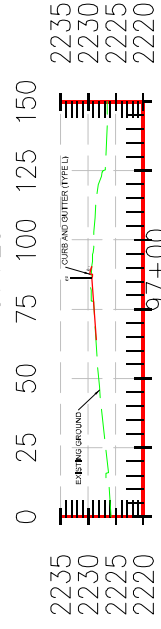
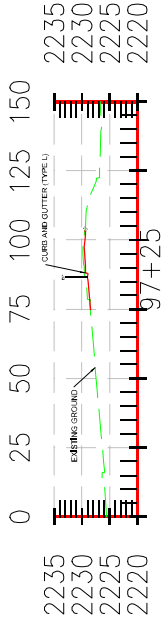
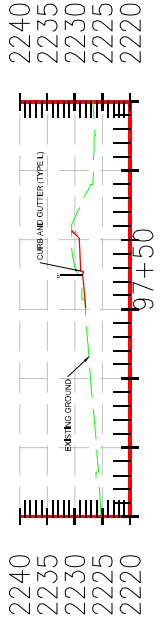
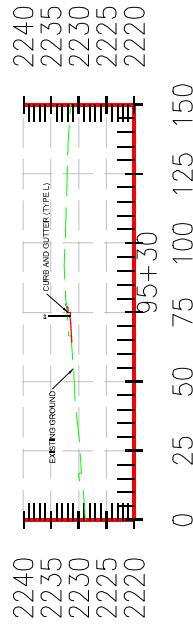
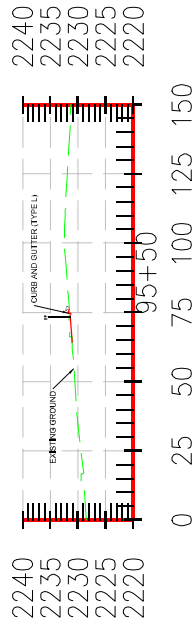
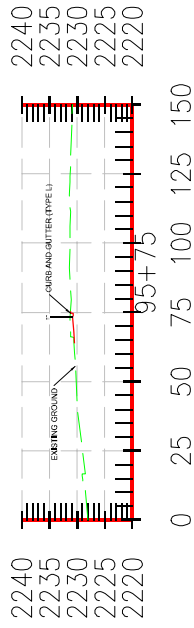
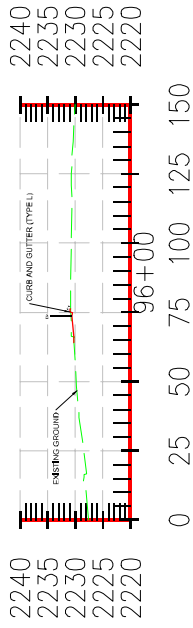
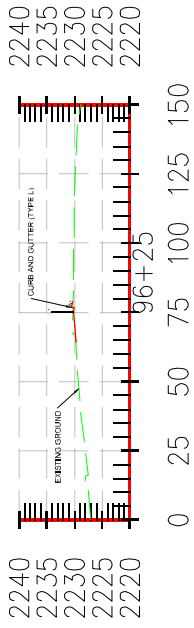




COH - Beltway
 St Rose Pkwy Expansion -
 Sidewalk
 1"=50'
 4/13/2023

OPTION B

ST ROSE EXTENSION - SIDEWALK
 CROSS SECTIONS - NOT FOR CONSTRUCTION
 4/11/2023



ST ROSE EXTENSION - SIDEWALK
 CROSS SECTIONS - NOT FOR CONSTRUCTION
 4/11/2023

