CC Exhibit A

CITY OF ROSEVILLE CALIFORNIA

DEVELOPMENT SERVICES DEPARTMENT–PLANNING DIVISION

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ADDENDUM TO THE 2035 GENERAL PLAN ENVIRONMENTAL IMPACT REPORT (SCH #2019080418, CERTIFIED ON AUGUST 5, 2020)

Project Title/File Number: Commercial Corridor Specific Plans, PL21-0383

Project Location: The project includes three general areas, generally described as the Atlantic Street Corridor, which includes properties on the southern side of Atlantic Street from Interstate 80 to Folsom Road; the Douglas-Harding Corridor, which includes properties on either side of Douglas Boulevard from Park Drive to Interstate 80 and on either side of Harding Boulevard from Lead Hill Road to the terminus of South Harding Boulevard; and the Douglas-Sunrise Corridor, which includes properties along one or both sides of Sunrise Avenue from Coloma Way to Lead Hill Boulevard and along one or both sides of Douglas Boulevard from Interstate 80 to Rocky Ridge Drive. The project also includes the Dry Creek open space area between Folsom Road and Interstate 80.

Project Description: The project is three related and connected Specific Plans centered along older commercial corridors in developed areas of the City. The three Specific Plans are the Atlantic Street Corridor Specific Plan, the Douglas-Harding Corridor Specific Plan, and the Douglas-Sunrise Corridor Specific Plan. The purpose of these three Specific Plans is to encourage and facilitate the revitalization and redevelopment of the areas consistent with the vision for each plan. The project includes land use and zone district amendments to correct inconsistencies, replace outdated zone districts with the City's current zone districts, and create logical land use and zoning patterns; water and sewer infrastructure studies to ensure there is sufficient available capacity to support up to 850 units of multifamily residential development; conceptual streetscape plans; design guidelines and development standards for multifamily and nonresidential development; frontage improvement guidelines and standards; permitted use tables; and entitlement process streamlining. The project also includes land use corrections over areas adjacent to the three Specific Plans. These include correcting the land use designation over the Dry Creek open space area from the existing Low Density Residential designation to the Open Space designation and removing the land use designation over arterial roadways adjacent to the plans, because land use designations are generally not applied to arterial roadways elsewhere in the City.

Project Applicant: City of Roseville

Property Owner: Various

Lead Agency Contact: Lauren Hocker, 916-774-5272

An Addendum to a previously certified environmental impact report may be prepared for a project if only minor technical changes or additions are necessary or none of the conditions calling for the preparation of a subsequent EIR have occurred (California Environmental Quality Act Guidelines [CEQA] Section 15164). Consistent with CEQA Guidelines Section 15164, the below analysis has been prepared in order to demonstrate that none of the conditions described in Section 15162 of the CEQA Guidelines calling for preparation of a subsequent EIR have occurred and that only minor technical changes or additions are necessary in order to deem the adopted or certified prior environmental document adequate to describe the impacts of the proposed project. CEQA Guidelines Section 15164 also states that an addendum need not be circulated for public review, but can be included in or attached to the adopted or certified environmental document for consideration by the hearing body. This Addendum focuses only on those aspects of the project or its impacts which require additional discussion.

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PROJECT DESCRIPTION

Project Location

The three Specific Plan boundaries are shown in Figure 1, Figure 2, and Figure 3 and are described below.

Atlantic Street Corridor Specific Plan: The 73-acre Plan Area is located south of Atlantic Street between Interstate 80 Road and Folsom Road, in the City's Infill subarea. The boundaries of the Specific Plan include all of the property on the block adjacent to Atlantic Street and all property between Atlantic Street and the Dry Creek open space designated for nonresidential or multifamily uses.

Douglas-Harding Corridor Specific Plan: The 152-acre Plan Area is located west of Interstate 80 and is centered on Douglas Boulevard and Harding/South Harding Boulevard, in the City's Infill subarea. The boundaries of the Specific Plan are generally defined by Park Drive to the west, Interstate 80 to the east, Lead Hill Boulevard to the north, and the terminus of South Harding Boulevard to the south. The Plan Area includes all of the commercial property and property with a multifamily zoning designation alongside the two defining roadways in the plan.

Douglas-Sunrise Corridor Specific Plan: The 251-acre Plan Area is located east of Interstate 80 and is centered on Douglas Boulevard and Sunrise/North Sunrise Avenue, in the City's Infill subarea. The boundaries of the Specific Plan are generally defined by Lead Hill Boulevard to the north, Coloma Way to the south, Rocky Ridge Drive to the east, and Interstate 80 to the west. The Plan Area excludes all of the predominantly residential areas within these general boundaries, and includes mostly commercial property alongside the two defining roadways in the Plan Area, Douglas Boulevard and Sunrise/North Sunrise Avenue. This Plan Area is developed, and incorporates a mix of commercial areas, public/quasi-public designated land, a dog park, and some residential property.

The project also includes the correction of the land use designations affecting the Dry Creek open space area, the location of which is shown in Figure 4. The area is centered on Dry Creek between Interstate 80 and Folsom Road. The correction of the land use designations over arterial roadway right-of-way affects Atlantic Street between Interstate 80 and Folsom Road, Douglas Boulevard between Park Drive and Interstate 80, and Harding/South Harding Boulevard between Lead Hill Road and the terminus of South Harding Boulevard.

Figure 1: Atlantic Street Specific Plan Boundaries

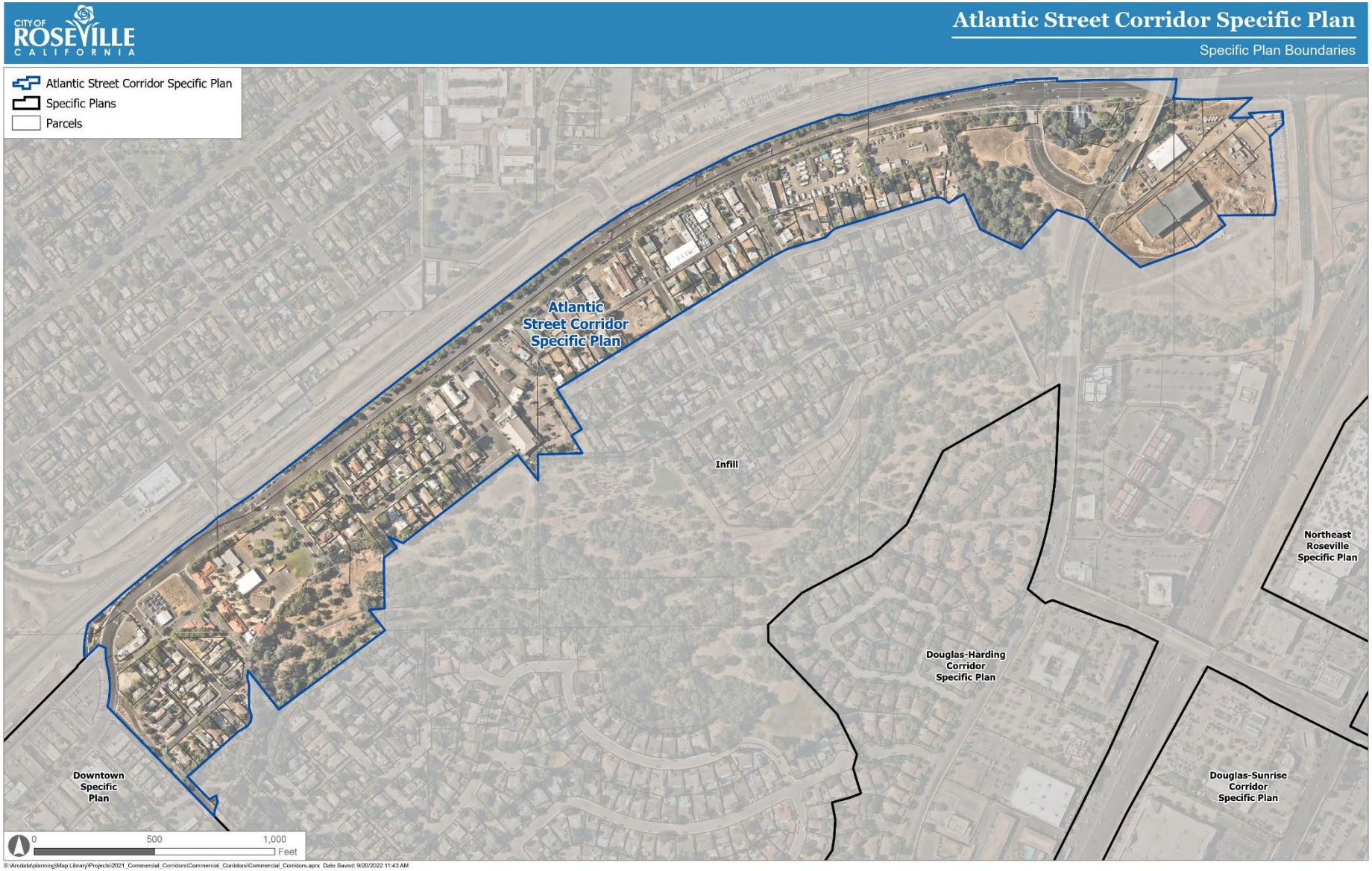

Figure 2: Douglas-Harding Specific Plan Boundaries

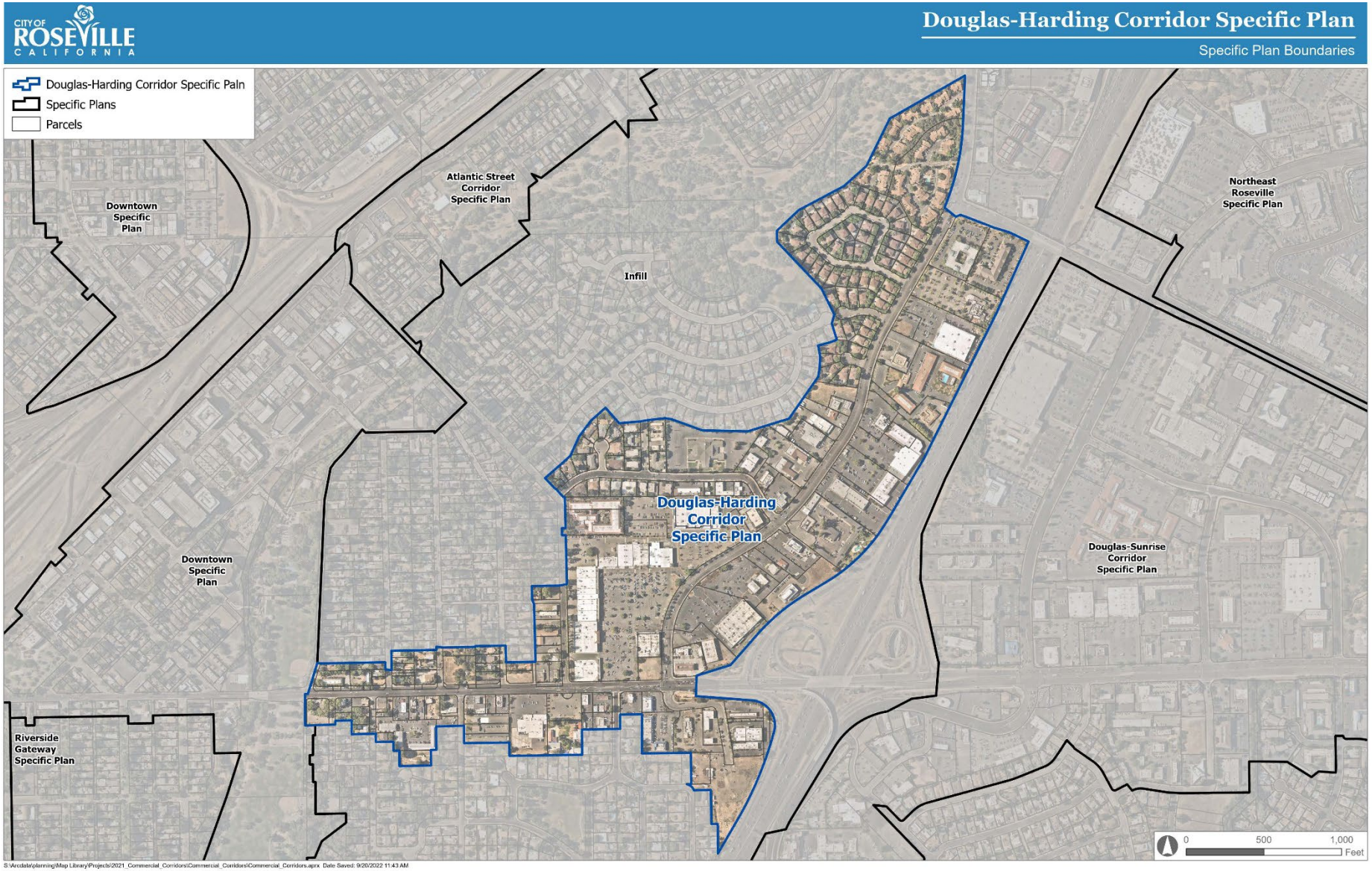

Figure 3: Douglas-Sunrise Specific Plan Boundaries

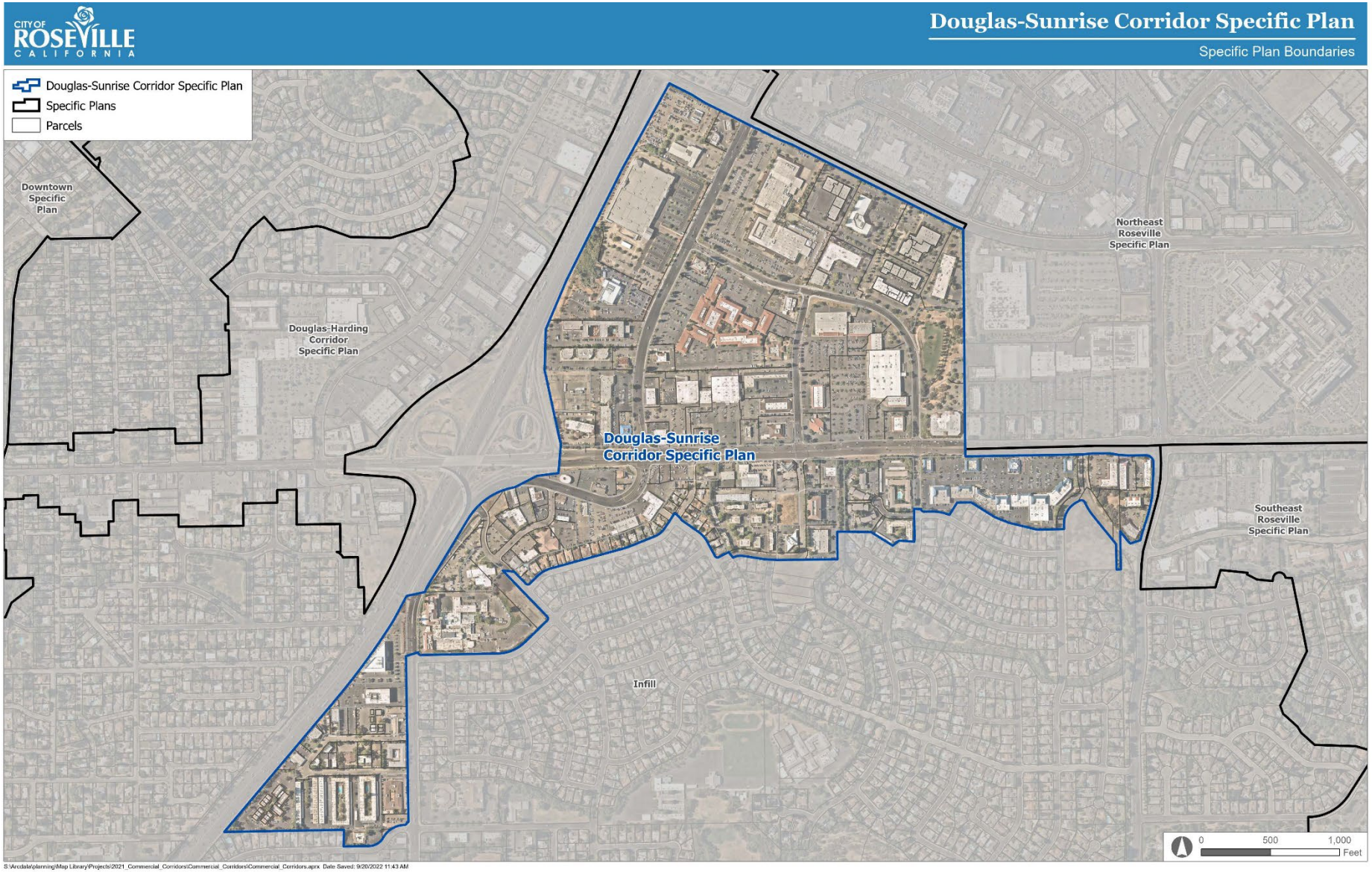

Figure 4: Dry Creek Open Space

Background

From the City's founding through the World War II era, commercial activity in Roseville centered on Vernon Street and Old Town on either side of the railroad tracks. Douglas Boulevard served as a connection from East Roseville and Interstate 80 to the Downtown and was populated with small standalone restaurants and neighborhood serving commercial uses. Although the first subdivisions along Atlantic Street date as early as 1907, the area was primarily rural in character until the late 1940's and 1950's. Roseville Square, the City's first modern commercial center, was constructed in 1961 and served as an identifying gateway to the City. Harding Boulevard was constructed along the eastern side of the center to provide a secondary access point to the center. Harding Boulevard construction continued from the 1970s through 1980s to the north and saw development of similar commercial buildings, motels, and gas stations. During the 1980s through the 1990s the City was also expanding its boundaries to the east down Douglas Boulevard, across Interstate 80. Although these areas still have an active commercial presence, many of the older properties in the area have suffered from deferred maintenance over the more than fifty-year life span of the corridor. The ad hoc nature of development of the corridors has also created an uneven appearance.

The City adopted a revitalization strategy in 1999 to support improvements to the Historic Old Town, Vernon Street, and other aging areas of the city. This effort resulted in the adoption of the Riverside Gateway Specific Plan in 2006 and the Downtown Specific Plan in 2009. The intent of this investment was to return these areas, which to this day still serve as the center and core of the fabric of the City, to their former prominence. These efforts stimulated reinvestment in these areas, with improved streetscapes, as well as the development of new businesses and housing.

Having witnessed the success of these planning and revitalization efforts, City Council designated the creation of commercial corridor plans (for Atlantic Street, Douglas-Harding, and Douglas-Sunrise) as a Council priority. The intent was to establish goals, policies, design standards, and processes which would identify the potential of these developed areas for commercial reinvestment and multifamily housing (particularly within existing commercial areas), as well reconciling old, potentially outdated land uses with the current environment in these long-established areas of the city.

Environmental Setting

The Specific Plan areas are developed, and include commercial buildings, offices, quasi-industrial sites (such as an electrical substation and a small Caltrans yard), apartments, single-family homes, and a few small (the largest is three acres) undeveloped or underdeveloped parcels. The Specific Plan areas include a complete network of roadways and sidewalks, some on-street bicycle lanes, and complete utility infrastructure. The combined acreage of the Specific Plans is 476 acres, and includes open space, park, commercial, industrial, and residential land use designations and zone districts. Descriptions of each Specific Plan area are included below:

<u>Atlantic Street Corridor</u>

The Atlantic Street Corridor is located within the Infill subarea of the City, adjacent to Downtown. The Atlantic Corridor includes all of the property in the area between Folsom Road, the Dry Creek open space, Atlantic Street, and where Parry Street ends. East of this, the Plan Area includes all property between Atlantic Street and Shearer Street, and the properties along Wills Road.

The area within and surrounding the Atlantic Corridor is developed, and includes commercial areas, residential neighborhoods, some industrial and public/quasi-public designated land, and nearby open space. Through the City's improvement efforts, some upgrades have already been implemented along the Atlantic Street streetscape and at the three Miner's Ravine Trail connections that are located within the Atlantic Corridor. The Union Pacific Railroad tracks run along the north side of Atlantic Street. There are two railroad crossings: one at Tiger Street and one at Yosemite Street.

Atlantic Street is a four-lane arterial which connects to I-80 on the eastern boundary of the Atlantic Corridor. To the west, Atlantic Street connects to Vernon Street and the crossing to Historic Old Town. Several schools, including Roseville and Adelante High Schools, are accessible via Atlantic Street. Atlantic Street also provides access to Harding Boulevard, connecting to Galleria Boulevard and the shopping (including the regional mall), restaurants, and other amenities provided in these areas. The area south of the Atlantic Street Corridor boundary supports single-family properties and the Dry Creek open space area.

Douglas-Harding Corridor

The Douglas-Harding Corridor area is within the City's Infill area and is located east of the original core of the City and the Downtown Specific Plan area. The area is separated from the Downtown by older, pre-1930's residential subdivisions and by Royer and Saugstaud parks. Douglas Boulevard and Harding Boulevard are the key roadways around which the Corridor Plan is focused. Douglas Boulevard is a four-lane roadway with a shared center turn lane, which connects to Downtown at the western end of the Plan Area and to Interstate 80 at the eastern end of the Plan Area. Outside of the Corridor Plan, Douglas Boulevard continues to the west and ultimately ends at Folsom Lake State Recreation Area. Harding Boulevard is a four-lane roadway with a shared center turn lane, which after leaving the Corridor Plan connects to the Galleria Mall and Highway 65 to the north and terminates within the Corridor Plan to the south.

The land surrounding Harding Boulevard is developed with commercial uses built in the 1960s, with some apartments on the western side of the road at the northern end of the Corridor Plan. The land surrounding Douglas Boulevard is developed with commercial uses near the intersection with Harding Boulevard, but as you move westward down the roadway the frontage includes a mix of commercial buildings, homes, and homes that have been converted to offices or other businesses. The land surrounding the Corridor Plan is predominantly residential neighborhoods, with homes built in the 1920s to 1940s north of Douglas Boulevard and most homes built in the 1950s and later south of Douglas Boulevard and west of Harding Boulevard.

There are four parks within ¼-mile walking distance of the Corridor Plan: Saugstad Park, Royer Park, Lincoln Estates Park, and Garbolino Park. George Cirby Elementary School is located approximately ½-mile south of Douglas Boulevard, and there are several private schools either within or within ½-mile of the Plan Area. There are connections to Miner's Ravine Trail on both Douglas Boulevard and Harding Boulevard, within ¼-mile of the Corridor Plan boundaries; the 9-mile Miner's Ravine Trail links the City's downtown to the City's eastern boundary at Sierra College Boulevard.

Douglas-Sunrise Corridor

The Douglas-Sunrise Corridor area is located in the Infill subarea of the City. The area is developed, and incorporates a mix of commercial areas, residential neighborhoods, public/quasi-public designated land, and a dog park. The main thoroughfares in the corridor include Douglas Boulevard, which travels east to west, and Sunrise Avenue/North Sunrise Avenue, which travels north to south. Lead Hill Boulevard delineates the northern border of the Plan Area. Other minor streets of importance in the Plan Area include Sierra Gardens Drive and Smith Lane.

The boundaries of the Corridor Plan are generally defined by Lead Hill Boulevard to the north, Coloma Way to the south, Rocky Ridge Drive to the east, and Interstate 80 to the west. The Plan Area excludes all of the predominantly residential areas within these general boundaries. The Plan Area includes mostly commercial property alongside the two defining roadways in the Plan Area, Douglas Boulevard and Sunrise/North Sunrise Avenue. The Plan Area is bordered to the east by the Northeast Roseville Specific Plan area and the Southeast Roseville Specific Plan area. These were the first two specific plans created by the City in the late 1980s.

The Douglas-Sunrise Corridor is essential within the City as a commercial hub, but also as the crossroads of two thoroughfares that have regional significance. Douglas Boulevard is heavily trafficked as an entrance and exit to Roseville from Interstate 80. From the intersection with Sunrise Avenue, Douglas travels east and provides access to destinations such as the Kaiser Permanente Roseville Medical Center, one of South Placer County's largest concentration of professional office buildings, and shopping centers. Douglas Boulevard also serves as the access to regionally significant recreational amenities such as the 152-acre Maidu Regional Park and terminates at the entrance to Folsom Lake State Recreation Area. North Sunrise Avenue begins at the entrance of the Sutter Roseville Medical Center, becoming Sunrise Avenue at the intersection with Douglas Boulevard. Sunrise Avenue continues south (eventually becoming Sunrise Boulevard) through multiple jurisdictions and ultimately connects to three separate highways or freeways. Within the City, the corridor is a key part of the major commercial area serving residents of the immediately adjacent Sierra Gardens neighborhood and the thousands of residents farther south to the City's southern border and beyond.

Proposed Project

The proposed project (Project) consists of the adoption of the following three Specific Plans:

- Atlantic Street Corridor Specific Plan
- Douglas-Harding Corridor Specific Plan
- Douglas-Sunrise Corridor Specific Plan

The Specific Plans include the following chapters and content:

Chapter 2, Setting and Context – This chapter describes the history of the Specific Plan area, major factors that have influenced the design of the Specific Plan, the existing land uses and development patterns, and the existing design and character of the Specific Plan area.

Chapter 3, Land Use – This chapter focuses on the existing and proposed land use plan for the area, with an emphasis on the land use goals and overall vision for the area, and a description of the land use designations being used in the Specific Plan. The chapter includes land use maps.

Chapter 4, Circulation – This chapter describes the pedestrian, bicycle, and vehicular pathways within the Specific Plan area, defines the vision and goals to support circulation and connectivity in the Specific Plan area, and identifies the broader circulation plan and more specific frontage and roadway characteristics for the Specific Plan area. The chapter includes existing conditions, constraints, and opportunities maps, and streetscape options.

Chapter 5, Utilities and Infrastructure – This chapter describes the existing utilities and infrastructure which support the Specific Plan area, describes the goals to support the existing and proposed systems, and describes the plan to enhance and improve utilities and infrastructure to support the Specific Plan.

Chapter 6, Design Guidelines – This chapter describes the design guidelines which will apply to residential and non-residential projects, and also includes frontage design guidelines.

Chapter 7, Implementation – This chapter describes how the Specific Plan will be applied to future development and uses within the Specific Plan area, including descriptions of the types of entitlements needed for development proposals, and the processes and procedures for revising or amending the Specific Plan.

The proposed Specific Plans do not permit a greater development intensity or scale than is currently permitted. These are infill areas which have been fully developed, but because many of the roadways and businesses were

developed more than fifty years ago, the area would benefit from revitalization. The coequal goals of the Specific Plans are to improve aesthetics and comfort on the streetscapes, facilitate commercial reinvestment and redevelopment, and facilitate high density housing (particularly in commercial areas). The Project includes the following key features in order to achieve these coequal goals:

- Amending the General Plan Land Use Diagram, to correct discrepancies between the land use designation and existing zone districts or use of the property. These are older areas of the City with many such discrepancies, including properties zoned multifamily but within a commercial or low density residential land use designation.
- A rezone of properties within a Planned Development zone district to one of the City's standard zone districts. Most of these are older commercial properties with outdated or unclear Planned Development ordinances. The use of these property-specific ordinances reduces clarity for the public, property owners, and tenants, because they must look up the specific ordinance for the site to determine the allowed uses of the land. Some of these ordinances are also unclear, broadly stating that "office and shopping uses" are permitted, or stating that "low-traffic-generating uses" are allowed. The Project will replace these ordinances with the standard zone district which is most similar to the Planned Development Ordinance. In one case, the Planned Development ordinance is residential, allowing three units on the property. This Planned Development ordinance will be replaced with the City's Multifamily Housing zone district, which also allows a minimum of three units.
- For a handful of properties, the Project includes both a rezone and a General Plan amendment to address spot zoning or consistency with surrounding properties or existing uses. Spot zoning occurs when a small area has a zone district that is inconsistent with the zone district of surrounding, similar properties. This includes:
    - 208 South Lincoln Street (APN 013-182-010): This property is fully developed with three units. The City's Multifamily Housing zone district (R3) is defined as a minimum of three units on one property. The property is within the Single-Family zone district (R1) and Low Density Residential (LDR) land use designation, and is proposed to be changed to R3 and High Density Residential (HDR), to match the use of the land.
    - 212 and 214 South Lincoln Street (APN 013-182-037 and -051): These parcels are located between 208 South Lincoln Street and Douglas Boulevard. One parcel is developed with a single-family home and the other (on the corner) is vacant. Property to the north (208 South Lincoln) is in multifamily use, property to the west is an office complex, and property across South Lincoln to the east is within the Multifamily Housing zone district. To avoid creating a spot zone condition, the Project includes changing the zone district and land use designation of these parcels from R1/LDR to R3/HDR.
    - 111 Keehner Avenue (APN 014-120-044): This property is developed with nine apartment units and parking, but is within the R1 zone district and LDR land use designation. The Project includes amending these consistent with the existing use of the property, to R3/HDR.
    - 275 Folsom Road (APN 013-211-006): This property is developed with a senior living community, and a small part of the parcel extends over Folsom Road. This small area has a different land use designation and zone district than the remainder of the parcel; this is called a "split zoning" condition, where one property has more than one land use or zone. To correct the split zoning, the Project includes changing the zone district and land use designation from R1/LDR to R3/HDR, consistent with the majority of the parcel.
    - 1123 Wayne Drive (APN 014-130-008): This property is undeveloped and is used as part of the commercial property for a seasonal business (Bambi's Christmas Tree Farm), and for storage; although separate parcels, the two parcels appear to be one property based on their use and improvement. The property is within the R1/LDR zone district and land use designation, but is

not in single-family use. The Project includes changing the zone district and land use designation to R3/HDR, as a buffer between the single-family and the commercial property designations.

- 303, 305, 307, and 309 Loretto Drive, and 1601 Santa Clara Drive (APNs 014-333-008, -009, -010, and 014-411-001, -002): These properties are all adjacent single-family parcels and back up to an apartment complex.
- 301 Marian Way (APN 014-183-011): This property includes two parcels with the same address. The 0.20-acre, larger parcel has frontage on Marian Way and contains a single-family home, while the second parcel is only 0.04 acres and is a narrow strip of land at the rear of the property that includes landscaping and a pool for the home. The smaller parcel has a Community Commercial land use designation and is within the Planned Development 192 (low-traffic-generating commercial) zone district. This smaller parcel is clearly part of the single-family property, and the Project includes changing the zone district and land use designation to R1/LDR.

- In the existing condition, multifamily uses in the Community Commercial or Neighborhood Commercial zone districts require a Conditional Use Permit and a Design Review Permit, both of which require a public hearing. The project includes removing the requirement for a Conditional Use Permit and removing the requirement for a public hearing; a staff level Design Review Permit will still be required.
- A slight reduction of parking standards for multifamily uses in predominantly commercial areas, from 1.5 spaces per studio/1 bedroom unit and 2 spaces per 2+ bedroom unit, to 1 space per studio/1 bedroom unit, 1.5 spaces per 2–3 bedroom unit, and 2 spaces per 4+ bedroom unit.
- Water and sewer infrastructure studies to assess the existing system improvements needed to address the aging system, to support reinvestment and redevelopment, including the addition of up to 850 multifamily housing units on properties within an existing multifamily zoning designation or on commercial property. This is discussed further below, under the subheading “Housing.”
- Conceptual streetscape enhancement options to consider as part of any future public improvement projects. Improvements are not preselected or defined, nor are future projects identified or known at this time. The Circulation chapter of the Specific Plans includes exhibits identifying important opportunity areas and constraints, followed by a list of potential improvements including landscaping updates, medians, crosswalk enhancements, street furniture, and other options.
- Conceptual plans to underground existing above-ground electrical utilities on Douglas Boulevard.
- Frontage design guidelines to apply to development and redevelopment, requiring improvements to sidewalks, landscaping, etc on the roadway frontage.
- Design guidelines for commercial development and multifamily developments, based on feedback from the community, which will help create a cohesive identity in the corridors.

In addition to the three Specific Plans, the Project also includes correcting the General Plan land use designation over the Dry Creek open space (between Folsom Road and Interstate 80) from Low Density Residential to Open Space. The zone district in the affected area is predominantly a mix of Open Space (OS), Floodway (FW), and Flood Fringe (FF); the existing Low Density Residential land use designation is inconsistent with the existing zoning and use of the area as passive open space.

Finally, the Project includes removing the land use designation applied to the right-of-way over arterial roadways adjacent to the Specific Plans. This is a technical mapping correction which has no impact on the actual permitted use of the property. These areas are designated within the General Plan Circulation Element as arterial roadways and the roadways are fully developed and owned by the City. In all but the oldest part of the City, it is standard practice for land use to follow the property boundary along arterial roadways, rather than to be extended across the roadway right-of-way. This practice allows major roadways to be clearly visible on the City’s General Plan Land Use Diagram.

Housing

Along with streetscape improvements and commercial reinvestment and redevelopment, the facilitation of housing – particularly in commercial areas – is a goal of the project. The Project does not increase the amount of developable land area, but does seek to lower financial and procedural disincentives to housing projects. The areas where the City is anticipating housing are underused commercial parking lots, long-vacant commercial buildings, and the few vacant or underused properties where such housing is already permitted by zoning. The purpose of the sewer and water evaluations was to provide streamlining for future redevelopment projects. Future projects which are generally consistent with the assumptions of the Project technical studies will not need to prepare individual system evaluations.

Infrastructure studies for the Project assumed a total of 50 units could be developed in the Atlantic Street corridor, 200 units could be developed in the Douglas-Harding corridor, and 600 units could be developed in the Douglas-Sunrise corridor, for a total of 850 units. The system evaluations assumed these units would be located on vacant or commercial properties in the Atlantic Street Plan area, located on South Harding or Harding Boulevard in the Douglas-Harding Plan Area, and on Sunrise Boulevard north of Douglas Boulevard in the Douglas-Sunrise Plan Area. General areas were selected for the purpose of pipe system evaluations, but the Specific Plans do not identify any specific sites as the sites where these housing units will or must be built. For commercial property where multifamily housing would be a permitted use, whether housing, commercial uses, or mixed uses are developed would be determined by the property owner and by market conditions.

Entitlements

The following entitlements are needed for the proposed Project:

1. A General Plan Amendment to amend General Plan Land Use Element text to reflect the adoption of three new Specific Plans; amend Land Use Element Figure II-1 (Planning Areas) to add the boundaries of the three new Specific Plans; and amend Figure III-3 (Pedestrian Districts) and Figure VIII-3 (Land Use Designations with City's Regulatory Floodplain) because these figures include the boundaries of the City's Specific Plans or land use map as background information on the figure; and amend the General Plan Land Use Map (Land Use Element Figure II-2) consistent with the three new Specific Plans, to correct land use from Low Density Residential to Open Space over the Dry Creek open space area, to remove the land use designations over arterial roadways within and adjacent to the three new Specific Plans, and other minor changes.

2. A resolution to approve the Atlantic Street Corridor Specific Plan.

3. A Rezone to change the underlying zone districts and apply the Special Area (/SA-AT) overlay zone to property within the Atlantic Street Corridor Specific Plan.

4. A resolution to approve the Douglas-Harding Corridor Specific Plan.

5. A Rezone to change the underlying zone districts and apply the Special Area (/SA-DH) overlay zone to property within the Douglas-Harding Corridor Specific Plan.

6. A resolution to approve the Douglas-Sunrise Corridor Specific Plan.

7. A Rezone to change the underlying zone districts and apply the Special Area (/SA-DS) overlay zone to property within the Douglas-Sunrise Corridor Specific Plan.

8. A Rezone to change the underlying zone districts on specified properties in the Infill Planning Area.

9. An Ordinance Amendment to Title 19 of the Municipal Code (Zoning Ordinance), Chapter 19.18.030 Special Area (SA) District for the purpose of adding the three new Specific Plans to the list of Special Area Districts;

adding new Chapter 19.33 Commercial Corridor Plans to establish the permitted uses (including non-conforming uses), development standards, parking standards, and entitlement and approval procedures for the three Specific Plans; amending Chapter 19.24.020 (Nonconforming Uses and Structures) to refer to the new Chapter 19.33 standards; amending Chapter 19.26.030 (Parking space requirements by use type) to refer to the parking reduction processes of the new Chapter 19.33; and amending Chapter 19.78.020 (Required public hearings, authorized Approving Authority and public notice) acknowledging the new approval procedures within the new Chapter 19.33.

The General Plan Amendment exhibits, rezone exhibits, Ordinance amendment, and Specific Plans are hereby incorporated by reference and are available for review online at www.roseville.ca.us/corridorplans on the Documents page (direct link to the Documents page).

SCOPE OF ADDENDUM

This Addendum tiers from the 2035 General Plan Environmental Impact Report (GP EIR) and the 2021 Housing Element Addendum (HE Addendum) (combined, the GP EIR and Addendum), which analyzed the impacts of full buildout of the City's General Plan land uses and implementation of its policies consistent with the General Plan and the 2021 Housing Element. The GP EIR is available for review on the City's website at https://www.roseville.ca.us/generalplan and the HE Addendum is available at www.roseville.ca.us/housingelement. The GP EIR evaluated the following topical sections, as numbered below:

Chapter 4.0. Introduction to the Environmental Analysis

- Section 4.1. Land Use and Agriculture
- Section 4.2. Population, Employment, and Housing
- Section 4.3. Transportation
- Section 4.4. Air Quality
- Section 4.5. Greenhouse Gas Emissions
- Section 4.6. Noise and Vibration
- Section 4.7. Geology, Soils, and Paleontological Resources
- Section 4.8. Biological Resources
- Section 4.9. Cultural and Tribal Cultural Resources
- Section 4.10. Hazards, Hazardous Materials, and Wildfire
- Section 4.11. Public Services and Recreation
- Section 4.12. Utilities and Service Systems
- Section 4.13. Hydrology and Water Quality
- Section 4.14. Aesthetics
- Section 4.15. Energy

The HE Addendum evaluated the same impact areas, but was formatted in the same analysis order as the CEQA Guidelines Initial Study Checklist, in which impacts are evaluated by topic area in alphabetical order. For each impact topic and question, the HE Addendum listed the location (page number) where that topic was addressed in the GP EIR and the disposition of the impact. This Addendum follows the same format. The area analyzed in the GP EIR and Addendum included all areas within the City limits and those areas that are within the City's Sphere of Influence, referred to throughout as the Planning Area. For consistency with previous documentation, in this Addendum the Planning Area will continue to refer to the area assessed within the GP EIR and Addendum, while "Project area" will refer to the much smaller subarea of the Planning area affected by the proposed Project.

The GP EIR included a comprehensive analysis of the impacts of City buildout compared to baseline physical conditions and conservatively assumed that developable sites would be fully developed, rather than developing at average intensities. As of 2019 GP EIR baseline conditions, the City had approximately 21,000 units of

residential development capacity before reaching buildout conditions, a figure which had dropped to approximately 19,000 units at the time of the HE Addendum, and which is currently estimated as 18,500 units. However, because of the conservative development assumptions within the GP EIR, the evaluation included the addition of between 20,000 and 25,000 units from existing conditions to buildout conditions, which is up to 4,000 units more than the City's buildout projections. A range was used in order to provide flexibility for future projects which could affect City buildout, ensuring that some future project changes could still fall within the scope of the GP EIR. Therefore, the Housing Element Rezone Program addition of units was well within the range of development analyzed within the GP EIR, which is why an Addendum was prepared. The HE Addendum indicated that the purpose and scope of the Addendum was focused on the way in which the Housing Element changed the mix of uses, rather than the use totals, by increasing residential density in certain areas and removing non-residential capacity.

This Addendum is focused in the same manner as the HE Addendum. The GP EIR assumed that development intensities could be greater than historic or planned averages over time, and so assumed a 2035 buildout total which includes 4,000 more units than is currently projected. The HE Addendum evaluated the addition of approximately 1,500 new high density units[1] to the City's projected buildout total, leaving 2,500 units of GP EIR buildout capacity. The Project is within the scope of General Plan buildout and the Housing Element Rezone Program, but does assume that 850 units will be located in the Project area, compared to the 400 units assumed by the HE Addendum. This assumption within the HE Addendum was based on an assessment of realistic capacity based on market conditions, not based on land use designations or other regulations which restrict the amount of development potential. The Project includes the assumption of 850 units because of changes in market conditions which lead the City to believe there is the potential for more units to locate in this area than were previously assumed. Therefore, the Addendum focuses on the way in which previous environmental analysis may be affected by assuming 850 units are developed in the Project area, rather than the 400 units assumed in the HE Addendum. This revised assumption is within the scope of the GP EIR Infill Housing Alternative, which assumed the development of 1,400 units within the City's Infill area. The Project is within the Infill area. The Infill Alternative was developed to assess the impacts of focusing more growth within the core of the City.

This Addendum provides area-specific analysis where feasible (e.g. local utility infrastructure). As described in the Project Description, the project does not increase the amount of developable land area. The Project facilitates and streamlines the approval process for multifamily housing as well as for commercial reinvestment and redevelopment. Therefore, much of the analysis is being provided in order to streamline future project- or site-specific environmental review, pursuant to the tiering provisions of CEQA (also see the Purpose and Use of Addendum section).

The environmental setting relevant to a project's impacts and the origin of those impacts varies depending on the issue topic. Some impacts are driven primarily by the physical act of construction and development, which are often referred to as ground-disturbing activities. Other impacts are driven primarily by the type of use (residential, commercial, etc) which will be built, and for these, the environmental setting varies based on the needs and nature of the analysis. For example, the environmental setting for air quality impacts related to ozone is the relevant air basin. For impacts tied to ground disturbance, the environmental setting is typically defined by the geographic scope of the construction area and its immediate surroundings, and the scope or intensity of the impacts is determined by the amount of grading or other ground-disturbance.

[1] The Rezone Program provided capacity for 2,086 "lower income" units. This is not equivalent to adding 2,086 new units to the City's cumulative buildout conditions. For Housing Element planning, density is used as a proxy for affordability; high density residential units at densities of 23 units per acre or greater are counted as "lower income." One of the Rezone Program strategies includes increasing the density of existing planned high density properties which are currently planned for densities below 23 units per acre. So a site planned for 200 units at 20 units per acre would have zero "lower income" units, but increasing the density of the site to 30 units per acre would move all of the units into the "lower income" category, thereby adding 300 lower income units while only adding 100 new units to buildout. The HE Addendum found the Rezone Program would add buildout capacity for 1,563 high density residential units.

The proposed Project does not facilitate or include construction within areas that had not previously been anticipated for construction within the GP EIR and Addendum. Therefore, the Project does not include any changes which would affect the GP EIR analyses which result directly from ground disturbance and general development. Impact topics in this category are:

- Section 4.7 Geology, Soils, and Paleontological Resources
- Section 4.8. Biological Resources
- Section 4.9. Cultural and Tribal Cultural Resources
- Section 4.10. Hazards, Hazardous Materials, and Wildfire
- Section 4.13. Hydrology and Water Quality
- Section 4.14. Aesthetics

This Addendum provides a summary of the GP EIR and Addendum analysis and its basis for determining impacts for each of the above topical sections, to clearly show that the Project does not change these impact evaluations.

The GP EIR and Addendum identified the following impacts as significant and unavoidable:

- Vehicle Miles Traveled impacts
- Air Quality – Construction
- Air Quality – Operational
- Air Quality – Pollutant Concentrations
- Greenhouse Gases
- Noise and Vibration (short-term and long-term)
- Historical Resources
- Archeological Resources
- Disturbance of Human Remains
- Tribal Cultural Resources
- Construction of Utilities (indirect impacts)
- Aesthetics
- Light and Glare

All of the above impacts were also found to be significant and unavoidable cumulative impacts, along with the following:

- Biological Resources – Special-status plants, riparian habitat/sensitive natural communities, or wetlands and other waters
- Biological Resources – Special-status wildlife species and habitats

In order to assess the citywide impacts of changing the location and intensity of residential uses consistent with the Housing Element Rezone Program, the HE Addendum included an updated citywide traffic impact study and vehicle miles traveled (VMT) analysis. Analysis topics which use this information, including Air Quality, Greenhouse Gases, and Transportation, were updated based on the updated citywide study. The updated analyses found the Housing Element would actually reduce impacts compared to the analyses of the GP EIR. The HE Addendum found that analyses related to Geology, Soils, and Paleontological Resources; Biological Resources; Cultural and Tribal Cultural Resources; Hazards, Hazardous Materials, and Wildfire; Hydrology and Water Quality; and Aesthetics would generally be unchanged by the Housing Element. The HE Addendum found that the Housing Element would not result in any new or substantially increased impacts compared to the GP EIR analysis.

The analyses in this Addendum rely on the GP EIR and Addendum analysis with minor supplements or technical updates where appropriate. The Project facilitates and streamlines multifamily residential development in the Project area, and assumes a residential capacity of 850 units. This falls within the buildout range described within the GP EIR and Addendum and within the same development footprint. Therefore, the Project is not anticipated to change ground-disturbing impacts or the general effects of urban development.

Project Features Needing Evaluation

The Project includes general policy and procedure-making activities, programs to describe City procedures and processes, the correction of errors, or other activities which do not have the potential to result in physical environmental effects. This section lists features of the Project Description and discusses their potential to cause physical environmental effects, in order to explain the features of the project which are evaluated within this Addendum.

Project Feature	Potential for Effect
General Plan Amendment to correct land use map inconsistencies	Land use changes are proposed to correct inconsistencies between the existing zone district and the existing land use designation. The zone district determines the allowed use of the property, not the land use, so the proposed land use change has no impact on the potential use of the affected properties. For properties in the multifamily zone district, the change would facilitate and streamline multifamily development by ensuring individual property owners do not need to correct this inconsistency themselves. See "Housing," below.
Rezone of properties within a Planned Development zone district	As discussed in the Project Description, these are older, outdated, and/or unclear property-specific Ordinances. The Project will replace these ordinances with the standard zone district which is most similar to the Planned Development Ordinance. This will have no effect on the development potential of the properties nor will it change the use category of the property in a manner that may increase the potential for physical impacts (e.g. from residential to commercial). This feature of the Project does not have the potential to result in new or previously unanticipated physical environmental effects.
Rezone and General Plan land use amendment to address spot zoning or consistency with surrounding properties	Only a few properties are affected, and all of the listed properties permit full development of the affected site, or are already fully developed. The proposed change does not change the development potential of the site, but does change the permitted uses of the site. Most affected properties are parcels where single-family uses are currently permitted, and the Project would change the land use and zone district to allow multifamily uses. As described in the Project Description, several of them are already developed as multifamily properties, while some are developed with a single home, and one is undeveloped. Redevelopment of these properties is not anticipated; there are many existing properties in the Project area in single-family use within the multifamily zone district, and these have not redeveloped. This is because redevelopment would be costly and require property consolidation. While very unlikely, any potential impacts would be captured in the evaluation included for "Housing" (see below).
Removing the requirement for a Conditional Use Permit, removing the requirement for a public hearing (a discretionary, staff level permit is still required), and slightly reducing the parking standards for multifamily residential projects.	These are changes to City procedures, processes, and development standards for multifamily development applications for process streamlining, which have no impact on the potential physical environmental effects of such projects. This feature of the Project does not have the potential to result in new or previously unanticipated physical environmental effects. See "Housing," below.

Conceptual streetscape enhancement options	Many of the streetscape improvement options are focused primarily on aesthetic changes such as striping, decorative pavements or pavement treatments, or other improvements which can be completed as part of a previously planned roadway resurfacing and rehabilitation project. Other options, such as adding medians or landscaping, may require a small amount of construction work in defined areas, to excavate, construct the median or planter, and install irrigation within the existing right-of-way. The construction work for such small-scale improvement projects is within the scope of improvements and citywide development contemplated by the GP EIR. This feature of the Project does not have the potential to result in new or previously unanticipated physical environmental effects.
Conceptual plans to underground existing above-ground electrical utilities	Utility undergrounding projects include removal of above-ground poles and lines, and trenching in the roadway or right-of-way to install conduit underground. These are small-scale linear improvement projects that do not require significant equipment or disturbance area to complete, and take place within paved areas. As a stand-alone project, this would typically be exempt from the California Environmental Quality Act. This feature of the Project does not have the potential to result in new or previously unanticipated physical environmental effects.
Design guidelines and standards	These are changes to City development standards and design guidelines for commercial and multifamily development applications. The standards are generally designed to ensure development and redevelopment is designed to be more compatible with surrounding established uses. None of the standards have the potential to cause negative, physical environmental impacts. This feature of the Project does not have the potential to result in new or previously unanticipated physical environmental effects.
General Plan Amendment to correct the land use designation over the Dry Creek open space	The existing Low Density Residential land use designation is inconsistent with the existing zoning and use of the area as passive open space. The affected area is Dry Creek and its surrounding floodplain, including the Miner's Ravine Trail. The zone district determines the allowed use of the property, not the land use, so the proposed land use change has no impact on the potential use of the affected properties; residential use of this land is already prohibited. This land use change does not have the potential to result in new or previously unanticipated physical environmental effects.
Removing the land use designation applied to the right-of-way over arterial roadways adjacent to or within the Specific Plans.	This is a technical mapping correction which has no impact on the actual permitted use of the property. These areas are designated within the General Plan Circulation Element as arterial roadways and the roadways are fully developed and owned by the City. In all but the oldest part of the City, it is standard practice for land use to follow the property boundary along arterial roadways, rather than to be extended across the roadway right-of-way. This practice allows major roadways to be clearly visible on the City's General Plan Land Use

	Diagram. This technical mapping correction does not have the potential to result in new or previously unanticipated physical environmental effects.
Housing	The project provides streamlining for up to 850 high density residential units. These units could be proposed, approved, and constructed even without the Project, based on existing regulations and standards. However, the Project includes some land use changes that lower the procedural barriers for high density residential projects, along with streamlined processes. Since various land use and procedure-making aspects of the Project facilitate and make high density housing more financially and otherwise feasible, the potential physical effects of the development of 850 units is evaluated.

As described, except for the facilitation of housing, the individual components of the project do not have the potential to directly cause new, significant physical environmental effects. This Addendum focuses on evaluating the physical environmental effects that could result not from any one policy or standard, but based on the overall redevelopment activities that could be facilitated by successful implementation of the overall Project. The physical effects evaluated in this Addendum are those which could result from the development of 850 high density residential units and general redevelopment activities.

PURPOSE AND USE OF ADDENDUM

City Council designated the creation of commercial corridor plans (for Atlantic Street, Douglas-Harding, and Douglas-Sunrise) as a Council priority. The intent was to establish goals, policies, design standards, and processes which would identify the potential of these developed areas for commercial reinvestment and multifamily housing (particularly within existing commercial areas), as well reconciling old, potentially outdated land uses with the current environment in these long-established areas of the city. Subsequently, the City began its update to the General Plan Housing Element. Since corridor updates had already been identified as a City priority, and housing streamlining would be included as part of the corridors, the updated Housing Element adopted in August 2021 included "Commercial Corridors" as a Rezone Program strategy.

The adopted Rezone Program Commercial Corridors strategy was assumed to provide 400 high density residential units, with additional units provided through an infill strategy; commercial-to-residential rezone strategy; and increases in allowed density on existing, vacant multifamily sites. The capacity values for each strategy are explicitly described as estimates, with the Rezone Program further stating that the strategies would be implemented together or in part in order to achieve the total Rezone Program capacity.

The Housing Element did not approve any housing projects or land use amendments; it was a policy-level document establishing the framework for future actions. The HE Addendum stated:

> After the 2021 Housing Element is adopted the City would begin identifying sites and taking specific land use actions, at which time an environmental review process will be needed to determine the physical effects which would result from those actions. To streamline that future environmental review, this Addendum evaluates the physical effects of implementing the rezone program to the extent reasonable and practicable, based on the Project description above.

The Addendum for the proposed Project is being prepared for similar reasons. As described, the Project streamlines and clarifies approval processes and regulations for commercial redevelopment, facilitates and streamlines approval processes for multifamily development, corrects land use discrepancies which would be costly and time-consuming for individual projects to correct, and establishes a framework for consistent streetscape enhancements, but the Project does not increase the physical development potential of the Project area or include approval of any specific streetscape improvements or other projects. The Project is a policy-level document. However, to streamline future environmental review, this Addendum evaluates the physical effects of multifamily development, commercial redevelopment, and streetscape improvements to the extent reasonable and practicable, based on the Project description.

In preparing the Addendum it is the intent of the City to create a foundation upon which future, project-specific CEQA documents can build. Tiering refers to the concept of a multi-level approach to preparing documents set forth in Public Resources Code Section 21083.3 and Section 15152 of the CEQA Guidelines. Project-level environmental analysis can be streamlined to limit the scope of site-specific approvals following the preparation of an EIR for a general plan, specific plan, or zoning action. This streamlining provision applies to site-specific approvals for projects that are consistent with these earlier approvals. Future projects consistent with the Specific Plans and the evaluation within this Addendum will only be required to provide the level of environmental review necessary to address site-specific conditions, if any.

Section 15152 of the CEQA Guidelines provides that where a first-tier EIR has "adequately addressed" the subject of cumulative impacts, such impacts need not be revisited in second- and/or third-tier documents. According to Section 15152(f)(3), significant effects identified in a first-tier EIR have been adequately addressed, for purposes of later approvals, if the lead agency determines that such effects have been either:

A) "mitigated or avoided as a result of the prior [EIR] and findings adopted in connection with that prior [EIR]"; or

B) "examined at a sufficient level of detail in the prior [EIR] to enable those effects to be mitigated or avoided by site-specific revisions, the imposition of conditions, or by other means in connection with the approval of the later project."

The GP EIR and Addendum is a program EIR and helps determine the need for subsequent environmental documentation, as well as dictates the scope of project level CEQA review. According to Section 15168(d) of the CEQA Guidelines, a program EIR can be used to simplify the task of preparing future environmental documents on later activities in the program. A program EIR can:

1) "Provide the basis in an Initial Study for determining whether the later activity may have any significant effects.

2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.

3) Focus an EIR on a later activity to permit discussion solely of new effects which had not been considered before."

The GP EIR and Addendum explicitly stated that it was to be used to streamline future environmental review and approval of private and public projects, as well as implementation actions, such as updates to zoning, the City's CEQA Implementing Procedures, the Capital Improvement Program, and other implementing documents and plans that are consistent with the General Plan. The City will make use of existing streamlining provided by CEQA, and will make use of emerging streamlining techniques, as appropriate, to ensure implementation of the Project provides adequate and appropriate environmental review.

ENVIRONMENTAL CHECKLIST FOR ADDENDUM ENVIRONMENTAL REVIEW

The purpose of this checklist is to evaluate the categories in terms of any "changed condition" (i.e. changed circumstances, project changes, or new information of substantial importance) that may result in a changed environmental result. A "no" answer does not necessarily mean there are no potential impacts relative to the environmental category, but that there is no change in the condition or status of the impact since it was analyzed and addressed in prior environmental documents.

EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

Where Impact Was Analyzed
This column provides a cross-reference to the pages of the prior environmental documents where information and analysis may be found relative to the environmental issue listed under each topic.

Do Proposed Changes Involve New Significant Impacts?
Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the changes represented by the current project will result in new significant impacts that have not already been considered and mitigated by the prior environmental review documents and related approvals, or will result in a substantial increase in the severity of a previously identified impact.

Any new Circumstances Involving New Impacts?
Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes to the project site or the vicinity (circumstances under which the project is undertaken) which have occurred subsequent to the certification or adoption of prior environmental documents, which would result in the current project having new significant environmental impacts that were not considered in the prior environmental documents or that substantially increase the severity of a previously identified impact.

Any new Information Requiring New Analysis or Verification?
Pursuant to Section 15162(a)(3)(A–D) of the CEQA Guidelines, this column indicates whether new information of substantial importance which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified or adopted is available requiring an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigation measures remain valid. Either "yes" or "no" will be answered to indicate whether there is new information showing that: (A) the project will have one or more significant effects not discussed in the prior environmental documents; (B) that significant effects previously examined will be substantially more severe than shown in the prior environmental documents; (C) that mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the prior environmental documents would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative. If "no," then no additional environmental documentation (supplemental or subsequent EIR) is required.

Mitigation Measures Implemented or Addressing Impacts
Pursuant to Section 15162(a)(3) of the CEQA Guidelines, this column indicates whether the prior environmental documents provide mitigation measures to address effects in the related impact category. In some cases, the mitigation measures have already been implemented. In any instance where mitigation was included, regardless of whether the mitigation has been completed at this time, the response will include the mitigation measure number. If "none" is indicated, this environmental analysis concludes a significant impact does not occur with this project, no mitigation was previously included, and no mitigation is needed.

DISCUSSION AND MITIGATION SECTIONS

Discussion
A discussion of the elements of the checklist is provided under each environmental category in order to clarify the answers. The discussion provides information about the particular environmental issue, how the project relates to the issue and the status of any mitigation that may be required or has already been implemented.

Mitigation Measures
Applicable mitigation measures from the prior environmental review that apply to the project are listed under each environmental category.

Conclusions
A discussion of the conclusion relating to the analysis contained in each section.

CHECKLIST

I. Aesthetics

	Where Impact Was Analyzed in Prior Environmental Documents	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a. Have a substantial adverse effect on a scenic vista?	EIR 4.14-18 and Addendum page 15	No	No	No	None
b. Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	EIR 4.14-18 and Addendum page 15	No	No	No	None
c. In non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	EIR 4.14-19 and Addendum page 15	No	No	No	None
d. Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	EIR 4.14-24 and Addendum page 15	No	No	No	None

Discussion: Aesthetics and visual resources are subjective by nature, and therefore the extent of visual impacts associated with adoption and implementation of development evaluated at a program level is difficult to quantify. The GP EIR analysis was conducted qualitatively, assessing the potential implications of full buildout of the Planning Area.

There are no designated or eligible state scenic highways within or near the Planning Area, nor is the Planning Area visible from such a highway, so the GP EIR concluded there were no impacts with respect to this topic (GP EIR page 4.14-18). This evaluation remains adequate and is applicable to this Project.

Impacts related to substantial adverse effects on a scenic vista were found to be less than significant (GP EIR page 4.14-18) because there are no scenic vistas in the Planning Area. This evaluation remains adequate and is applicable to this Project.

Impacts related to, in a non-urbanized area, substantially degrading the visual character or quality of public views of the site and its surroundings, and in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality, were found to be significant (GP EIR page 4.14-19). The significance determination was driven by the impacts to *non-urbanized areas*, where buildout of the Planning Area will convert large areas of open, undeveloped land to urban uses. This is unrelated to the Project area, which occurs in an urbanized area.

In an urbanized area, the criteria for evaluation is whether a project will conflict with zoning or other regulations governing scenic quality. The GP EIR discusses the effects of infill and redevelopment at length, acknowledging that new development in infill settings may result in some buildings that are taller or of a greater scale than the current development in the local neighborhood. However, the analysis indicates that new development will be required to comply with the City's Zoning Ordinance, General Plan policies, and as applicable with the City's Community Design Guidelines, and that these are intended to foster development which is compatible and complementary with the existing development. Furthermore, the GP EIR notes that allowing for greater density and intensity can improve the character of neighborhood centers and corridors, that taller or larger buildings do not necessarily constitute a visual impact, and that adding uses and density typically improves visual quality by developing vacant or underused properties and improving maintenance of existing structures and yards.

The HE Addendum discussed the infill aspects of the Rezone Program, including the program to increase the residential density on some infill sites with an existing multifamily zoning designation, Medium Density Residential land use designation, or High Density Residential land use designation, and the Commercial Corridors strategy. The HE Addendum further notes that these strategies were actually included as part of the Infill Housing Alternative evaluated in the GP EIR (Section 6), which considered the addition of up to 1,400 infill housing units. The analysis of the Alternative states that a conflict with applicable zoning and other regulations governing scenic quality would not occur under the Alternative and that this is consistent with the conclusion in the Aesthetics section of the GP EIR.

The Project includes additional design guidelines which supplement the Community Design Guidelines, and are designed to further reduce the potential for visual impacts resulting from development and/or redevelopment of infill sites near existing residential properties. The Specific Plans also include conceptual streetscape imagery showing different types of projects and how these might integrate into existing settings, including imagery of a horizontal mixed use site, a multifamily development within a single-family neighborhood, a depiction of an apartment building stepping down in height toward single-family homes, and a five story apartment building at 199 North Sunrise Avenue. This imagery visually supports the conclusions of the GP EIR and Addendum. Therefore, the GP EIR and Addendum adequately describes the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects related to aesthetic impacts in urbanized areas.

Mitigation Measures: None.

II. Agricultural & Forestry Resources

	Where Impact Was Analyzed in Prior Environmental Documents	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	EIR 4.1-17 and Addendum page 17	No	No	No	None
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	EIR 4.1-17 and Addendum page 17	No	No	No	None
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	N/A	No	No	No	N/A
d) Result in the loss of forest land or conversion of forest land to non-forest use?	N/A	No	No	No	N/A
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	EIR 4.1-17 and Addendum page 17	No	No	No	None

Discussion: The GP EIR indicates approximately 20 acres of Prime Farmland borders Pleasant Creek within Reason Farms. The remainder of the Planning Area is designated by the Placer County Important Farmland map as Farmland of Local Importance, Grazing Land, Other Land, and Urban and Built-Up Land (California Department of Conservation 2016). These designations are not considered Important Farmland under CEQA (Public Resources Code Sections 21060.1 and 21095 and CEQA Guidelines Appendix G). The areas of Prime Farmland with Reason Farms is

not designated for conversion to urban land uses. Therefore, the GP EIR concluded buildout of the General Plan would not convert Important Farmland to nonagricultural uses and no impact would occur. This evaluation remains adequate and is applicable to this Project.

The Planning Area is not zoned for agricultural uses and no parcels are under Williamson Act contracts (Placer County 2020). Therefore, the GP EIR concluded buildout of the General Plan would not conflict with existing zoning for agricultural uses or a Williamson Act contract and no impact would occur. This evaluation remains adequate and is applicable to this Project.

The Planning Area does not contain any forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)), and therefore there are no impacts related to forest land. This evaluation remains adequate and is applicable to this Project.

Mitigation Measures: None.

III. Air Quality

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Conflict with or obstruct implementation of the applicable air quality plan?	EIR 4.4-25 and Addendum page 18	No	No	No	MM 4.4-2a, MM 4.4-2b, and MM 4.4-3
b) Result in a cumulatively considerable net increase of any criteria for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	EIR 4.4-26 & 4.4-29 and Addendum page 18	No	No	No	MM 4.4-2a and MM 4.4-2b
c) Expose sensitive receptors to substantial pollutant concentrations?	EIR 4.4-36 and Addendum page 18	No	No	No	MM 4.4-3
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	EIR 4.4-49 and Addendum page 18	No	No	No	MM 4.4-5

Discussion: The GP EIR evaluated construction-related activities, which would result in temporary emissions of criteria air pollutants (e.g., PM_{10}, $PM_{2.5}$, CO) and ozone precursors (e.g., ROG and NO_X) from ground-disturbing activities (e.g., excavation, grading, and clearing); exhaust emissions from use of off-road equipment, material delivery, and construction worker commutes; building construction; asphalt paving; and application of architectural coatings. The GP EIR also evaluated activities associated with the operation of General Plan land uses, which would generate criteria air pollutant and precursor emissions from mobile, energy, and area sources. The California Emissions Estimator Model (CalEEMod) was used to estimate emissions resulting from both construction-related activities and operational activities. The HE Addendum indicated that the Rezone Program does not change the location or extent of land area which will be disturbed by construction, nor does it increase the amount of building area which would be constructed (as discussed previously, the units added by the Rezone Program fall within the scope of units evaluated by the GP EIR). The Project also falls within the scope of the units evaluated by the GP EIR and Addendum. Therefore, the Project would not result in a change to the construction-related analysis in the GP EIR, which concluded that citywide emissions would exceed the adopted Placer County Air Pollution Control District significance thresholds, and that even after application of mitigation these impacts would remain significant and unavoidable. This citywide analysis remains appropriate and applicable to the Project.

Note that this evaluation considered the combined effects of development activities occurring concurrently across the City; individual projects may not, by themselves, result in significant impacts. The Sacramento Metropolitan Air Quality Management District (SMAQMD) CEQA Handbook (page 3-4) indicates that an individual project on a vacant site generally needs to involve 35 or more acres to exceed the construction-related significance threshold. The largest vacant site in the Project area is approximately three acres.

For operational emissions, the HE Addendum evaluation noted that the Housing Element did not change the total units analyzed but did change the location and density of uses, which can have an effect on operational emissions related to transportation. An updated analysis of vehicle miles traveled (VMT) was prepared for the Housing Element; the details and findings of this VMT analysis were discussed in greater detail in the Transportation section of the HE Addendum. To summarize, the updated analysis found the Housing Element had a beneficial effect on VMT generation. The updated analysis found existing conditions (2020) had an average citywide VMT of 15.7 VMT/resident and cumulative conditions (2035) have an average citywide VMT of 14.7 VMT/resident. This was an increase of baseline (existing conditions) VMT, which the GP EIR found to be 15.1 VMT/resident, but is a decrease of cumulative conditions VMT, which the GP EIR found to be 15.5 VMT/resident (with transportation facilities constrained) or 14.9 VMT/resident (with transportation facilities unconstrained). The HE Addendum found that operational criteria pollutant emissions would be decreased compared to the analysis of the GP EIR, because it reduced citywide VMT. The VMT reductions occurred because higher densities generally result in lower per-person vehicle miles traveled, especially in areas of the City which have low VMT rates due to proximity to services, jobs, and transit, such as the Project area. The Project is within the area of the City which generates the lowest per-person VMT in the City, and therefore would also be expected to have a beneficial impact on per person VMT generation.

Given that the Project will reduce citywide VMT, it will also reduce all criteria pollutant emissions associated with transportation. The GP EIR and Addendum found that emissions related to operation were significant and unavoidable, because the application of mitigation was not sufficient to bring emissions below the significance thresholds. This conclusion remain adequate and is applicable to this Project. However, this is based on the citywide emissions; individual projects may not exceed the significance thresholds. The Placer County Air Pollution Control District California Environmental Quality Act Handbook Table 2-2 provides a construction emissions screening table which indicates that an apartment project must generally be larger than approximately 900 units to exceed operational significance thresholds, and a commercial project must be more than

200,000 square feet to exceed significance thresholds. The combined redevelopment activities of the Project would not exceed either screening threshold.

For substantial pollutant concentrations, the GP EIR and Addendum found construction and operation of the General Plan would generate localized air pollutant emissions that could affect existing and proposed sensitive receptors. Construction activities would generate diesel particulate matter (diesel PM) emissions. Existing regulations and policies, as well as revised policies were found to reduce potential exposure to substantial pollutant concentrations, but impacts related to diesel particulates were found to be significant and unavoidable. The Project would not change the location or extent of construction activities, so would result in no change to this analysis. This evaluation remains adequate and is applicable to this Project.

Buildout of the General Plan would also contribute vehicles to local intersections that could cause a CO hotspot (i.e., exceedance of the CO ambient air quality standard). However, due to requirements for cleaner vehicle emissions, proposed land use and transportation goals and policies, and use of intelligent transportation system equipment, the GP EIR concluded the General Plan's land uses would not contribute substantial vehicle volumes to existing or future intersections that could cause a CO hotspot. Existing regulations and policies, as well as revised policies were found to reduce potential exposure to substantial pollutant concentrations related to CO hotspots to a less than significant level. The HE Addendum included an updated Level of Service analysis (see the Transportation section of this Addendum) which found that the Housing Element would not change trip distribution in a manner that would cause the City's Level of Service policy to be exceeded, nor would it contribute significant trips to intersections already operating at acceptable levels. Furthermore, the Infill Alternative analysis of the GP EIR likewise found that even adding 1,400 units in the Infill area of the City, where the Project is located, would not cause these impacts. Therefore the GP EIR and Addendum analysis related to CO hotspots remains adequate and is applicable to this Project.

For other emissions, the GP EIR found that buildout of the General Plan could involve actions which would expose people to objectionable odors. Construction-related activities would generate odors from the use of diesel-powered equipment and from paving and architectural coating activities. However, these odorous emissions would be temporary and disperse rapidly with distance from the source; therefore, construction-generated odors would not result in the frequent exposure of receptors to objectionable odor emissions. Future land uses could result in the operation of new land use that generates objectionable odors or the siting of sensitive receptors in proximity to existing odor-generating land uses within the Planning Area. Therefore, development under the General Plan could result in the exposure of receptors to objectionable odor emissions. Because buffer distances and implementation of specific technology- and design-based measures cannot be known at this time, it was conservatively assumed that sensitive receptors could be exposed to substantial odor-generating emissions, and the GP EIR found impacts to be significant and unavoidable after the application of mitigation. The HE Addendum indicated the Housing Element does not change the location and extent of urban development, and though it includes the potential placement of residential uses in locations which are currently designated for commercial uses, none are located in areas which are exposed to significant odor sources. This remains true of the Project. The Project area was evaluated using the SMAQMD odor screening methodology, and it was found that there were no significant odor sources that would affect the Project. Therefore the GP EIR and Addendum evaluation remains adequate and is applicable to this Project.

Mitigation Measures: All of the mitigation measures below were effectuated through inclusion in the City's 2035 General Plan Appendix A: Implementation Measures, but are included here for reference.

Mitigation Measure 4.4-2a – ***The proposed General Plan Update should be amended as follows:***

Implementation Measure

Projects that could have a potentially significant effect, as demonstrated by exceedance of the PCAPCD-recommended thresholds of significance, shall incorporate applicable PCAPCD-recommended standard operational mitigation measures, as listed below or as they may be updated in the future, or those design features determined by the City to be as effective:

- Wood burning or pellet stoves shall not be permitted. Natural gas or propane fired fireplaces shall be clearly delineated on plans submitted to obtain building permits.
- Where natural gas is available, gas outlets shall be provided in residential backyards for use with outdoor cooking appliances such as gas barbeques.
- Electrical outlets should be installed on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.
- All newly constructed residential buildings including one- and two-family dwellings, townhomes, and multi-family units in low-rise and high-rise residential buildings shall comply with the California Green Building Standards Code (CalGreen).
- Covenants, Conditions & Restrictions (CC&Rs) shall include the required distribution of educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information shall be delivered as part of a “move-in” packet prior to occupancy of the residence.
- Streets should be designed to maximize pedestrian access to transit stops.
- Site design shall maximize access to transit, to accommodate bus travel, and to provide lighted shelters at transit access points.
- A pedestrian access network shall link complementary land uses.
- Provide bicycle storage to promote bicycling.
- Vanpool parking only spaces and preferential parking for carpools should be required for employment-generating uses.
- Consider using concrete or other non-polluting materials for paving parking lots instead of asphalt.
- Landscaping should be designed to eventually shade buildings and parking lots.

Mitigation Measure 4.4-2b – ***The proposed General Plan Update should be amended as follows:***

Implementation Measure

If, following implementation of Mitigation Measure 4.4-2a, a project's operational emissions would still exceed PCAPCD-recommended thresholds of significance, the City would require the project to offset remaining project emissions in excess of thresholds by establishing off-site mitigation or participation in PCAPCD's Off-site Mitigation Program.

Mitigation Measure 4.4-3 – The proposed General Plan Update should be amended as follows:

Implementation Measure

- The City shall require, as part of plans for development within the Planning Area, the implementation of ARB's *Air Quality and Land Use* Handbook*: A Community Health Perspective* guidance concerning land use compatibility and recommended setback distances with regard to sources of TAC emissions and sensitive land uses, or related guidance as it may be updated in the future.
- As an alternative to these buffer distances, proposed sensitive receptors, uses that involve substantial truck trips, and large gas stations may provide a site-specific health risk assessment, using methods consistent with applicable guidance from the Office of Environmental Health Hazard Assessment, with mitigation, if necessary, to demonstrate compliance with applicable PCAPCD-recommended health risk thresholds. When health risk impacts exceed PCAPCD-recommended thresholds, feasible on-site mitigation measures to reduce TAC exposure shall be implemented to mitigate health risk impacts below PCAPCD-recommended thresholds. On-site measures could include but are not limited to providing enhanced filtration systems (e.g., MERV 13 or greater) for near-by sensitive receptor buildings, use of solid barriers to pollution, and vegetation to reduce pollutant concentrations, changes to the TAC emission source's operation (e.g. technology or management practices that reduce harmful emissions at the Rail Yard), and positioning of exhaust and intake for ventilation systems to minimize exposure, among others.
- The City shall require, as part of development of land uses associated with sensitive receptors within 500 feet of high-volume roadways (defined as roadways carrying an average of 100,000 or more vehicles per day), the *incorporation* of feasible design measures to reduce exposure by sensitive receptors of substantial emissions of TACs from nearby high-volume roadways and operation of the Roseville Rail Yard. Design measures shall include recommended strategies from the ARB Technical Advisory, as listed below or as they may be updated in the future, or those design features determined by the City to be as effective:
    - Design that promotes air flow and pollutant dispersion along street corridors, including the use of wider sidewalks, bicycle lanes, and dedicated transit lanes, which create space for better air flow and pollutant dispersion along with increasing active transportation and mode shift;

- Installation of solid barriers, particularly in the downwind direction. Note that consideration of this strategy should also weigh the negative effect of dividing neighborhoods and obscuring sightlines.
- Installation of vegetation for pollutant dispersion; maximum benefit of this strategy is typically seen when combined with solid barriers.
- Installation of indoor high-efficiency filtration systems and devices to remove pollutants from the air. If this strategy is selected, a plan for ongoing operation and maintenance of the systems must also be developed to ensure long-term efficiency is achieved as intended by the system.

Mitigation Measure 4.4-5 – ***The proposed General Plan Update should be amended as follows:***

Implementation Measure

All new Specific Plans and proposed amendments to Specific Plans shall be evaluated for odor impacts using the SMAQMD-recommended screening distances for odor sources, or the most current adopted or recommended version. If the minimum buffer distance is not feasible, as an alternative to these buffer distances, technology- and design-based measures shall be evaluated as part of the Specific Plan design guidelines to minimize, contain, or prevent the generation of odor-causing emissions and the dispersion of such emissions to nearby sensitive receptors. For example, in the case of siting odor-producing sources, activities could be maintained within an enclosed space and appropriate air filtration systems could be implemented to reduce odors expelled from the building. For developments that would host sensitive receptors, design would include air site layout, landscaping, indoor air filtration systems, or other appropriate measures to minimize exposure of proposed sensitive receptors to odors.

IV. Biological Resources

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	EIR 4.8-60 (plants), 4.8-64 (wildlife), and Addendum page 23	No	No	No	MM 4.8-1 and 4.8-2
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies or regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	EIR 4.8-70 and Addendum page 23	No	No	No	MM 4.8-1, 4.8-2, and MM 4.8-3
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	EIR 4.8-73 and Addendum page 23	No	No	No	MM 4.8-1, 4.8-2, MM 4.8-3, and MM 4.8-4
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	EIR 4.8-76 and Addendum page 23	No	No	No	MM 4.8-1, 4.8-2, MM 4.8-3, and MM 4.8-4
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	EIR 4.8-79 and Addendum page 23	No	No	No	None

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	EIR 4.8-80 and Addendum page 23	No	No	No	None

Discussion*:* The biological resources information presented in the GP EIR was based on review of the following sources: previous studies conducted for the West Roseville, Sierra Vista, Creekview, and Amoruso Ranch Specific Plan Areas and associated EIRs; a comment letter received from CDFW in response to the NOP; biological resource databases, including the United States Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC), USFWS Critical Habitat Mapper, USFWS National Wetlands Inventory (NWI) Wetlands Mapper, the California Natural Diversity Database (CNDDB) and Biogeographic Information and Observation System (BIOS), and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants; aerial photography interpretation; and the draft Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP).

Impacts related to the loss and degradation of special-status plants and their habitats were found to be potentially significant (GP EIR page 4.8-60) as were impacts to special-status wildlife and their habitats (GP EIR page 4.8-64), impacts to riparian habitat or other sensitive natural communities (GP EIR page 4.8-70), impacts to protected wetlands and other waters (GP EIR page 4.8-73), and impacts to wildlife movement corridors and nursery sites (GP EIR page 4.8-76) because buildout of the General Plan could result in direct removal or take of special-status species; modification or removal of sensitive habitats, wildlife corridors, nursery sites, protected waters, and habitats suitable for special-status species; indirect effects to species or habitats that may result from construction-related runoff, sedimentation, erosion, and introduction of invasive weeds; and the introduction of new sources of noise and light. Implementation of mitigation, combined with General Plan policies and existing laws and regulations, were found to reduce impacts to less than significant levels, because new development would be required to identify, avoid, and preserve sensitive habitats, wildlife corridors, nursery sites, protected waters, and habitats which may support special-status populations to the extent feasible, and compensate for the loss of these resources through preservation, compensation, or other appropriate measures in coordination with state and federal agencies. Furthermore, the City's Specific Planning process has already resulted in the creation of connected open space corridors throughout the Planning Area which contain much of the sensitive habitat in the Planning Area.

Impacts related to conflicts with local ordinances protecting biological resources were found to be less than significant (GP EIR page 4.8-79) because while buildout of the Planning Area would result in impacts to biological resources, all development would be subject to and consistent with the city's ordinances and policies such as the Tree Preservation Ordinance. Therefore, impacts related to conflict with local ordinances were found to be less than significant.

Impacts related to conflict with the provisions of an adopted Habitat Conservation Plan, Natural Conservation Community Plan, or other approved Conservation Plan were found to be less than significant because there are no adopted plans which apply to the Planning Area.

All of the analyses described above are based on the potential impacts of grading and general development within the Planning Area, and the HE Addendum noted that the Housing Element neither changed the boundaries of the Planning Area nor the locations of potential grading and development within the Planning Area. Therefore, the GP EIR analyses of biological resources adequately and appropriately describe the potential impacts of the Housing Element. The Project area is within a fully developed and urbanized location of the Planning Area, where significant impacts to biological resources would not be expected to occur; the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: All of the mitigation measures below were effectuated through inclusion in the City's 2035 General Plan Appendix A: Implementation Measures, but are included here for reference.

Mitigation Measure 4.8-1 The proposed General Plan Update should be amended as follows:

Implementation Measure for Special-Status Plants and Habitat

As appropriate to each individual project or Specific Plan, the following actions or those determined to be equally as effective by the City shall be implemented where there may be an adverse impact on special-status plants or habitat:

a. In conjunction with environmental review pursuant to CEQA, for projects that could directly affect special-status plants or habitat, the City shall require that resource field surveys, including special-status plant surveys, be submitted concurrent with development applications inventorying the type, quantity, and quality of existing open space resources and conditions. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed, is within an adopted specific plan area, or contains resources considered less than significant.

b. The City and project proponents will identify feasible opportunities to preserve special-status plant species occurrences and sensitive habitats through design and planning.

c. If the City determines it is reasonable and feasible to do so, the City will require preservation of occupied special-status plant species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status plant species and sensitive habitats.

d. If the project would result in take of state or federally listed species, the City will require project proponent/s to obtain take authorization from the USFWS and/or the CDFW, as appropriate, depending on species status, and comply with all conditions of the take authorization.

e. The City will require project proponents to develop and implement a mitigation and monitoring plan reflective of permit conditions required by State and/or federal regulatory agencies, to compensate for effects to or loss of special-status species and sensitive habitats. The mitigation and monitoring plan will describe in detail how impacts to special-status species or sensitive habitats shall be avoided or offset, including details on restoration and creation of habitat, compensation for the temporal loss of habitat, management and monitoring to avoid indirect habitat degradation (e.g., management of invasive plant species, maintenance of required hydrology),

success criteria ensuring that habitat function goals and objectives are met and target special-status species cover and density parameters are established, performance standards to ensure success, and remedial actions if performance standards are not met. The plan will include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment).

f. If available, purchase of mitigation credits at an agency-approved mitigation bank (i.e., approved by the agency with jurisdiction over the affected species or habitat) in Placer County, will be acceptable for compensatory mitigation for special-status species.

Mitigation Measure 4.8-2 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure for Special-Status Wildlife

If feasible, the City will require preservation of occupied special-status wildlife species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status wildlife species and sensitive habitats.

Mitigation Measure 4.8-3 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure for Riparian Habitat and Sensitive Natural Communities

If a proposed project would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, the City will require project proponent/s to notify the California Department of Fish and Wildlife, obtain a Lake and Streambed Alteration Agreement if determined necessary by the California Department of Fish and Wildlife, and comply with all conditions of the Lake and Streambed Alteration Agreement. Measures for riparian habitat and sensitive natural communities protection include, but are not limited to, avoid impacts by establishing a buffer zone between adjacent land uses and riparian habitat and sensitive natural communities; protect and preserve riparian habitat and sensitive natural communities to the extent feasible; and compensate for loss of riparian habitat and sensitive natural communities by creating, restoring, or preserving off-site habitat in coordination with the applicable resource agencies.

Mitigation Measure 4.8-4 – ***The proposed General Plan Update should be amended as follows:***

Implementation Measure for Wetlands and Other Waters

If a project would result in ground disturbance on sites containing waterways or other aquatic habitats, the City will require project proponent/s to complete a delineation of waters of the United States according to U.S. Army Corps of Engineers' methods, and to submit the completed delineation to the U.S. Army Corps of Engineers for jurisdictional determination. If the project would result in fill of wetlands or other waters of the United States, the City will require project proponent/s to obtain a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers and water quality certification from the Regional Water Quality Control Board pursuant to Section 401 of the Clean Water Act. If the project involves work in areas containing waters disclaimed by the USACE, project applicants shall obtain a Waste Discharge Requirement permit from the Regional Water Quality Control Board pursuant to the Porter Cologne Act. Project applicants shall be required to obtain all needed permits prior to project implementation, to abide by the conditions of the permits, including all mitigation requirements, and to implement all requirements of the permits in the timeframes required therein.

V. Cultural Resources

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Cause a substantial adverse change in the significance of an historic resource pursuant to in Section 15064.5?	EIR 4.9-30 and Addendum page 28	No	No	No	MM 4.9-1a
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	EIR 4.9-33 and Addendum page 28	No	No	No	MM 4.9-2a and 4.9-2b
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	EIR 4.9-37 and Addendum page 28	No	No	No	MM 4.9-3 and 4.9-4

Discussion: In order to identify known and potential historical resources to determine whether any buildings, structures, objects, districts, or sites had been previously recorded or evaluated in the Planning Area for the GP EIR, Historic Property Data Files for Placer County were examined, along with the current and previous General Plan, various Specific Plans and their environmental documents and technical appendices, and the City of Roseville Municipal Code. In addition to these standard sources of information, summaries of Record Search results for selected specific plans and projects were also used. A similar process was used for archaeological resources, including the evaluation of studies completed for Specific Plans and other projects.

Impacts related to adverse changes to the significance of a historical resource were found to be significant, as were adverse changes in the significance of an archeological resource and adverse impacts related to the disturbance of human remains because the Planning Area is known to contain resources and is also sensitive for the undiscovered presence of historic resources, archeological resources, and human remains. Although the General Plan and the City's Zoning Ordinance contain goals and policies which require identification and assessment of potential resources in advance of development, impacts to resources could nonetheless occur. Grading and site development within the Planning Area has the potential to impact undiscovered subsurface historic and archeological resources, as well as human remains – particularly remains which are interred outside of formal cemeteries. The GP included policy revisions to further strengthen protections and the GP EIR included mitigation measures to address these impacts, but nonetheless impacts could still occur. Therefore impacts to historic resources, archeological resources, and human remains were found to remain significant and unavoidable.

The analyses described above are based on the potential impacts of grading and general development within the Planning Area, and the HE Addendum noted that the Housing Element neither changed the boundaries of the Planning Area nor the locations of potential grading and

development within the Planning Area. Therefore, the GP EIR analyses of cultural resources adequately and appropriately described the potential impacts of the Housing Element. The mitigation measures included for the GP EIR and Addendum apply to the Project, and were implemented as part of the Project. The City undertook tribal consultation pursuant to SB 18, which is discussed in the Tribal Cultural Resources section of this Addendum. With regard to historical resources, the Atlantic Street Corridor and Douglas-Harding Corridor Specific Plans include many buildings greater than 45 years old. These areas have been previously surveyed for records as part of or associated with the Downtown Specific Plan project, which included surveys for the Specific Plan area and surrounding areas covered by the Project. There are no structures on the City's Master List or on the National Historic Register in the Project area. In addition, the Project includes streamlining provisions and design guidelines and standards, but the Project does not allow development of any site which was not previously permitted to be developed. Therefore, the GP EIR and Addendum analysis adequately and appropriately describe the potential impacts of the Project, and the Project is consistent with the cultural resources policies of the General Plan. The Project does not result in new or substantial increases in significant effects.

Mitigation Measures: All of the mitigation measures below were effectuated through inclusion in the City's 2035 General Plan Appendix A: Implementation Measures, but are included here for reference.

Mitigation Measure 4.9-1a – The General Plan Update should be amended as follows:

Implementation Measure

As appropriate to each individual project or Specific Plan, the following actions or those determined to be equally as effective by the City shall be implemented where there may be an adverse impact on potential historical resources:

a. Consult the City's Master List of Historical Resources Inventory and, as necessary, seek updated information from the North Central Information Center or other applicable data repositories to determine whether the project area has been surveyed, and whether historic built environment resources were identified.

b. If a survey of the property or the area in which the property is located has not been conducted, a qualified architectural historian shall conduct a study of the project area for the presence of historic built environment resources.

c. If a study is required, it will evaluate the significance of built environment resources greater than 45 years in age that may be directly or indirectly impacted by project activities. The study may include a field survey; background, archival and historic research; and consultation with local historical societies, museums or other interested parties; as necessary.

d. If necessary, the qualified architectural historian's study will recommend appropriate protection or mitigative treatment, if any, and include recordation of identified built environment resources. Recommended treatment for historical resources identified in the report shall be implemented.

e. If no significant historic built environment resources are identified in the study or prior survey of the project area that may be directly or indirectly impacted by project activities, there is no adverse change to documented built environment historical resources and no further action is required.

f. If a significant built environment historical resource could be directly or indirectly impacted by project activities, avoidance shall be considered the primary mitigation option. If avoidance is not feasible, then the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties will reduce impacts to an acceptable level. If adherence to the Secretary of the Interior's Standards cannot avoid materially altering in an adverse manner the physical characteristics or historic character of the surrounding environmental setting that contribute to a resource's historic significance, additional mitigation may be required.

g. If avoidance is not feasible and minimizing impacts through adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties is not feasible, documentation is required using, as appropriate, Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and/or Historic American Landscapes Survey (HALS) guidelines before the property is potentially altered during project activities.

Mitigation Measure 4.9-2a – The proposed General Plan Update should be amended as follows:

Implementation Measure

Projects that could have significant adverse impacts to potentially significant archaeological resources shall be required to assess impacts and provide feasible mitigation. The following steps, or those determined to be equally as effective by the City, will be followed:

a. Request information from the California Native American Heritage Commission to obtain a review of the Sacred Lands File and a list of local Native American groups and individuals that may have specific knowledge of cultural resources in the area that could be affected by project implementation. Each Native American group and individual identified by the Native American Heritage Commission will be contacted to obtain any available information on cultural resources in the project area. Additional consultation with relevant tribal representatives may be appropriate, depending on the relative level of cultural sensitivity, as identified by Native American groups or individuals.

b. Request updated information from the North Central Information Center of the California Historical Resources Information System (California State University, Sacramento) to determine whether the project area has been previously surveyed and whether archaeological resources were identified. In the event the records indicate that no previous survey has been conducted or existing survey data is greater than five years old, the applicant will retain the services of a qualified archaeologist to assess the adequacy of the existing data (if any) and assess the archaeological sensitivity of the project area. If the survey did not meet current professional standards or regulatory guidelines, or relies on

outdated information, a qualified archaeologist will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources.

c. If a survey is warranted, it will include all necessary background research, including that resulting from consulting with traditionally and culturally affiliated California Native American tribes in addition to an archaeological pedestrian survey. Based on findings of the survey, additional technical studies may be required, such as geoarchaeological sensitivity analysis, or other analysis scaled according to the nature of the individual project. A report will document the results of the survey and provide appropriate management recommendations, and include recordation of identified archaeological resources on appropriate California Department of Parks and Recreation site record forms and cultural resources reports.

d. Management recommendations may include, but are not limited to additional studies to evaluate identified sites or archaeological monitoring at locations determined by a qualified archaeologist in consultation with culturally affiliated California Native American tribes to be sensitive for subsurface cultural resource deposits. The City will determine the need for tribal monitoring based upon the guidance provided in Volume I of the City's Internal Guidance for Management of Tribal Cultural Resources and Consultation.

e. Once approved by the City, provide the North Central Information Center with appropriate California Department of Parks and Recreation site record forms and cultural resources reports for any resources identified. Any subsequent reports completed as a result of additional technical work will likewise be submitted to the Northcentral Information Center.

f. If no archeological resources, including those which are TCRs or are associated with a TCR, are identified that may be directly or indirectly impacted by project activities, mitigation is complete as there would be no adverse change to documented archeological resources. The exception would be in the event of the discovery of a previously unknown archaeological site inadvertently exposed during project implementation. In such an event, a qualified archaeologist will be retained to assess the discovery and provide management recommendations as necessary, in accordance with the City's Internal Guidance for Management of Tribal Cultural Resources and Consultation Section 3.2.

g. When a project will impact a known archaeological site, including those determined to be a TCR, and avoidance is not a feasible option, a qualified archaeologist, in consultation with traditionally and culturally affiliated California Native American tribes, shall evaluate the eligibility of the site for listing in the California Register of Historical Resources. If the archaeological site is found to be a historical resource as per CEQA Guidelines Section 15064.5 (a)(3), the qualified archaeologist shall recommend further mitigative treatment, which could include preservation in place or data recovery, consistent with Internal Guidance for Management of Tribal Cultural Resources and Consultation Section 3.2.4.

h. If a site to be tested is prehistoric, the City should determine the need for tribal monitoring based upon the guidance provided in Volume I of the Internal Guidance for Management of Tribal Cultural Resources and Consultation Section 2.4.4.

i. Appropriate mitigation may include curation of artifacts removed during subsurface testing, consistent with the City's Internal Guidance for Management of Tribal Cultural Resources and Consultation.

j. If significant archaeological resources that meet the definition of historical or unique archaeological resources, including those determined by the City to be TCRs, are identified in the project area, the preferred mitigation of impacts is preservation in place. If impacts cannot be avoided through project design, appropriate and feasible treatment measures are required, which may consist of, but are not limited to actions, such as data recovery excavations. If only part of a site will be impacted by a project, data recovery will only be necessary for that portion of the site. Data recovery will not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Studies and reports resulting from the data recovery shall be deposited with the North Central Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 of the Health and Safety Code, as outlined in the City's Internal Guidance for Management of Tribal Cultural Resources and Consultation.

Mitigation Measure 4.9-2b – The General Plan Update should be amended as follows:

Implementation Measure

Projects that could have significant adverse impacts to undiscovered, potentially significant archaeological resources and/or TCRs which may be discovered during construction shall be required to implement the Post-Review Discovery Procedures within Volume II Part C of the City's Internal Guidance for Management of Tribal Cultural Resources and Consultation, or those determined to be equally as effective by the City.

Mitigation Measure 4.9-3 – The General Plan Update should be amended as follows:

Implementation Measure

<u>Management of Tribal Cultural Resources and Consultation</u>

Projects that could have significant adverse impacts to human remains or potential human remains shall implement the applicable procedures and recommended mitigation within the City's Internal Guidance for Management of Tribal Cultural Resources and Consultation.

Mitigation Measure 4.9-4

Implement Mitigation Measure 4.9-3 (Projects that could have significant adverse impacts to human remains or potential human remains shall implement the applicable procedures and recommended mitigation within the City's Internal Guidance for Management of Tribal Cultural Resources and Consultation).

VI. Energy

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	EIR 4.15-9	No	No	No	None
b) Conflict with or obstruct a state or local plan for renewable energy or energy inefficiency?	EIR 4.15-18	No	No	No	None

Discussion: The GP EIR and Addendum analyzed energy impacts by assessing energy usage associated with the construction and operation of projects developed as part of buildout of the General Plan. Energy demand was calculated consistent with the greenhouse gases (GHG) emissions modeling (see Greenhouse Gases section of this Addendum). The analysis found that fuel consumed by construction would be temporary and would not represent a significant demand, and further concluded that there are no anticipated unusual characteristics of buildout that would necessitate the use of equipment that is less energy-efficient than for other comparable projects. For building energy use, energy efficiency requirements will become more stringent over time, as they have in the past, so new projects will be more efficient than existing projects of the same type in the Planning area. Therefore, buildout will reduce the per-resident average energy use. This will be especially true of Project activities, because existing buildings in the Project area were built well before modern energy efficiency standards, so reinvestment and redevelopment activities involving those buildings would improve their energy efficiency. The conclusions of the GP EIR and Addendum remain appropriate to describe the Project, because the Project does not change the location or extent of construction, the units are within the scope of the buildout analysis, multi-family residential is a typical building use that does not result in unusual energy demand characteristics, and redevelopment activities involving existing older buildings would improve their efficiency.

Transportation energy would be required in the form of fuel, and the average demand for fuel per resident will decrease over buildout conditions, because the transportation analysis shows that VMT per resident will decrease at buildout conditions compared to existing conditions (see the Transportation section of this Addendum). This remains true of the Project, which is located in the lowest per-person VMT area of the City.

The GP EIR and Addendum found all projects within the Planning Area would be required to comply with the California Energy Code and California Green Building Standards Code in effect at the time of building permit application, and would therefore not conflict with or obstruct a state or local plan for renewable energy or energy efficient. This would remain true of development consistent with the Project.

The GP EIR and Addendum concluded that buildout would not result in significant impacts due to wasteful, inefficient, or unnecessary project construction, and impacts would be less than significant. This conclusion and the supporting analysis remains appropriate and applicable to the Project.

Mitigation Measures: None.

VII. Geology, Soils, and Paleontological Resources

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:		No	No	No	None
i) Ruptures of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? (Refer to Division of Mines and Geology Special Publication 42.)	EIR 4.7-27 and Addendum page 36	No	No	No	None
ii) Strong seismic ground shaking?	EIR 4.7-28 and Addendum page 36	No	No	No	None

iii) Seismic-related ground failure, including liquefaction?	EIR 4.7-27 and Addendum page 36	No	No	No	None
iv) Landslides?	EIR 4.7-27 and Addendum page 36	No	No	No	None
b) Result in substantial soil erosion or the loss of topsoil?	EIR 4.7-29 and Addendum page 36	No	No	No	None
c) Be located in a geological unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	EIR 4.7-31 and Addendum page 36	No	No	No	None
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	EIR 4.7-31 and Addendum page 36	No	No	No	None
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	EIR 4.7-27 and Addendum page 36	No	No	No	None
f) Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	EIR 4.7-32 and Addendum page 36	No	No	No	MM 4.7-4

Discussion: The analysis prepared for the GP EIR relied on published geologic literature and maps, NRCS soil survey data, and a records search performed at the University of California Museum of Paleontology (UCMP). The information obtained from those sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts. The GP EIR indicated impacts due to surface fault rupture, liquefaction, landslides, or the use of septic systems did not require analysis because these risks were not evident (GP EIR page 4.7-27). The Planning Area does not include fault traces, soils subject to liquefaction or landslide hazards, and new development is required to connect to sewer systems.

Impacts due to strong seismic ground shaking were found to be less than significant (GP EIR page 4.7-28) because the evidence indicates strong shaking is unlikely and implementation of existing General Plan Seismic and Geologic Hazards goals and policies, in combination with compliance with the geologic and seismic requirements in the California Building Code (which the City has adopted), and the City's site-specific Design Review process (as set forth in the City's Design Standards Section 2, General Requirements), would reduce the potential for adverse impacts to people or structures related to seismic shaking.

Impacts due to soil erosion were found to be less than significant (GP EIR page 4.7-29) because compliance with existing stormwater, grading, and erosion control regulations and implementation of policies in the existing General Plan and proposed General Plan Update would reduce the soil erosion impact by requiring applicants to implement BMPs based on the City's *Stormwater Quality BMP Guidance Manual for Construction*,

develop and implement a SWPPP, comply with the City's Grading Ordinance, comply with the City's Design and Construction Standards, and comply with the avoidance and minimization measures contained in the Open Space Preserve Overarching Management Plan, all of which are specifically designed to minimize construction-related soil erosion and degradation of water quality to the maximum extent feasible.

Impacts due to unstable and expansive soils were found to be less than significant (GP EIR page 4.7-31) because implementation of General Plan Seismic and Geologic Hazards goals and policies and compliance with existing laws and regulations, including Section 111 (Grading) of the City's Design and Construction Standards related to soil testing for earthwork and backfill, would address issues related to unstable and expansive soils by requiring new construction to prepare site-specific geotechnical reports to identify areas of unstable soil and shrink-swell potential, and to follow design specifications contained in the CBC and standard engineering practices to prevent adverse impacts associated with these limitations.

Impacts related to the damage or destruction of unique paleontological resources or unique geologic features were found to be potentially significant (GP EIR page 4.7-32) because the Planning Area contains geologic formations known to be sensitives for paleontological resources and grading could damage these resources. As mitigation, General Plan Goal OS4.1 was revised and Policy OS4.11 was added to provide guidance and protection for paleontological resources. After mitigation impacts were found to be less than significant.

All of the analyses described above are based on the potential impacts of grading within the Planning Area, and the HE Addendum found the Housing Element neither changed the boundaries of the Planning Area nor the locations of potential grading within the Planning Area. This remains true of the Project. Therefore, the GP EIR and Addendum analyses of geology, soils, and paleontological resources adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: The mitigation measure below was effectuated through inclusion in the City's 2035 General Plan Appendix A: Implementation Measures, but is included here for reference.

Mitigation Measure 4.7-4 ***– The proposed General Plan Update should be amended as follows:***

Implementation Measure

Paleontological Resources

Where there is potential for a significant impact to paleontological resources:

1. Consult the Paleontological Sensitivity Map.
2. For projects located in geologic units that are not identified as paleontologically sensitive and which do not involve ground disturbance to a depth greater than 5 feet below the ground surface, no further actions related to paleontological resources shall be required.
3. For projects that would be located in paleontologically sensitive geologic units, or those that would be located in non-paleontologically sensitive surficial units but would involve ground disturbance to a depth greater than 5 feet, provide a site-specific analysis of the project's potential to damage or destroy unique paleontological resources, and measures designed to protect unique paleontological resources, as

needed and appropriate. Such measures may include, but are not limited to, construction worker personnel training, periodic monitoring during construction activities, stopping work within 50 feet of any fossil that is discovered, evaluation of the fossil by a qualified paleontologist, and proper recordation and curation of the specimen.

VIII. Greenhouse Gases

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	EIR 4.5-18 and Addendum page 39	No	No	No	MM 4.4-2a, MM 4.3-1, and MM 4.5-1c
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	EIR 4.5-18 and Addendum page 39	No	No	No	MM 4.4-2a, MM 4.3-1, and MM 4.5-1c

Discussion: The GP EIR used CalEEMod to estimate GHG emissions which would result from construction and operation of completed land uses consistent with General Plan buildout. The construction emissions were summed and then amortized over a 30-year operational lifetime and added to the operational emissions associated with buildout. Thresholds of significance were developed for the GP EIR based on statewide demographics and data adjusted for land uses relevant in the City of Roseville. The GP EIR evaluation found existing conditions emissions of 5.13 MT CO_2e per service population (a combination of residents and employees) and that this would be reduced slightly to 5.12 MT CO2e per service population in cumulative buildout conditions. This value exceeds the significance thresholds for the years 2020, 2035, and 2050 (5.07, 2.25, and 0.83 MT CO_2e per service population, respectively). The evaluation further found that mobile emissions from transportation sources account for approximately 67% of citywide emissions and that emissions resulting from the operation of buildings (energy) were the next-largest sector, at approximately 19% of citywide emissions.

The HE Addendum evaluated the impact of changing the location and density of uses, which can have an effect on operational emissions related to transportation. An updated analysis of vehicle miles traveled (VMT) was prepared for the Housing Element; the details and findings of this VMT analysis are discussed in greater detail in the Transportation section of this Addendum. However, to summarize, the updated analysis found the Housing Element has a beneficial effect on VMT generation. The updated analysis found existing conditions (2020) have an average

citywide VMT of 15.7 VMT/resident and cumulative conditions (2035) have an average citywide VMT of 14.7 VMT/resident. This is an increase of baseline (existing conditions) VMT, which the GP EIR found to be 15.1 VMT/resident, but is a decrease of cumulative conditions VMT, which the GP EIR found to be 15.5 VMT/resident (with transportation facilities constrained) or 14.9 VMT/resident (with transportation facilities unconstrained). Given that the Housing Element was found to reduce citywide VMT, it was also found to reduce transportation sector GHG emissions. The Project is located within the area of the City found to have the lowest per-person VMT rate, where growth in the City would have the least impacts due to transportation-related GHG. The GP EIR and Addendum found that GHG emissions were significant and unavoidable after the application of mitigation. The GP EIR and Addendum analyses of GHG adequately and appropriately describes the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: The mitigation measures below were effectuated through inclusion in the City's 2035 General Plan Appendix A: Implementation Measures, but is included here for reference.

Mitigation Measure 4.5-1a: Implement Mitigation Measure 4.4-2a.

Mitigation Measure 4.5-1b: Implement Mitigation Measure 4.3-1.

Mitigation Measure 4.5-1c. The proposed General Plan Update should be amended as follows:

Implementation Measure

Area Sources

- The City shall utilize electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands.
- The installation of wood-burning fireplaces or appliances in new development shall not be permitted.

Energy

- The City will pursue within existing and future City facilities and may partner with other public agencies and organizations to promote replacement of appliances and office equipment with energy-efficient models with a priority from highest to lowest in terms of typical GHG reductions, on: water heater, vending machine, copier, refrigerator, printer, dishwasher, water cooler, computer, and clothes washer.
- The City will pursue improvements to existing and future City facilities and may partner with other public agencies and organizations to implement comprehensive building efficiency improvements, inclusive of, but not limited to, implement lighting efficiency upgrades, improved building temperature controls, building air sealing, duct air sealing and duct replacement, upgrading and/or insulating water heaters, ensuring proper functioning and efficiency of heating and air conditioning systems, reducing heat loss through and around windows, installation of cool roofs, and implementing energy conservation education.

- The City will support education and outreach to promote rebates, incentives, and other programs (as they become available) which would promote reductions in greenhouse gas emissions, and use available information on rebates used by consumers to determine where to focus education and outreach, including programs designed to promote electric appliances and replace natural gas appliances, and programs related to lighting.
- The City will promote the U.S. Department of Housing and Urban Development Energy Efficient Mortgage (EEM) program and similar programs that assist buyers in purchasing homes meeting energy-efficiency criteria.
- The City will partner with other agencies and organizations to expand the City's urban forest to promote sequestration, but also with a focus on selection and placement that reduces the need for air conditioning and the urban heat island effect.

Land Use and Transportation

- The City will direct its own investments and review proposed development projects to reduce vehicular travel demand, promote non-vehicular travel, and facilitate local purchase and use of electric vehicles.
- The City will continue to direct its own investments and pursue outside funding for infrastructure and operational programs to promote ease and convenience of pedestrian, bicycle, and transit travel for daily trips.
- The City will integrate its land use and transportation planning and review and condition proposed projects to better situate residents in proximity to workplaces, goods and services, and recreational opportunities, making updates to implementing plans, such as the Capital Improvement Program, Bicycle Master Plan, Pedestrian Master Plan, Transportation Systems Management program, transportation impact fee program, and transit plans.
- The City will support applications for affordable housing funds from agencies that reward and incentivize good planning, such as infill housing and housing built close to jobs, transportation, and amenities.
- The City will partner with other agencies and proposed developments to expand bicycle parking and other facilities, pedestrian facilities and amenities, and electric vehicle charging stations, with a focus on daily destinations.
- The City will support a reduction of parking requirements for projects with a location, design, surrounding mix of uses, access to non-vehicular transportation facilities, and/or ongoing travel demand management programs that would reduce the need for vehicular trips.

IX. Hazards and Hazardous Materials

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	EIR 4.10-20 and Addendum page 42	No	No	No	None
b) Create a significant hazard to the public or the environment though reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	EIR 4.10-20 and Addendum page 42	No	No	No	None
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	EIR 4.10-21 and Addendum page 42	No	No	No	None
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	EIR 4.10-23 and Addendum page 42	No	No	No	None
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	EIR 4.10-19 and Addendum page 42	No	No	No	None
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	EIR 4.10-26 and Addendum page 42	No	No	No	None

g) Expose people or structures either directly or indirectly to a significant risk of loss, injury or death involving wildland fires?	EIR 4.10-27 and Addendum page 42	No	No	No	None

Discussion*:* The GP EIR analyses in this section considered the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from implementation of the General Plan, and identified the primary ways that hazardous materials could expose individuals or the environment to health and safety risks.

The GP EIR included a preliminary review of environmental risk databases, but because the analysis is at the programmatic level it did not include sampling, site specific review, laboratory analysis, or inspection of buildings or site surfaces. Sites within the Planning Area with potential environmental hazards were identified based on information obtained from the Cortese List (including SWRCB's GeoTracker database and DTSC's EnviroStor database), the Pipeline and Hazardous Materials Safety Administration (PHMSA) Public Map Viewer, and a review of California Important Farmlands mapped by the Department of Conservation. In addition, the Placer County Department of Environmental Health maintains lists of hazardous material sites, releases, and accident occurrences. The methodology for determining wildfire hazards included a review of aerial photographs, and a review of CAL FIRE's fire hazard severity zone maps.

Impacts related to airport safety and noise hazards were found to be less than significant because the nearest airport is approximately 6.3 miles southwest of the Planning Area. This remains correct, and therefore the impacts of the Project are consistent with this conclusion.

Impacts related to the creation of significant hazard through routine transport, use, or disposal or possible release of hazardous materials from upset or accident conditions were found to be less than significant because while population growth and new businesses in the Planning Area would increase the potential for exposure to impacts, implementation of General Plan policies combined with compliance with existing federal and state regulations would ensure impacts would not be substantial. The same conclusion was reached for impacts related to handling of hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Regulations governing the transport, use, disposal, and handling of hazardous materials, substances, or waste, are detailed and stringent at both the federal and state level, and are developed and adopted to ensure that adverse health and safety impacts are prevented. In addition, the Planning Area does not contain any existing or planned industrial uses (those most likely to handle or use acutely hazardous materials) in proximity to an existing or proposed school.

Impacts related to public health hazards resulting from locating project development on a known hazardous materials site were found to be less than significant. Several sites within the City are listed on the state's Cortese List of known hazardous materials sites, and there are approximately 70 known listed hazardous materials sites in the City, most of which have been remediated and closed. The largest hazardous materials site in Roseville is associated with the former Southern Pacific Railyard, which is now the Union Pacific Railyard (Railyard), where cleanup and mitigation for contamination is ongoing and may affect surrounding properties.

The GP EIR indicated that most new development was not planned to occur on listed sites, but there were redevelopment and infill sites within areas with existing hazardous materials issues. For redevelopment or infill development areas with existing hazardous materials issues, General Plan goals and policies, in addition to application of current regulations, would not absolutely prevent exposure to hazards and hazardous materials, but would use existing facility information to identify areas of hazardous materials use. In a programmatic analysis such as the GP EIR and Addendum, as well as for this Project, site-specific review is not conducted, because the potential for impacts depends heavily on the exact nature and design of proposed construction, which cannot be known at this time. The GP EIR and Addendum indicated that while there is the potential

for future exposure due to construction of infill and redevelopment sites, site-specific investigations would be required where applicable to address these conditions as part of project-level environmental review. This remains true of the Project.

Buildout of the General Plan would add additional traffic and residences requiring evacuation in case of an emergency. The GP EIR found implementation of General Plan policies was found to ensure conformance with local emergency-response programs and continued cooperation with emergency-response service providers. In addition, while buildout of the General Plan was found to have a potential to increase risk to fire for both people and property, by increasing the amount of structures in the Planning Area, implementation of General Plan policies and actions, along with existing regulations was found to ensure that people and structures would not be exposed to a significant risk of loss of injury involving fires. Impacts were found to be less than significant. The HE Addendum found that the Housing Element would not change the location or extent of uses in a manner that would affect local emergency response programs, nor are there any areas of the City which are at increased risk of wildfire hazard. This remains true for the Project. Therefore, the GP EIR and Addendum conclusion related to emergency response plans and wildfire hazard remain appropriate and applicable to describe the impacts of the Project.

The nature of general plans, consistent with state law and common practice, is that specific uses or developments normally are not identified at a project level. Rather, categories of land use are defined that would allow a wide range of specific uses. The specific types of businesses allowed, and whether or not they would generate or use hazardous materials, cannot be known at the programmatic level, though the analysis can make assumptions about the typical range of hazardous materials used by business such as gasoline service stations and dry cleaners. In short, the GP EIR indicated that development in the Planning Area could involve a variety of land uses, including residences, commercial uses, industrial uses, utilities and transportation facilities, office space, and public services facilities (i.e., educational and institutional uses), and the analysis assumed and evaluated a range of potential uses that could handle hazardous materials, and a broad range of potential hazardous materials that could be used, in order to reach conclusions as to impacts. The HE Addendum concluded the Housing Element does not change these assessments or conclusions, because it does not introduce new types of uses not previously analyzed and the Housing Element would add residential unit capacity, which is not associated with significant use, transport, or disposal of hazardous materials. This conclusion remains appropriate for the Project.

As it relates to hazardous materials sites, an updated program-level investigation using SWRCB's GeoTracker database and DTSC's EnviroStor database was completed, and determined there are no active clean-up sites within the Project area. As discussed in the GP EIR, the infill and redevelopment sites may include sites affected by on-site or nearby hazardous materials conditions which are site-specific and cannot be known at this time. If warranted by observable site conditions, future development and redevelopment would require assessment, disclosure, and mitigation as part of the development application. While the potential impacts related to general construction remain the same for residential and non-residential construction, the operational exposure sensitivity of residential uses is greater than for non-residential uses, which would need to be considered when contemplating development of a given site. The conclusion of the GP EIR and Addendum remains appropriate for the Project.

In combination with existing required federal and state regulations pertaining to hazardous site cleanup, ongoing remedial activities at known contamination sites, site-specific environmental site assessments prior to site-specific earthmoving activities and as part of project-level environmental review, and implementation of existing and General Plan policies, would ensure the potential impacts of future development related to hazardous materials would be less than significant. This analysis and conclusion remains appropriate and adequate to describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

X. Hydrology and Water Quality

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	EIR 4.13-27 and Addendum page 45	No	No	No	None
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	EIR 4.13-30 and Addendum page 45	No	No	No	None
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:		No	No	No	None
i) result in substantial erosion or siltation on or off-site;	EIR 4.13-33 and Addendum page 45	No	No	No	None
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	EIR 4.13-35 and Addendum page 45	No	No	No	None
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater systems or provide substantial additional sources of polluted runoff; or	EIR 4.13-35 and Addendum page 45	No	No	No	None

iv) impede or redirect flood flows?	EIR 4.13-35 and Addendum page 45	No	No	No	
d) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	EIR 4.13-27 and Addendum page 45	No	No	No	None
e) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	EIR 4.13-41 and Addendum page 45	No	No	No	None
f) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	EIR 4.13-41 and Addendum page 45	No	No	No	None

Discussion: The GP EIR described potential impacts related to surface and groundwater hydrology and water quality, along with flooding, in the Planning Area. The analysis used the City's floodplain mapping (which includes Federal Emergency Management Agency floodplains); the 303(d) list of waterbodies impaired by pollution according to the State Water Resources Control Board; and a review of applicable watershed management, groundwater management, and restoration plans; and the environmental documentation provided for the City's Specific Plans.

Impacts related to violation of water quality standards or conflict with a water quality control plan were found to be less than significant because while buildout of the Planning Area would introduce uses which could result in additional discharges of pollutants, the policies of the General Plan combined with current land use stormwater, grading, and erosion control laws, along with regulations and permit conditions would ensure that significant impacts associated with violation of standards or conflicts with water quality control plans would not occur.

Impacts related to substantial interference with groundwater recharge or decrease in water supplies that would impede implementation of a sustainable groundwater management plan were found to be less than significant because while buildout of the Planning Area would result in additional impervious surfaces and therefore could reduce infiltration to groundwater, the Planning Area soils are substantially impermeable and only provide low levels of groundwater recharge. In addition, while development would result in the use of additional water, some of which could be from groundwater sources, the City's Urban Water Master Plan and the Western Placer County Groundwater Management Plan provide for sustainable management of groundwater supplies.

Impacts related to substantial alteration of drainage patterns resulting in substantial erosion or siltation were found to be less than significant because while construction and grading could result in runoff of soils and soil erosion, implementation of General Plan policies and existing regulations will ensure that substantial impacts do not result.

Impacts related to substantial alteration of drainage patterns resulting in runoff that would exceed the capacity of stormwater systems, cause an increase in flooding, or provide additional sources of polluted runoff were found to be less than significant because while buildout of the Planning Area would increase impervious surfaces and contribute to increased runoff, which could contribute additional pollutants, result in

hydromodification, or increased flood potential, implementation of General Plan policies combined with current drainage and flood control regulations ensures that impacts are not substantial.

Impacts related to release of pollutants in flood hazard, tsunami, or seiche zones were found to be less than significant because General Plan policy and the City's development regulations do not permit permanent storage of materials within flood hazard zones, and temporary storage is only permitted with a Flood Encroachment Permit, part of the purpose of which is to ensure there will be no impacts to the floodplain or water quality. In addition, the Planning Area is not near any water bodies which pose a tsunami or seiche hazard.

The analyses described above are based on the potential impacts of grading and general development within the Planning Area, and the Housing Element neither changed the boundaries of the Planning Area nor the locations of potential grading and development within the Planning Area. Therefore, the GP EIR analyses of hydrology and water quality were found to adequately and appropriately describe the potential impacts of the Housing Element. This conclusion remains appropriate for the Project, with the addition that over time general redevelopment activities in the Project area will decrease the amount of impervious surface area, reduce the rate of runoff, and reduce pollutant concentrations within the runoff. This is because the existing development of the area occurred before any water quality design standards or minimum landscape standards existed, while redevelopment and new development will be required to meet low impact water quality design standards (LID), which will increase the amount of landscaping and introduce water quality treatment, such as bioswales. The conclusions of the GP EIR and Addendum remain appropriate, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

XI. Land Use and Planning

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Physically divide an established community?	EIR 4.1-18 and Addendum page 48	No	No	No	None
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation of an agency adopted for the purpose of avoiding or mitigating an environmental effect?	EIR 4.1-19 and Addendum page 48	No	No	No	None

Discussion: The GP EIR and Addendum found that buildout of the General Plan and Housing Element would not physically divide the community, because the City's land use designations, roadway locations, transit systems, and pedestrian and bicycle pathways have been and will continue to be planned (per General Plan policy) comprehensively through the Specific Plan process to provide connected communities. Impacts were found to be less than significant. The Project does not include changes to the engineering of any of the City's existing or planned roads, other paths of travel, or community connectivity. The Project does include element which could improvement connectivity, such as concepts for wayfinding signs, design standards to improve sidewalks, and policies to encourage multi-modal improvements in the future.

The GP EIR and Addendum included an analysis of potential inconsistencies between the General Plan and other land use plans, policies, or regulations, including with the Sacramento Area Council of Governments (SACOG) 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS), SACOG Blueprint, Placer County Local Agency Formation Commission, new Specific Plans, the Zoning Ordinance, and the Roseville/Placer County Memorandum of Understanding. In all cases, it was determined there were no inconsistencies between the General Plan and other plans that would result in significant impacts; impacts were found to be less than significant. Furthermore, adding high density residential development in the City's infill areas—particularly within the City's core—are actions supported by the SACOG MTP/SCS.

Based on the foregoing, the GP EIR analyses of potential land use impacts adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

XII. Mineral Resources

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	EIR 4.7-1 and Addendum page 49	No	No	No	None
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	EIR 4.7-1 and Addendum page 49	No	No	No	None

Discussion: The City of Roseville does not overlie any known deposits of economically valuable mineral resources (Loyd 1995), and the City does not have a Surface Mining and Reclamation Act (SMARA) permit. No mining activities are currently underway nor does the City anticipate that any mining activities will take place in the future. Therefore, mineral resources were not evaluated in the GP EIR and Addendum, and need not be evaluated within this Addendum.

Mitigation Measures: None.

XIII. Noise

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents' Mitigation Measures Implemented or Addressing Impacts.
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	EIR 4.6-43 and 4.6-46 and Addendum page 50	No	No	No	None
b) Generation of excessive ground borne vibration of ground borne noise levels?	EIR 4.6-66 and Addendum page 50	No	No	No	None
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	EIR 4.6-43 and Addendum page 50	No	No	No	None

Discussion: The GP EIR identified noise conditions for new noise-sensitive developments within areas with the potential to be affected by substantial existing or future transportation noise sources and stationary noise sources. Existing conditions were compared to cumulative buildout conditions, based on existing and future General Plan land uses. The methodology used for this analysis was consistent with approaches recommended by the Federal Transit Administration (FTA), the California Department of Transportation (Caltrans), and the City of Roseville. Noise modeling was conducted using the Federal Highway Administration's (FHWA) traffic noise prediction model (FHWA-RD-77-108) and the FTA's Transit Noise and Vibration Impact Assessment Guidance Manual (2018). Stationary-source noise levels were obtained from manufacturer specifications and industry-standard technical reports. Traffic data from the traffic impact analysis prepared for buildout of the General Plan were used to model existing and future traffic noise levels.

The Planning Area does not intersect with any military bases, special use airspaces, or low-level flightpaths and is not located in safety zones or noise contours associated with airfields or airports that are a concern for land use compatibility planning. The Planning Area is not located within 2 miles of a public or private airstrip. Therefore, impacts due to these issues were found to be less than significant without the need for detailed analysis. This evaluation does not require updating and is adequate.

The GP EIR and Addendum evaluated the potential for temporary, short-term noise and vibration impacts due to construction. The analysis found that while buildout of the General Plan would involve noise associated with construction and some level of vibration due to typical construction practices, the City's Noise Ordinance limits construction to daytime hours, because these are outside of the recognized sleep hours for residents and are also outside of evening and early morning hours and time periods when residents are most sensitive to noise and vibration. The analysis recognizes that the City's Noise Ordinance and General Plan policy ensure that the impact of construction is reduced to the extent practicable, given that construction cannot be avoided and is a necessary part of development. The GP EIR and Addendum concluded that vibration levels from construction were less than significant, because large-scale projects with extensive excavation and pile driving are not contemplated near vibration-sensitive uses. However, construction noise could cause significant impacts, and additional mitigation is not available. Construction noise impacts were found to be significant and unavoidable. The Project does not change the location or intensity of construction activities within the City and does not affect the maximum daily noise generation. Maximum daily noise is based on the maximum amount of land area or building area that can feasibly be developed during any given day, so while the addition of units may increase the duration of a construction project, it does not change the amount of construction per day or the intensity of construction.

The GP EIR and Addendum analysis of permanent or long-term noise impacts due to transportation and non-transportation noise included evaluations of roadway noise in existing and cumulative buildout conditions; landscape and building maintenance activities; mechanical equipment; solid waste collection; parking lots; commercial, office, and industrial activities; and residential, school, and recreation activities and events. The evaluation considered the impacts of these noise sources on sensitive receptors, including on residential uses. The analysis evaluated the potential for residential sites to be exposed to undue noise because of proximity to non-residential uses or other noise-generating sources, including an assessment of the cumulative noise generated by all of the City's higher-capacity roadways, and concluded that the City's General Plan includes extensive policies related to noise which are designed to reduce exposure to unacceptable noise

volumes to the extent feasible. Nonetheless, the GP EIR and Addendum concluded impacts would remain significant and unavoidable, since the City cannot demonstrate that adverse noise impacts will be absolutely prevented.

The Project assumes some amount of residential uses will be developed on non-residential sites and that some of the units will be developed on existing multifamily residential sites. Potential noise exposure has already been evaluated in the GP EIR and Addendum for existing residential sites, so the development of these sites does not change these evaluations. However, residential uses on non-residential sites could expose sensitive receptors to noise, the most common of which is roadway noise. The HE Addendum described the potential impacts of allowing multi-family residential development near Douglas Boulevard, Sunrise Avenue, Atlantic Street, and Harding Boulevard. The GP EIR noise analysis indicates these roadways will generate cumulative exterior noise volumes above 65 dBA L_{dn} at a point 100 feet from the roadway centerline, which exceeds the City's Conditionally Acceptable noise standard. Similarly, areas within the Douglas-Harding and Douglas-Sunrise Corridors near Interstate 80 are also exposed to roadway noise above 65 dBA L_{dn}. Therefore, multifamily development in these areas would require feasible noise shielding for any common outdoor spaces, which is typically provided in these developments by placing the outdoor area on the other side of the apartment building from the noise source or within an interior courtyard. Interior spaces may also require some level of shielding to achieve the City's noise standards, which is achieved through the use of window treatments, insulation, and other construction methods. The City's existing Building Permit process includes review for compliance with the City's Noise Ordinance and the California Noise Insulation Standards (CCR Title 24, Part 2), to ensure interior noise meets the City's standard of 45 dBA L_{dn}. Compliance with the City's existing policies and ordinances related to noise will ensure that noise impacts are reduced to the extent feasible, consistent with the GP EIR and Addendum analysis.

In addition to noise affecting residential uses, development of residential sites can have indirect effects on noise through the generation of traffic. The updated transportation analysis for the HE Addendum indicated that while adding units in the area would redistribute traffic, it generally does so in a manner that reduces travel (vehicle miles traveled), and therefore would result in noise consistent with the volumes evaluated in the GP EIR. This was also the same conclusion reached for the Infill Alternative evaluated in the GP EIR, which found that adding 1,400 units to the City's infill area would not increase transportation noise impacts compared to the other alternatives, including the now-adopted General Plan. These analyses remain applicable to the Project, which would not result in new or unanticipated traffic noise impacts.

The GP EIR anticipated the potential for vibration-sensitive land uses to be developed in areas with some amount of existing vibration, such as near the Union Pacific Railroad. General Plan policy requires all feasible measures necessary, as a part of proposed development and public infrastructure projects, to avoid structural damage to adjacent structures and avoid substantial annoyance for adjacent vibration-sensitive uses, consistent with California Department of Transportation and Federal Transit Agency guidance—guidance that is specifically designed to avoid annoyance to vibration-sensitive uses and structure damage. Impacts due to vibration were found to be less than significant.

Based on the foregoing, the GP EIR and Addendum analyses of potential noise impacts adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

XIV. Population and Housing

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, though extension of roads or other infrastructure)?	EIR 4.2-10 and Addendum page 53	No	No	No	None
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	EIR 4.2-15 and Addendum page 53	No	No	No	None

Discussion: The General Plan analyzed in the GP EIR did not include changes to land use, the Sphere of Influence, or new growth. Furthermore, the majority of the vacant land adjacent to the City's boundaries are within existing adopted Specific Plans within Placer County which contemplate urbanization and development. Therefore, the GP EIR concluded the General Plan did not induce substantial population growth either directly or indirectly, and impacts were found to be less than significant. The Housing Element includes additional residential units, but these units fall within the scope of the GP EIR analysis, as do the units associated with the Project. Therefore, while the Project may include an additional increment of growth, this increment of growth is neither substantial nor unplanned.

The General Plan analyzed in the GP EIR did not involve converting established residential areas to a non-residential land use or redeveloping existing residential areas with new residences by removing existing dwelling units, and displacement impacts were thus found to be less than significant, and nor did the Housing Element. The Project also does not convert established residential areas to non-residential use; on the contrary, the Project does the opposite by streamlining the use of non-residential sites for multifamily residential uses. The Project also includes streamlining for multifamily projects on properties designated for multifamily uses. While many of these properties have one or more units on them in the existing condition, which could conceivably be demolished for the purpose of building multiple homes, this is the case in the existing condition; the Project does not cause this circumstance. In addition, property consolidation and the demolition of single-family homes is not considered likely, due to market conditions; these multifamily properties developed within single-family homes have been available for development for decades, and no such projects have been proposed. Finally, any development of this kind would develop more homes than

were previously on the site. Therefore, the Project will not result in significant impacts related to the displacement of a substantial number of existing people or housing.

Based on the foregoing the GP EIR and Addendum analyses of potential growth inducement impacts and displacement adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

XV. Public Services

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any the public services:					
a) Fire protection?	EIR 4.11-23 and Addendum page 54	No	No	No	None
b) Police protection?	EIR 4.11-22 and Addendum page 54	No	No	No	None
c) Schools?	EIR 4.11-25 and Addendum page 54	No	No	No	None

d) Parks?	EIR 4.11-27 and Addendum page 54	No	No	No	None
e) Other public facilities?	N/A	N/A	N/A	N/A	N/A

Discussion: The GP EIR and Addendum evaluated police, fire, school, and park facility/service demands resulting from buildout of the General Plan. The analysis indicated that all of these services would require additional facilities and/or staff, but that each of the City's adopted Specific Plans had anticipated and planned for these needs and had included the identification of sites and financing mechanisms. The EIRs for each Specific Plan had already evaluated the potential physical impacts of constructing the facilities. Therefore, the GP EIR and Addendum, which was within the scope of the GP EIR, concluded that the General Plan would not result in substantial adverse physical impacts associated with the provision of new or altered facilities, and impacts were found to be less than significant. This same conclusion was reached for the Infill Alternative of the GP EIR. The Project is within the scope of the above GP EIR and Addendum analysis. The Project would not add total units which would change the GP EIR and Addendum analysis, nor would it redistribute units in a manner that would concentrate service demands in an unanticipated location where service demands could not be met. Based on the foregoing, the GP EIR and Addendum analyses of potential public service impacts adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

XVI. Recreation

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that physical deterioration of the facility would occur or be accelerated?	EIR 4.11-27 and Addendum page 55	No	No	No	None
b) Does the project include recreational facilities or require the construction or expansion of	EIR 4.11-27 and	No	No	No	None

recreational facilities which might have an adverse physical effect on the environment?	Addendum page 55				

Discussion: The GP EIR indicated that buildout of the General Plan would add residents to the City, and these residents would increase the use of existing parks and recreational facilities, and would require the construction or expansion of recreational facilities, but that each of the City's adopted Specific Plans had anticipated and planned for these needs and had included the identification of sites and financing mechanisms. The EIRs for each Specific Plan had already evaluated the potential physical impacts of constructing the facilities and the City's policies ensure that adequate parkland acreage is developed and maintained. Therefore, the GP EIR concluded that the General Plan would not result in substantial adverse physical impacts associated with the provision or maintenance of recreation facilities, and impacts were found to be less than significant. The HE Addendum indicated the Housing Element units were within the scope of the above GP EIR analysis, and would not redistribute units in a manner that would concentrate service demands in an unanticipated location. The Infill Alternative analysis also reached this conclusion. This conclusion is also correct for the Project, which will add residents within the City's core area. Based on the foregoing, the GP EIR and Addendum analyses of potential public service impacts adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None

XVII. Transportation

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	EIR 4.3-43 and Addendum page 56	No	No	No	None
b) Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?	EIR 4.3-33 and Addendum page 56	No	No	No	MM4.3.1

c) Substantially increase hazards due to a geometric design feature(s) (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	EIR 4.3-42 and Addendum page 56	No	No	No	None
d) Result in inadequate emergency access?	EIR 4.10-27 and 4.3-42 and Addendum page 56	No	No	No	None

Discussion: The GP EIR included a transportation analysis which estimated VMT using Roseville's travel forecasting model, and reported VMT both in per capita (per resident) and per service population. The analysis also included the development of a VMT threshold of significance based on a reduction of 15% below baseline conditions. The City's baseline VMT was found to be 15.1 VMT per resident and the resulting threshold was 12.8 VMT per resident. Per resident VMT includes VMT for trips produces by a home's residents, such as to work, school, or to shop, and any trips where one end of the trip was at the home.

The transportation analysis found that the City's buildout VMT would be 15.5 VMT per resident in constrained conditions and 14.9 VMT per person in unconstrained conditions. Constrained conditions assumed a transportation network which only included future facilities with identified funding sources that were certain to be constructed by 2035, and was a worst-case evaluation provided to ensure the GP EIR did not underestimate any impacts. The unconstrained conditions included all facilities included in the SACOG 2020 MTP/SCS project list.

In addition to the citywide average VMT, the GP EIR also included a VMT evaluation by Specific Plan area. This evaluation showed that certain areas of the City are "low-VMT areas," which are defined in the GP EIR as areas of the City with VMT below the significance threshold. This analysis was based on the constrained conditions, so even under worst-case conditions the following areas were found to be low-VMT: the Downtown Specific Plan, Del Webb Specific Plan, North Central Roseville Specific Plan, Northeast Roseville Specific Plan, and Riverside Gateway Specific Plan.

An updated VMT analysis was prepared by Fehr and Peers Transportation Consultants to evaluate VMT impacts resulting from the Housing Element. This analysis updated the baseline conditions to February 2020 in order to ensure the baseline represented normal conditions, unaffected by COVID, and used constrained conditions for the cumulative analysis. The analysis found the City's baseline VMT has increased to 15.7 VMT per resident due to the fact that ¾ of new development since the prior analysis has occurred in the western area of the City, in Specific Plans with the highest VMT per resident. However, the cumulative conditions (2035) analysis found citywide VMT decreases to 14.7 VMT per resident with the Housing Element, which is both a reduction from baseline and a reduction compared to the GP EIR analysis of cumulative (2035) conditions. The Specific Plan analysis found that the same list of planning areas are low-VMT, plus the Highland Reserve North Specific Plan. While Housing Element VMT remained above the City's adopted significant threshold of 12.8 VMT per resident, it was lower than VMT reported in the GP EIR.

The Project is located in the areas adjacent to the Downtown and Riverside Gateway Specific Plans, which are among the lowest VMT areas in the City. The Project area has the same composition and density of uses, and the same proximity to transit and services, and is also a low VMT area. The addition of residential units within this area would reduce citywide VMT by adding more residents within an area where VMT rates are low.

Per service population VMT includes all per resident VMT plus VMT from all other sources, including trips from homes outside the area to work or shop and trips inside the City with neither trips at the home (from work to shopping). The service population analysis of the GP EIR was included for informational purposes to provide a coarse assessment of how non-home-based trips change over time. The GP EIR stated that appropriate methodologies for service sector VMT were still being developed and the resulting data was less reliable. For this reason, a significance threshold for service population VMT was not developed. This conclusion remains current, as stated in the updated transportation analysis prepared for the Housing Element. The GP EIR found that in existing conditions the citywide average was 29 VMT per service population while the cumulative conditions citywide average would be 33 VMT per service population (constrained) or 32.4 VMT per service population (unconstrained). An updated service sector analysis was provided for the Housing Element, but it used an updated methodology and therefore cannot be directly compared to the results reported in the GP EIR. The service sector analysis calculated that in existing conditions the citywide average is 32.5 VMT per service population and the cumulative conditions citywide average is 35.1 VMT per service population. While the numbers from the GP and Project analysis cannot be compared, the trend can: in both analyses, the citywide average service sector VMT is anticipated to increase over time rather than decrease. This means that while trips generated by residents of the City will be traveling less over time (as measured by per resident VMT) it is expected that all trips will be traveling more over time.

The GP EIR and Addendum included a Level of Service (LOS) analysis, provided for informational purposes. While LOS is not an impact under CEQA, the City maintains an LOS policy requiring that 70% of intersections operate at LOS C or better during both the a.m. and p.m. peak hours. The GP EIR found that 83.5% of intersections would operate acceptably during a.m. peak hours and 71.9% would operate acceptably during p.m. peak hours. The updated analysis found that 80.5% of intersections would operate acceptably during a.m. peak hours and 72.9% would operate acceptably during p.m. peak hours. The minor changes in results are mainly due to model updates, which included updates for the future and base year in the City of Rocklin using Rocklin's current circulation and development plans and roadway network updates based on current plans and data. However, in both the GP EIR and updated analysis, the City's intersections operate at LOS consistent with City policy. This conclusion was also reached for the Infill Alternative analyzed in the GP EIR, which examined the effect of adding 1,400 units to the City's infill area. The Project is within the scope of the GP EIR and Addendum analysis and therefore, the Project also would not result in conflict with the City's LOS policy.

The GP EIR and Addendum evaluated hazards due to design features, incompatible uses, or inadequate emergency access. The City's transportation networks have been comprehensively planned through the Specific Plan process to conform to the City's Design and Construction Standards. The City's Design and Construction Standards establish appropriate and safe designs, including minimum signal and driveway spacing, sidewalk and pedestrian crossing designs, bicycle lane designs, and other features which ensure a safe and reliable network. The City also maintains standards requiring minimum roadway widths, turnaround areas, and turning radii to ensure that emergency vehicles maintain access. Finally, the City's construction standards also provide for and regulate the use of temporary traffic controls at construction sites, including signage and flaggers. The City's comprehensive planning process also ensures that uses are compatible and do not increase hazards. The GP EIR and Addendum concluded impacts were less than significant. This conclusion remains appropriate for the

Project, which does not change roadway engineering, introduce incompatible uses, or contemplate development which would negatively affect emergency access. In fact, the Project includes streetscape update concepts such as driveway consolidation, sidewalk improvements, and crosswalk improvements which would be beneficial to safety conditions.

Finally, the GP EIR and Addendum evaluation found the General Plan and Housing Element would not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities nor would it adversely affect performance or safety of such facilities; impacts were found to be less than significant. The General Plan and the Project contains provisions that will enhance these modes to encourage greater use of transit and more walking and bicycling in the future. All new facilities and facility improvements contained in the circulation diagram would be constructed to applicable design standards, including the City's Design and Construction Standards (City of Roseville 2020), which have been created to minimize the potential for conflicts or collisions. The Project does not change this conclusion, as it does not introduce any programs or policies which would conflict with transportation plans. On the contrary, increased densities are generally transit-supportive, and the policies and concepts of the Project also include improvements to transit stops, sidewalks, crosswalks, and other multimodal infrastructure.

Based on the foregoing, the GP EIR and Addendum analyses of potential transportation impacts adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: The mitigation measure below was effectuated through inclusion in the City's 2035 General Plan Appendix A: Implementation Measures, but is included here for reference.

Mitigation Measure 4.3.1 – ***The proposed General Plan Update should be amended as follows:***

Implementation Measure

Proposed development projects that could have a potentially significant VMT impact shall consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction. The below list of potential measures is not intended to be exhaustive, and not all measures may be feasible, reasonable, or applicable to all projects. The purpose of this list is to identify options for future development proposals, not to constrain projects to this list, or to require that a project examine or include all measures from this list. Potential measures include:

- improve or increase access to transit;
- increase access to common goods and services, such as groceries, schools, and daycare;
- incorporate affordable housing into the project;
- incorporate neighborhood electric vehicle network;

- orient the project toward transit, bicycle and pedestrian facilities;
- improve pedestrian or bicycle networks, or transit service;
- provide traffic calming;
- provide bicycle parking;
- unbundle parking costs;
- provide parking cash-out programs;
- implement roadway pricing;
- implement or provide access to a commute reduction program;
- provide car-sharing, bike sharing, and ride-sharing programs;
- provide transit passes;
- shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services;
- providing telework options;
- providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle;
- providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms;
- providing employee transportation coordinators at employment sites;
- providing a guaranteed ride home service to users of non-auto modes;
- locate the project near transit;
- increase project density;
- increase the mix of uses within the project or within the project's surroundings;
- increase connectivity and/or intersection density on the project site; and/or
- deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes.

The City shall evaluate the feasibility of a local or regional VMT impact bank or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot demonstrate consistency with state guidance on VMT reduction, the project can contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.

XVIII. Tribal Cultural Resources

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
Would the project cause a substantial adverse change in the significance of a Tribal Cultural Resource as defined in Public Resources Code Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?	EIR 4.9-39 and Addendum page 61	No	No	No	MM 4.9-4

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1 the lead agency shall consider the significance of the resource to a California Native American tribe.	EIR 4.9-39 and Addendum page 61	No	No	No	MM 4.9-4

Discussion: For the GP EIR the City of Roseville contacted the Native American Heritage Commission, pursuant to SB 18 and AB 52 consultation requirements, asking for a list of individuals that might have knowledge of the Planning Area. The City used this list to circulate a letter dated April 3, 2017 providing the opportunity to participate in consultation to ensure consideration of Tribal Cultural Resources in the context of local land use policy. The United Auburn Indian Community (UAIC) responded to the request for consultation and provided information on the presence of tribal cultural resources as well as historic resources (cultural resources) within the Planning Area.

Impacts related to substantial adverse changes in the significance of a tribal cultural resources were found to be significant (GP EIR page 4.9-39) because the Planning Area is known to contain these resources and is sensitive for the presence of undiscovered or undocumented resources. In addition, some tribal cultural resources may also be cultural resources. The UAIC has indicated tribal cultural resources of significant value to the tribe are present in the Planning Area and could be impacted by grading, excavation, or other ground-disturbing activities associated with buildout of the Planning Area. The General Plan included policy revisions to further strengthen protections, the GP EIR included mitigation measures to address these impacts, and the City adopted new Internal Guidance for Management of Tribal Cultural Resources and Consultation, all of which were developed within input from the UAIC. Nonetheless, impacts could still occur. After mitigation impacts were found to be significant and unavoidable.

Notice of the Housing Element was distributed pursuant to SB 18 and, since it was anticipated an EIR could be required, notice pursuant to AB 52 was also distributed. Both were distributed in letters dated September 22, 2020. No requests for consultation were received. The HE Addendum found the GP EIR analysis was based on the potential impacts of grading and general development within the Planning Area, and the Housing Element neither changed the boundaries of the Planning Area nor the locations of potential grading and development within the Planning Area.

Notice of the Project was distributed pursuant to SB 18 in a letter dated December 15, 2021. The United Auburn Indian Community (UAIC) and the Wilton Rancheria responded with requests for consultation. While the Project area is within a fully developed and urbanized location of the Planning Area, there are known subsurface resources which were previously documented during other past construction activities within the Project area, and which were left in place. Furthermore, the Project area includes locations surrounding the Dry Creek open space which are known to be sensitive for the presence of undiscovered subsurface tribal cultural resources and is within an area which was used by tribal communities. The City engaged in consultation with the UAIC through phone calls and e-mail, and worked with the UAIC to develop and include the below policies within the Specific Plans where appropriate:

Coordinate with the United Auburn Indian Community about projects located in the Plan Area and, if areas of cultural or tribal cultural significance are identified, engage in consultation to determine appropriate treatment. To ensure good-faith coordination, the City will notify the United Auburn Indian Community of all ground-disturbing projects which use the Specific Plan streamlining provisions and would otherwise have required a public hearing according to the Zoning Ordinance.

Consider trailhead improvements to enhance community identity and expand trail access opportunities. Trails provide recreation and transportation corridors, connecting to parks, services, and other destinations. Trailheads are an opportunity to establish community identity through interpretive or informational signage and placemaking improvements. The contents of informational and interpretive signage should promote the history and identity of the Plan Area, in coordination with affiliated tribes, local historical societies, or other relevant cultural stakeholders. Any designs or information communicating information about California Native American tribes shall be determined through coordination with culturally affiliated California Native American tribes.

Encourage the placement of monuments or plaques that recognize and celebrate historic sites, structures, and events, and provide opportunities for public awareness and education about historic activities associated with culturally affiliated California Native American tribes. At trailheads, parks, and other areas of opportunity, consider the inclusion of informational signs or other structures as part of planned public improvement projects. Signage, monuments, and other structures can help communicate the history of an area and help with placemaking and identity. Designs should be determined through outreach and coordination with the appropriate stakeholders. Any designs or information communicating information about California Native American tribes shall be determined through coordination with culturally affiliated California Native American tribes.

The coordination policy ensures that project streamlining will not result in a lack of notification to and coordination with the UAIC. Given the sensitivity of certain areas, the City is committed to coordinating with the UAIC on future redevelopment projects with the potential to affect tribal cultural resources, to ensure appropriate treatment. The policy regarding education and awareness ensures the City works with culturally affiliated California Native American tribes to acknowledge and educate the community about the historic use of the Dry Creek open space by tribal communities, and its ongoing importance to those communities, as does the policy regarding trailhead improvements. The City and the UAIC closed consultation in agreement.

The Wilton Rancheria scheduled several calls with the City, but the Wilton Rancheria was then unavailable at the time of the call. Multiple attempts to reschedule were unsuccessful. The City ultimately e-mailed the above policies which were developed with the UAIC to the Wilton Rancheria, and closed consultation with the Wilton Rancheria after making a good-faith effort at consultation.

The GP EIR and Addendum analyses adequately and appropriately describe the potential impacts of the Project, and the Project is consistent with the tribal cultural resources policies of the General Plan. Implementation of individual development projects within the Specific Plan areas will require tribal coordination as described and consistent with General Plan policy. The Project does not result in new or substantial increases in significant effects.

Mitigation Measures: Mitigation consisted of the implementation of Mitigation Measures 4.9-4, previously stated in the Section V. Cultural Resources evaluation.

XIX. Utilities and Service Systems

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	EIR 4.12-21 and Addendum page 63	No	No	No	None
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?	EIR 4.12-24 and Addendum page 63	No	No	No	None
c) Result in a determination by the wastewater treatment provider which serves the project that it has adequate capacity to serve the project's projected demand in addition of the provider's existing commitments?	EIR 4.12-26 and Addendum page 63	No	No	No	None
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	EIR 4.12-30 and Addendum page 63	No	No	No	None
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	EIR 4.12-30 and Addendum page 63	No	No	No	None

Discussion: The GP EIR evaluation of utility services was based on full buildout of the General Plan, and capacity evaluation used the metrics appropriate to the impact area, as follows: for water, dwelling units or dwelling unit equivalents (edu); for wastewater, demand factors based on acreage by land use type; and for waste, total population and employees. The GP EIR also evaluated the potential for facility expansions, including the planned expansion of the Dry Creek wastewater treatment plant; off-site construction of the Ophir water treatment plant by the Placer County Water Agency; a new planned substation and 60-kilovolt overhead transmission lines within the Creekview Specific Plan; and construction of water lines, sewer lines, electrical lines, and supporting facilities (e.g pump stations). Except for the Ophir water treatment plant, expanded and new utilities and service systems would be within the Planning Area, and impacts associated with these facilities have already been identified and mitigated through Specific Plan EIRs. Therefore, with the exception of the Ophir plant, impacts were found to be less than significant. Construction of the Ophir plant was addressed in the Foothill Phase II Water Treatment Plant and Pipeline EIR, discussed in the GP EIR, and it found that construction air quality impacts would be significant and unavoidable. The GP EIR concluded that buildout of the General Plan would indirectly contribute to this significant and unavoidable impact, and the HE Addendum reached the same conclusion.

Water Infrastructure

A water infrastructure study was prepared by West Yost, based on initial work by Brown and Caldwell, to ensure sufficient line capacity existed to serve additional units in the Project area (Attachment 1: "Commercial Corridors Specific Plan – Potable Water System Hydraulic Evaluation Update" by West Yost dated June 17, 2022 and "Roseville Commercial Corridors Specific Plans Water Modeling Support", by Brown and Caldwell). The study was based on the assumption that up to 50 units of multifamily residential demand would be added in the Atlantic Street Corridor plan area, up to 200 units would be added in the Douglas-Harding Corridor plan area, and up to 600 units would be added in the Douglas-Sunrise plan area.

The existing water system in the Plan Area is located primarily within the roadways, though some pipelines extend through commercial properties. The technical memorandum prepared by Brown and Caldwell, as updated by West Yost, assessed the hydraulic systems in the Project area to determine whether any conveyance system improvements would be needed, either to address existing pipeline constraints or anticipated future constraints. The system was evaluated for both typical use and for fire flow, because fire flow places the highest demand on the system in terms of the minimum pressure and flow speed required.

The system evaluation also assumed certain projects to improve the existing conveyance system would be in place in the existing condition, because these projects are currently in the planning, design, or construction stage, or have recently finished construction. In the vicinity of the Plan Area, this included the following:

- Tiger Way/Union Pacific Railroad: Abandonment of a 6-inch diameter pipeline crossing and replacement with a new 12-inch diameter connection.
- Atlantic Street slip line: Slip line two 12-inch diameter pipelines with 8-inch diameter pipelines and abandon one 12-inch diameter pipeline.

- Hillcrest project: Install 8-inch and 12-inch diameter pipelines in the neighborhood near Hillcrest Avenue. Connect existing pipelines near Evelyn Way and Folsom Road. Abandon existing 6-inch diameter pipeline at the intersection of Sunrise Avenue and Frances Drive and install three new 8-inch diameter mains.

- I-80 crossing project: Abandon three pipelines (5-inch, 6-inch, and 8-inch diameter) crossing I-80 and install three 8-inch diameter pipelines to reconnect and loop the system in the area.

The 850 units are calculated to have an additional maximum day water demand of 0.30 mgd. Fire flow was determined to be the most significant constraint and is considered to be the controlling factor for water system upgrades in the area. To function adequately water pipes must be able to convey the maximum day water demands while maintaining a residual system pressure of 20 pounds per square inch (psi) and without exceeding a flow rate of 12 feet per second. The analysis found that to meet system demands while maintaining the necessary water pressure, some lines would need to be increased in size (diameter).

Some improvements are necessary in the existing condition or cumulative conditions without the additional 850 units, while others are necessary to support additional residential units in the Project area. The following is a list of projects that will ultimately need to be implemented, identified as Existing System Evaluation and Existing System Plus Specific Plan projects.

Existing System Evaluation Projects

- Upsize existing pipelines to 8-inch diameter pipelines in various sections of the Atlantic Street Plan Area, including within East, Center, Alola, and Thomas Street. (Atlantic Street Plan Area)
- Upsize existing pipelines to 12-inch diameter pipelines in Walnut and Brookview. (Atlantic Street Plan Area)
- Upsize existing pipelines to 12-inch diameter pipelines in Breuner Drive. (Douglas-Harding Plan Area)
- Upsize existing pipelines to 10-inch diameter pipelines in Jordan Drive and Smith Lane. (Douglas-Sunrise Plan Area)
- Upsize existing pipelines to 12-inch diameter pipelines in Cardinal Way. (Douglas-Sunrise Plan Area)

Existing System Plus Specific Plan Projects

- Upsize existing pipelines to 10-inch diameter pipelines in Center Street. (Atlantic Street Plan Area)
- Upsize existing pipelines to 12-inch diameter pipelines in a 980-foot section of Cardinal Way (Douglas-Sunrise Plan Area)

As shown above, two improvements are identified as necessary to support additional residential development. However, both of these pipes already require upsizing in the existing condition, but the replacement pipes will need to be two inches larger to accommodate additional residential units. The construction impacts associated with the replacement of local water lines are minimal, involving trenching within existing roadways, where there are no physical resources present which could be negatively impacts. Air quality and greenhouse gas impacts are also typically negligible, as the replacement of local lines involves only a few pieces of small equipment, and because it involves trenching rather than grading, it not a significant generator of dust. Pipeline replacement projects are typically exempt from CEQA. Therefore the replacement of these lines will not result in substantial physical impacts, and the impacts would occur regardless of the Project.

Water Supply

Under buildout conditions, the City has a total water demand of 48,762 acre feet per year (afy), and has surplus water supply during normal years and during multiple-dry years 1 and 2. However, during a single-dry year there is an approximate 9,000-afy deficit and during multiple-dry year 3 there is an approximate 2,000-afy deficit. The City's conservation measures are sufficient during dry years to offset the deficit. Therefore, impacts were found to be less than significant. The Housing Element was within the scope of the total dwelling units analyzed within the GP EIR, and was therefore found to be within the scope of analysis of the water evaluation; no changes or updates to this analysis was found to be required in the HE Addendum. This conclusion remains appropriate for the Project, which is also within the scope of the GP EIR.

Wastewater Infrastructure

The City's buildout demands on the wastewater system were reported in Table 4.12-7 of the GP EIR as 8.9 million gallons per day (mgd) of average dry weather flow, while the Pleasant Grove wastewater treatment plant's effective treatment capacity is 9.5 mgd, with plans to expand capacity to 12 mgd and the Dry Creek wastewater treatment plan has a permitted capacity of 18 mgd (note that treatment plants have service boundaries that include the City and other areas). The evaluation found there would be adequate capacity to serve full buildout of the City and impacts were found to be less than significant. The wastewater evaluation was based on the total acreage of citywide land uses, with approximately 13,000 acres of residential land use and 3,100 acres of commercial/office land use. The HE Addendum evaluated the result of changing the acreage of residential compared to commercial land uses, removing up to 20 acres of commercial land use and replacing it with up to 20 acres of residential land use. Table 4.12-7 of the GP EIR indicates that sewage demand for commercial sites is 850 gallons per day per acre, while for residential it is only 190 gallons per day per acre. Therefore, the land use change contemplated by the Housing Element was found to reduce wastewater system demands. However, in the context of the citywide demands the difference was negligible, and did not change the total average dry weather flow of 8.9 mgd. The Project is within the scope of the GP EIR evaluation and does not change land use in a manner or to a degree that requires further evaluation of treatment capacity.

A sewer infrastructure study was prepared by Woodward and Curran to ensure sewer infrastructure serving the Project area was sufficient to accommodate additional units. The study is included as Attachment 2, and it titled "Commercial Corridors Specific Plans Sewer Evaluation." The existing sewer system in the Project area is located primarily within the roadways, with the major/regional pipes located in roadways and in open space. Sewer flows from the Project area are conveyed through local systems to the Dry Creek Sewer Interceptor and two truck sewers south of Douglas Boulevard, which carry flows to the Dry Creek Wastewater Treatment Plant.

The system evaluation also assumed one project to improve the existing conveyance system would be in place in the existing condition, because this project is currently underway. This is the Pump Station 26 project, which involves capacity improvements at the pump station and downstream gravity sewers. Similarly, there are future improvements identified that are planned to be online by the time buildout of the area is

reached, so these were included in the future conditions without the Project. These projects include improvements along Eureka Road and East Roseville Parkway, as well as capacity improvements to Pump Station 25.

The sewer study evaluated demands in the existing conditions, future conditions, and a "buildout sensitivity" worst-case scenario that considered greater growth at a regional level, in Placer County and in the City's Downtown Specific Plan. Demand in the existing condition with the Project would be 0.23 mgd, in the future condition would be 0.25 mgd, and in the buildout sensitivity scenario would be 0.34 mgd.

Capacity deficiency or performance criteria are used to determine when infrastructure capacity reaches a stage where an improvement project is needed. The results of this analysis indicate that no improvements are needed in the Project area, but in the buildout condition there are four shallow manholes located on a line serving the Douglas-Sunrise Corridor Plan that slightly exceed criteria in the existing condition. These manholes are located within an existing creek which has lower ground elevation, resulting in the allowable height of the manholes to be less than five feet above the crown of the gravity pipeline. Therefore, any amount of additional surcharge in these shallow manholes exceeds the five-foot freeboard standard. Under buildout conditions, with or without the Project, the model predicts additional surcharge will be added to the main Cirby Creek Trunk A sewer, which extends to the shallow manholes; the future surcharge condition should be remedied.

The sewer study evaluated a potential solution to relieve Cirby Trunk A, which would consist of the installation of a relief sewer line to convey excess flows into Cirby Trunk B. The sewer line project is required due to buildout flows from the sewershed upstream, which includes development both in the City of Roseville as well as other South Placer Wastewater Authority partner agencies. The improvement is not needed in the existing condition but is needed to support buildout conditions, with or without the Project. The proposed relief line would be located within Coloma Way and would be approximately 3,600 linear feet, using a combination of trenching and trenchless methods depending on the depth of the line. As with water line construction, the installation of sewer lines within an existing roadway typically results in minimal physical impacts, particularly when trenchless methods are used. However, as this would be a 24-inch relief trunk line, rather than a smaller local line, it is possible some heavier equipment could be necessary. The details of constructing this line cannot be known at this stage, as construction-level documents and detailed evaluations of the sewer project are not available, and would will not be completed until cumulative conditions begin to warrant construction. However, the potential impacts of line construction are within the scope of overall GP EIR buildout analyses of air quality, greenhouse gases and other impact areas, which considered the citywide effects associated with buildout. The Project would contribute to the need for this line, but the relief line is needed in cumulative conditions without the Project. The Project does not result in new or unanticipated significant effects associated with sewer infrastructure or capacity.

Waste

The City's additional waste demands were calculated based on the increase in population and employees between existing conditions and buildout conditions, and used CalRecycle solid waste disposal rates of 4.8 pounds per day (ppd) per resident and 8.2 ppd per employee. Based on these rates, buildout of the General Plan was found to generate an additional 428 ppd of solid waste. The EIR noted that this estimate was extremely conservative, as it does not account for recycling or waste diversion. The estimated increase in waste would be within the maximum daily throughput of the Western Regional Sanitary Landfill, and therefore impacts were found to be less than significant.

The Project is within the scope of the population and employees analyzed within the GP EIR and Addendum, and is therefore within the scope of analysis of the waste evaluation; no changes or updates to this analysis are required.

In addition, future development accommodated under the General Plan would be required to comply with applicable federal, State, or local solid waste regulations or statues, including the City's Construction and Demolition and Recycling Ordinance, 2016 CALGreen Code, and AB 1826 (mandatory commercial organics recycling). Furthermore, the City would continue to comply with AB 1601, which requires implementation of a commercial solid waste recycling program. Therefore, impacts related to compliance with regulations pertaining to solid waste were found to be less than significant. The Project has no effect on this analysis or conclusion.

Based on the foregoing, the GP EIR and Addendum analyses of utility services impacts, as updated, adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

XX. Wildfire

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:					
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	EIR 4.10-27 and Addendum page 66	No	No	No	None
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	EIR 4.10-27 and Addendum page 66	No	No	No	None

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	EIR 4.10-27 and Addendum page 66	No	No	No	None
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	EIR 4.10-27 and Addendum page 66	No	No	No	None

Discussion: The Planning Area is not located in or near state responsibility areas or land classified as very high fire hazard severity zones. The Planning Area is designated by CAL FIRE as a Local Responsibility Area, and there are no Very High Fire Hazard Severity Zones in or adjacent to the Planning Area. Therefore, the GP EIR concluded the wildfire hazard risk for the City is low. The City's comprehensive planning has ensured that existing and planned fire stations are distributed through the Planning Area, and the City maintains and plans connected transportation networks consistent with the City's Design and Construction Standards to ensure adequate emergency access and evacuation routes. The City maintains a Multi-Hazard Mitigation Plan and Emergency Operations Plan, and the GP EIR and Addendum found that the General Plan and Housing Element was consistent and supportive of these emergency planning documents. The proposed Project does not affect the foregoing analysis. The Project is within the scope of the above GP EIR and Addendum analysis. The Project would not add total units which would change the GP EIR analysis of emergency services needs, nor would it distribute units in a manner that would concentrate emergency service demands in an unanticipated location. Based on the foregoing, the GP EIR and Addendum analyses of wildfire impacts adequately and appropriately describe the potential impacts of the Project, and the Project does not result in new or substantial increases in significant effects.

Mitigation Measures: None.

XXI. Mandatory Findings of Significance

	Where Impact Was Analyzed in Prior Environmental Documents.	Do Proposed Changes Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Circumstances Involving New Significant Impacts or Substantially More Severe Impacts?	Any New Information Requiring New Analysis or Verification?	Prior Environmental Documents Mitigation Measures Implemented or Addressing Impacts.
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, threatened or rare species, or eliminate important examples of the major periods of California history or prehistory?	EIR Chapter 5.0 and Addendum page 67	No	No	No	None
b) Does the project have impacts which are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	EIR Chapter 5.0 and Addendum page 67	No	No	No	None
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	EIR Chapter 5.0 and Addendum page 67	No	No	No	None

Discussion: Chapter 5.0 of the GP EIR includes an evaluation of cumulative impacts, growth inducing impacts, significant irreversible environmental changes, and a section on the significant and unavoidable impacts evaluated within the EIR. No new mitigation measures beyond those already identified in the topical sections of Chapter 4.0 were identified. As discussed in the sections above, the GP EIR found that General Plan buildout would result in significant and unavoidable impacts to biological resources, cultural resources, and tribal cultural resources. The analysis found the following impacts would also be cumulatively considerable: greenhouse gas emissions; VMT; construction and operational air quality emissions; exposure to substantial pollutant concentrations (long-term); operational noise due to traffic and stationary sources; biological resources including special status plants, riparian habitat/sensitive natural communities, wetlands, and loss of habitat and

special status wildlife species; both cultural and tribal cultural resources; indirect impacts due to construction of the Ophir water treatment plant; visual quality; and creation of substantial light and glare. These significant cumulative impacts have the potential to cause adverse impacts on human beings. As described in the foregoing analyses, the Project is within the scope of all impacts evaluated by the GP EIR and Addendum and appropriately describe the potential impacts of the Project.

ENVIRONMENTAL DETERMINATION:

In reviewing the site specific information provided for this project and acting as Lead Agency, the City of Roseville, Development Services Department, Planning Division has analyzed the potential environmental impacts created by this project and determined that the findings of CEQA Section 15162 concerning the decision not to prepare a subsequent EIR or negative declaration and the findings of CEQA Section 15164 concerning the decision to prepare an Addendum can be made. As supported by substantial evidence within the Addendum to the 2035 General Plan Environmental Impact Report (SCH #2019080418), certified on August 5, 2020, the Lead Agency makes the following findings:

[**X**] No substantial changes are proposed in the project which would require major revisions of the previous EIR or Mitigated Negative Declaration.

[**X**] No substantial changes have occurred with respect to the circumstances under which the project is undertaken.

[**X**] There is no new information of substantial importance which was not known and could not have been known with the exercise of due diligence at the time the previous EIR was certified as complete or the Mitigated Negative Declaration was adopted.

[**X**] Only minor technical changes or additions are necessary in order to deem the adopted environmental document adequate.

Addendum Prepared by:

Lauren Hocker, Senior Planner
City of Roseville, Development Services–Planning Division

Attachments:

1. Water Study
2. Sewer Study

Addendum Attachment 1

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TECHNICAL MEMORANDUM

DATE: June 17, 2022

Project No.: 415-60-22-35
SENT VIA: EMAIL

TO: Jessica Lynch, City of Roseville

CC: Lauren Hocker, City of Roseville
Tracie Mueller, City of Roseville

FROM: Chris Pittner, QISP, PE, RCE #93576
Kami Tiano, PE, RCE #84129

REVIEWED BY: Amy Kwong, PE, RCE #73213

SUBJECT: Commercial Corridors Specific Plan – Potable Water System Hydraulic Evaluation Update

This Technical Memorandum (TM) summarizes the findings and conclusions of West Yost's technical evaluation of the ability of the City of Roseville's (City) existing and 2050 potable water distribution system to serve the proposed Commercial Corridors Specific Plan development (Project). The proposed Project consists of redevelopment in the following corridors: Atlantic Street, Douglas-Harding, and Douglas-Sunrise, which will be served by the City's Pressure Zone 1 potable water system. The following sections summarize the hydraulic evaluation:

- Project Description
- Estimated Water Demand for the Project
- Planning and Modeling Criteria
- Hydraulic Model Inputs and Updates
- Evaluation Findings and Conclusions
- Planning Level Cost Estimates

It should be noted that the determination of whether adequate water supplies exist to serve the proposed Project is not included within the scope of this evaluation.

PROJECT DESCRIPTION

The proposed Project was previously evaluated by Brown and Caldwell (B&C), and the hydraulic evaluation was completed in 2021. However, the Project has been recently updated to include 450 additional residential units for a total of 850 residential units. The City requested West Yost to update the hydraulic modeling evaluation performed by B&C. The following sections document the updates performed and results from the re-evaluation.

ESTIMATED WATER DEMAND FOR THE PROJECT

Water demands for the project were estimated by West Yost using the City's adopted unit water demand factors and the updated number of dwelling units for the Project. The City's adopted peaking factors were then used to scale the projected average day demand to maximum day demand. Figure 1 and Figure 2 show the existing and proposed land use in each corridor, respectively.

The updated high density residential (HDR) dwelling units (DUs) in the three corridors include:

- Atlantic Street Corridor = 50 new HDR dwelling units
- Douglas-Harding Corridor = 200 new HDR DUs (previously 250 DUs)
- Douglas-Sunrise Corridor = 600 new HDR DUs (previously 100 DUs)

Table 1 summarizes the projected average day and maximum day demands for the Project.

Table 1. Estimated Potable Water Demand for the Project

Corridor	Land Use Category	Dwelling Units[a]	Unit Demand Factor[b]	Units of Water Use Factor	Average Day Demand, gpd[c]	Maximum Day Demand, gpd[d]
Atlantic Street	High Density Residential	50	177	gpd/DU	8,850	17,700
Douglas-Harding	High Density Residential	200	177	gpd/DU	35,400	70,800
Douglas-Sunrise	High Density Residential	600	177	gpd/DU	106,200	212,400
	Total	**850**	--	--	**150,450**	**300,900**

(a) Dwelling unit counts confirmed by the City of Roseville during project call held on March 4, 2022.
(b) Based on Section 8 in City of Roseville Design Standards (Roseville, 2022).
(c) Non-Revenue Water not included in demand calculations; assumes older unit demand factor is already conservative.
(d) Maximum day demand is equal to 2.0 times the average day demand per City of Roseville Design Standards.
DU = dwelling units
gpd = gallons per day

PLANNING AND MODELING EVALUATION CRITERIA

The planning and modeling criteria used to evaluate the proposed Project consist of the following:

- Minimum allowable service pressure is 50 pounds per square inch (psi) under normal system operating conditions.
- Maximum allowable service pressure is 100 psi under normal system operating conditions.
- Residual pressure at the flowing hydrant and at service locations throughout Zone 1 during maximum day demand plus fire flow conditions must be equal to or greater than 20 psi.
- Maximum allowable pipeline velocity for proposed pipelines is 12 ft/s during a simulated fire flow demand condition.
- Any new pipelines are modeled with a roughness coefficient (C-factor) of 130.

The required fire flows for existing (without Project) and proposed land uses (with Project) are shown on Figures 1 and 2, respectively. These fire flow requirements are based on land use category with Single Family Residential requiring 1,500 gpm fire flow; Commercial/Multi-Family (less than 10,000 square feet) requiring 2,500 gpm; and Commercial/Multi-Family (greater than 10,000 square feet) requiring 4,000 gpm.

HYDRAULIC MODEL INPUTS AND UPDATES

The City's potable water system hydraulic model was updated and calibrated by B&C in August 2020. West Yost was provided a current version of the City's potable water system hydraulic model in December 2021. As requested by City staff, the following pipeline improvements were added to the potable water system hydraulic model as part of this Project because they are currently in the planning, design, or construction phase:

- **Tiger Way Union Pacific Railroad (UPRR) crossing project**: Abandon 6-inch diameter pipeline crossing the UPRR between Atlantic Street and Tiger Way and replace with a new 12-inch diameter connection along Tiger Way between the existing 12-inch diameter pipelines from Campo Street to the end of the abandoned 6-inch diameter pipeline.
- **Atlantic Street slip line project**: Slip line two 12-inch diameter pipelines crossing Atlantic Street with 8-inch diameter pipelines and abandon one 12-inch diameter pipeline crossing the UPRR.
- **Hillcrest project**: Install various 8-inch diameter and 12-inch diameter pipelines in the neighborhood near Hillcrest Avenue. Connect existing pipelines in and crossing the alley near Evelyn Way and connect pipelines that cross at the intersection of Evelyn Way and Folsom Road. Abandon existing 6-inch diameter pipeline at the intersection of Sunrise Avenue and Frances Drive and install three new 8-inch diameter pipelines reconnecting existing mains.
- **I-80 crossing project**: Abandon three pipelines (5-inch, 6-inch, and 8-inch diameter) crossing I-80 and install three 8-inch diameter pipelines (Douglas Boulevard, Cirby Creek crossing, and South Harding to Wayne Drive) to reconnect and loop the system in this area.

For scenarios evaluating the proposed Project, the hydraulic model was also updated with the Project's projected maximum day water demand (300,900 gpd as presented in Table 1).

HYDRAULIC EVALUATION FINDINGS AND CONCLUSIONS

This section summarizes both the potable water system hydraulic evaluation results and the recommended infrastructure improvements to provide adequate service to the proposed Project. Scenarios evaluated as part of this hydraulic evaluation are under normal supply conditions and include:

- **Existing System** – No infrastructure improvements, existing (2019) maximum day demand (MDD)
- **Existing System with Project** – 2019 MDD, improvements identified for Existing System scenario, plus additional water demand for the Project
- **2050 System** – 2050 MDD, improvements identified for Existing System scenario
- **2050 System with Project** – 2050 MDD, improvements identified for existing system scenarios, plus additional water demand for the Project

Findings from Existing System Evaluation

Results from the hydraulic model indicate that minimum pressures remain above 50 psi within the vicinity of the proposed Project.

Figure 3 shows the available fire flow during MDD for the existing system while maintaining a minimum residual pressure of 20 psi. Hydraulic model results indicate that fire flow capacity is insufficient at multiple locations. Despite adequate transmission capacity throughout the Project area, excessive head losses in small diameter distribution system pipelines lead to deficient fire flow capacity (unable to meet the minimum pressure criterion of 20 psi). To address these deficiencies during fire flow conditions, existing distribution system pipelines within the area are recommended to be replaced with larger diameter pipelines as shown on Figure 4 and summarized below:

- Atlantic Street Corridor
  - **East and Center Street**: 8-inch pipes are recommended to meet pressure criterion.
  - **Alola and Thomas:** 8-inch pipes are recommended to meet pressure criterion.
  - **Walnut and Brookview**: 12-inch pipes are recommended to meet pipeline velocity criterion.
- Douglas-Harding Corridor
  - **Breuner Drive**: 12-inch pipes are recommended to meet pressure and pipeline velocity criteria.
- Douglas-Sunrise Corridor
  - **Jordan Drive**: 10-inch pipes are recommended to meet pressure criterion. This is an area where additional pipeline replacement of the existing 6-inch pipe in Santa Clara Drive would be recommended as part of the City's renewal and replacement program but would not be required to meet fire flow capacity.
  - **Cardinal Way**: 12-inch pipes are recommended in Cardinal Way to meet pipeline velocity criterion.
  - **Smith Lane**: 10-inch pipes are recommended to meet pressure criterion.

Findings from Existing System with Project Evaluation

Results from the hydraulic model indicate that minimum pressures remain above 50 psi within the vicinity of the proposed Project.

Figure 5 shows the available fire flow during MDD for the existing system including the Project and improvements from Figure 4 while maintaining a minimum residual pressure of 20 psi. Hydraulic model results indicate that fire flow capacity is insufficient at three locations due to the increase in the fire flow requirements to 4,000 gpm with the Project. To address these deficiencies during fire flow conditions, distribution system pipelines within the area are recommended to be replaced with larger diameter pipelines as shown on Figure 6 and summarized below:

- Atlantic Street Corridor
  - **Center Street**: 10-inch pipes are recommended in Center Street to serve the higher 4,000 gpm fire flow requirement under the "With Project" scenario.

- Douglas-Sunrise Corridor
  - **Cardinal Way**: 12-inch pipes are recommended in Cardinal Way to meet pipeline velocity criterion. This improvement is separated from the improvement identified for the existing water system in order to capture the cost-sharing between the developer and the City to account for the increase in flow requirements from the proposed Project.

Findings from 2050 System Evaluation

Results from the hydraulic model indicate that minimum pressures remain above 50 psi within the vicinity of the proposed Project.

Figure 7 shows the available fire flow during MDD for the 2050 system with improvements from Figure 4 while maintaining a minimum residual pressure of 20 psi. Hydraulic model results indicate that the available fire flow capacity is sufficient to meet all fire flow requirements.

Findings from 2050 System with Project Evaluation

Results from the hydraulic model indicate that minimum pressures remain above 50 psi within the vicinity of the proposed Project.

Figure 8 shows the available fire flow during MDD for the 2050 system including the Project and improvements from Figures 4 and 6 while maintaining a minimum residual pressure of 20 psi. Hydraulic model results indicate that the available fire flow capacity is sufficient to meet all fire flow requirements with the Project.

Summary of Recommended Improvements

Results from the hydraulic evaluation indicate that the City's existing water system infrastructure cannot provide adequate flows and pressures to the Project. Table 2 summarizes the pipeline improvements required to address deficiencies in each scenario. Figures 9 and 10 show the locations of the recommended pipeline improvements without and with the proposed Project, respectively.

Table 2. Summary of Pipeline Improvements

Scenario	8-inch Improvement, LF	10-inch Improvement, LF	12-inch Improvement, LF
Existing System	4,420	2,430	1,240
Existing System with Project	--	780	980
2050 System	--	--	--
2050 System with Project	--	--	--

PLANNING LEVEL COST ESTIMATES

The following tables detail the estimated costs for the recommended pipeline improvements to serve the proposed Project. Table 3 shows the estimated cost for the recommended pipeline improvements to mitigate the potable water system fire flow deficiencies without the Project, and Table 4 shows the estimated cost to address fire flow deficiencies with the Project. It should be noted that pipeline unit costs are based on average costs that have been seen on recent bids for similar agencies and Construction Contingencies, Engineering, and Environmental and Permitting Allowances are based on previous planning studies.

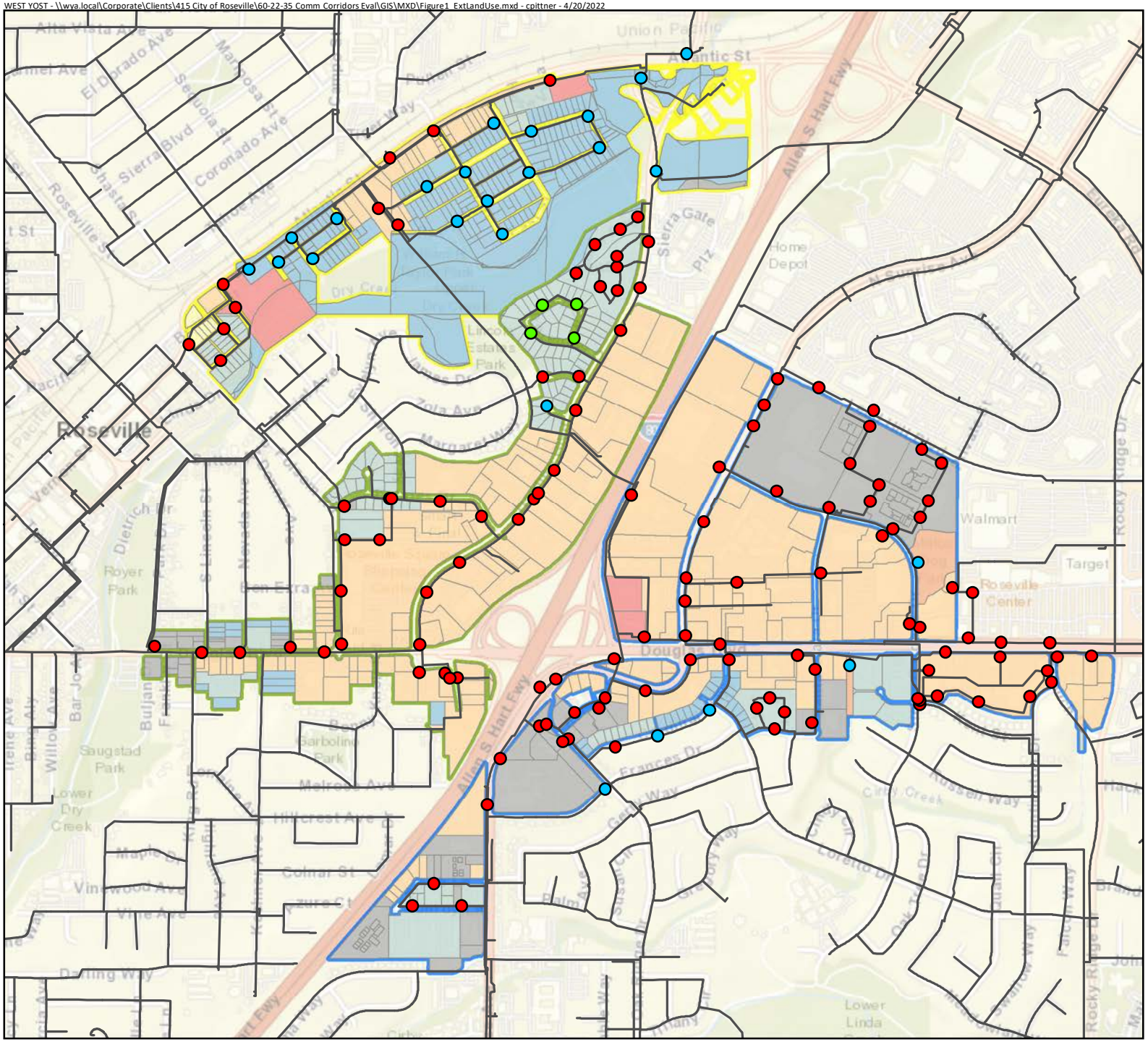
Table 3. Planning Level Cost Estimate (without Project)

Improvement	Quantity	Unit	Unit Construction Cost, dollars	Construction Cost, dollars
Upsize to 8-inch	4,420	LF	280	1,238,000
Upsize to 10-inch	2,430	LF	300	729,000
Upsize to 12-inch	1,240	LF	320	397,000
			Base Construction Cost	**$2,364,000**
			Construction Contingency (30 percent)	709,000
			Construction Cost with Contingency	3,073,000
			Project Allowances [Engineering, Environmental and Permitting] (35 percent)	1,076,000
			Total Cost	**$4,149,000**

Table 4. Planning Level Cost Estimate (with Project)

Improvement	Quantity	Unit	Unit Construction Cost, dollars	Construction Cost, dollars
Upsize to 10-inch	780	LF	300	234,000
Upsize to 12-inch	980	LF	320	314,000
			Base Construction Cost	**$548,000**
			Construction Contingency (30 percent)	164,000
			Construction Cost with Contingency	712,000
			Project Allowances [Engineering, Environmental and Permitting] (35 percent)	249,000
			Total Cost	**$961,000**

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure1_ExtLandUse.mxd - cpittner - 4/20/2022



N

0 600 1,200

Scale in Feet

Symbology

- Existing Pipelines
- Douglas-Sunrise Corridor
- Douglas-Harding Corridor
- Atlantic Street Corridor

Fire Flow Requirement

- 1,500 gpm
- 2,500 gpm
- 4,000 gpm

Existing Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

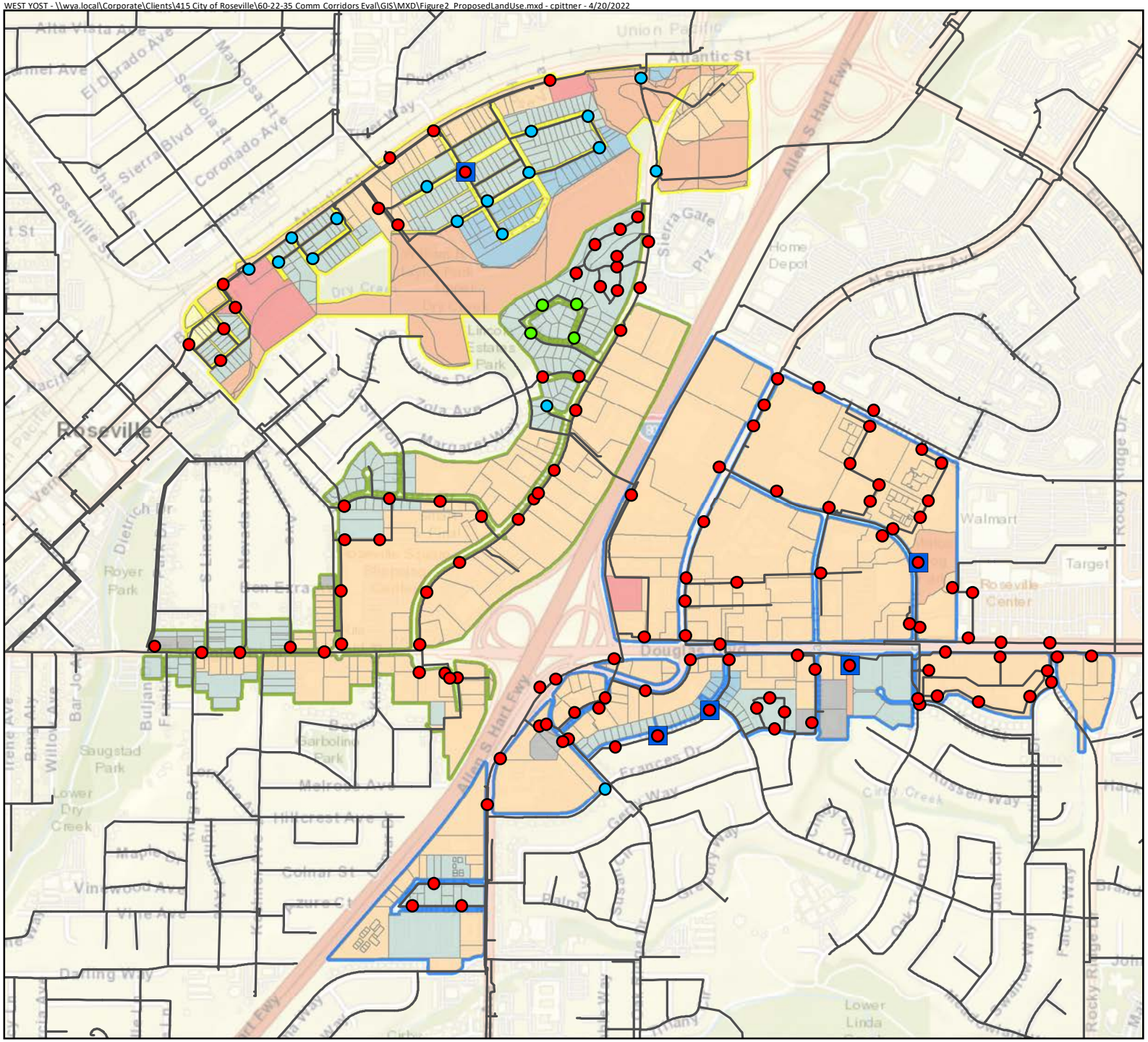
WEST YOST

Figure 1

Existing Land Use
Fire Flow Requirements

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure2_ProposedLandUse.mxd - cpittner - 4/20/2022



N

0 600 1,200

Scale in Feet

Symbology

- Existing Pipelines
- Douglas-Sunrise Corridor
- Douglas-Harding Corridor
- Atlantic Street Corridor

Fire Flow Requirement

- 1,500 gpm
- 2,500 gpm
- 4,000 gpm
- Increased to 4,000 gpm

Proposed Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

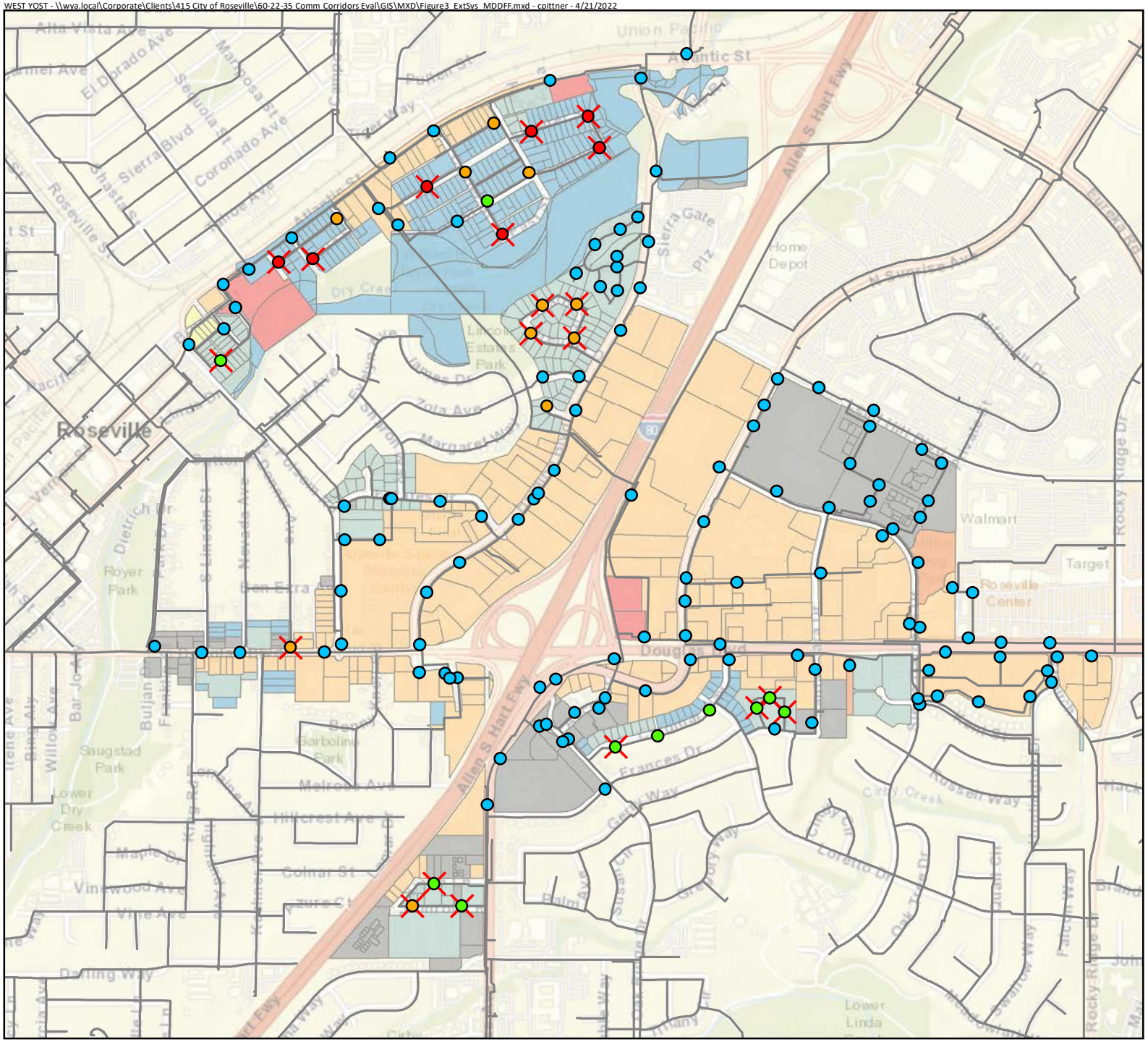
WEST YOST

Figure 2

Proposed Land Use
Fire Flow Requirements

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure3_ExtSys_MDDFF.mxd - cpittner - 4/21/2022



0 600 1,200

Scale in Feet

Symbology

Existing Pipelines

Available Fire Flow

- Less than 1,500 gpm
- 1,500 to 2,499 gpm
- 2,500 to 3,999 gpm
- Greater than 4,000 gpm
- Insufficient Fire Flow

Existing Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

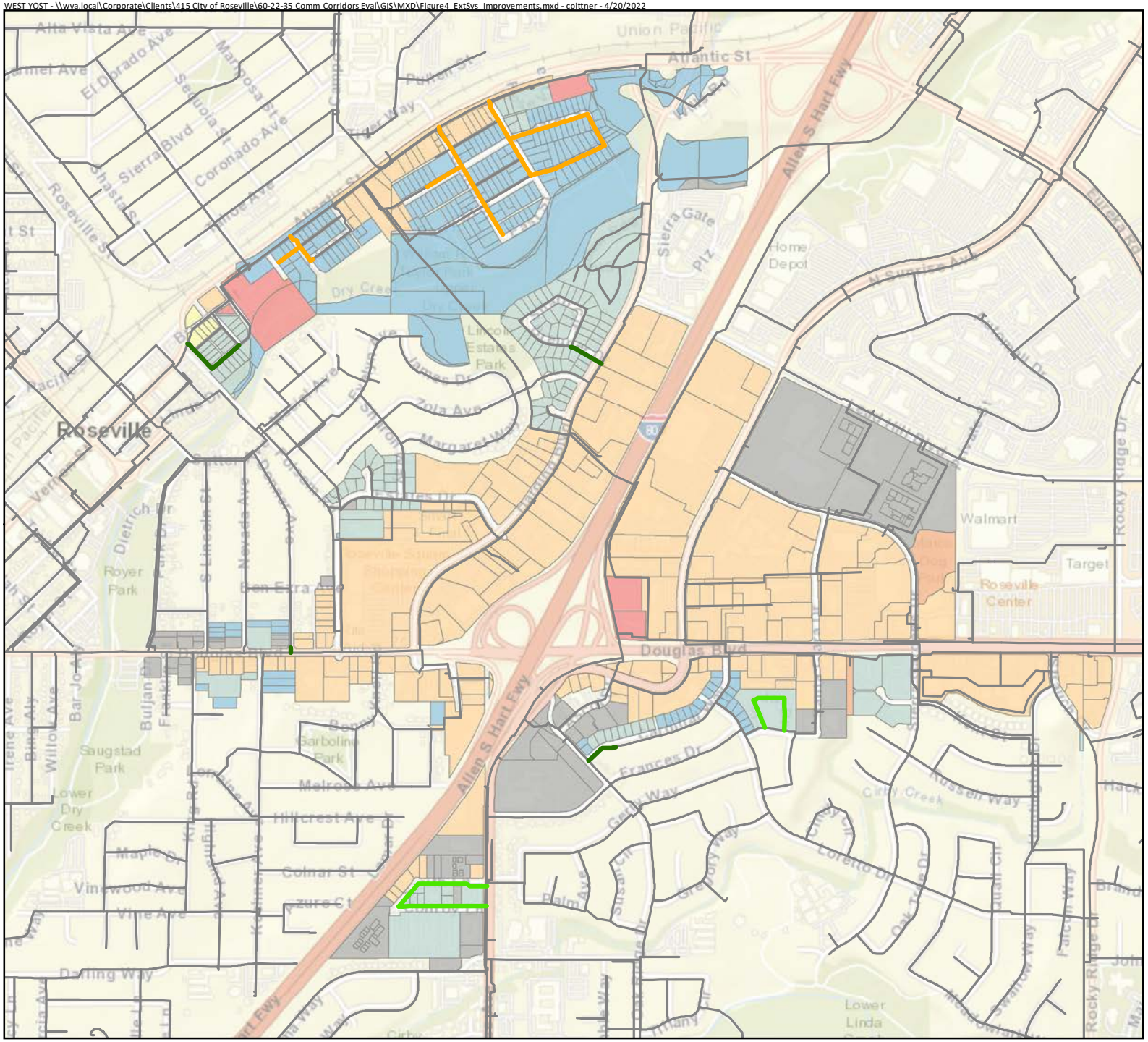
WEST YOST

Figure 3

Existing System Available Fire Flow

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure4_ExtSys_Improvements.mxd - cpittner - 4/20/2022



0 600 1,200

Scale in Feet

Symbology

Existing Pipelines

Pipeline Improvements

- Upsize to 8-inch
- Upsize to 10-inch
- Upsize to 12-inch

Extisting Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

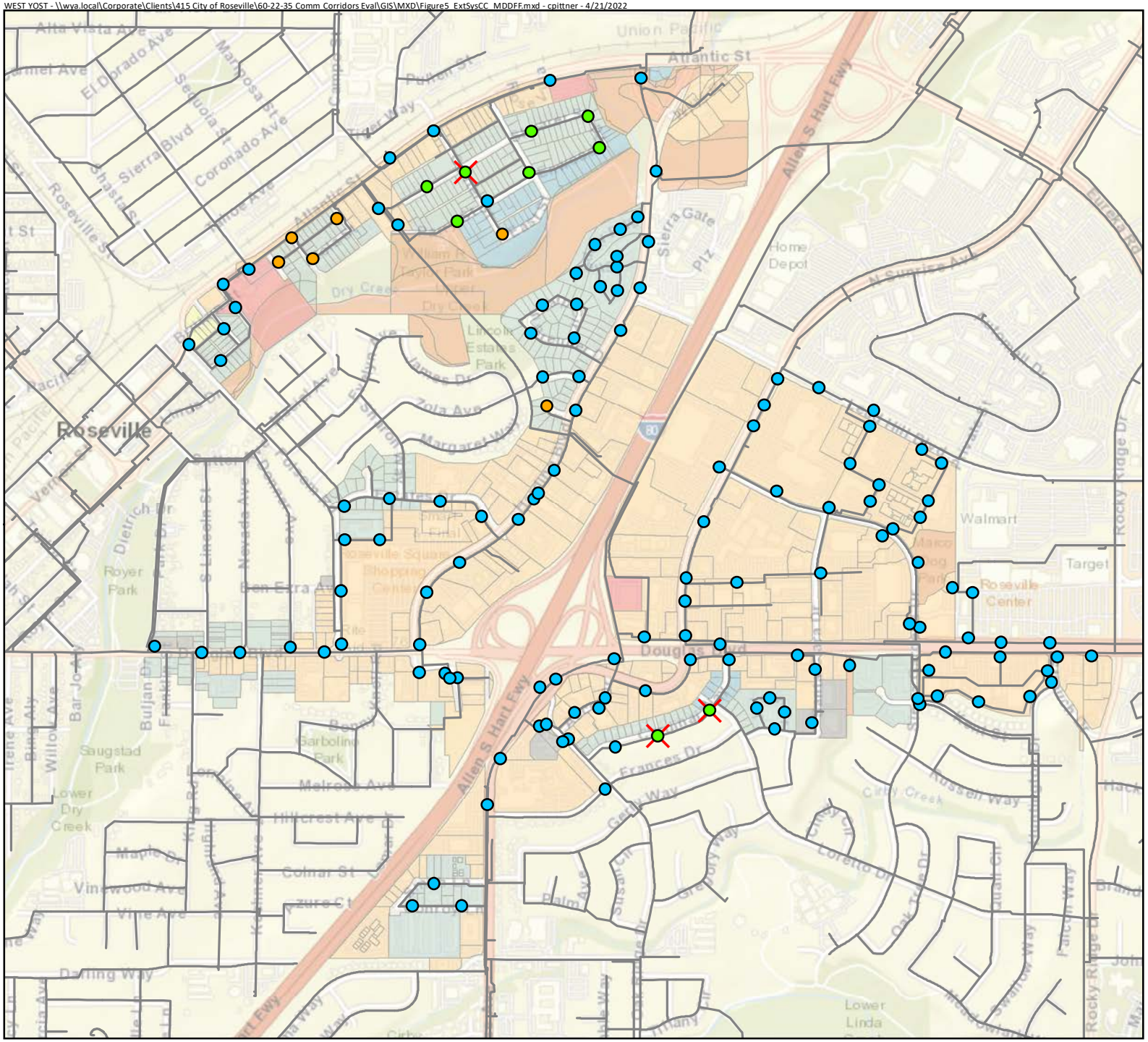
WEST YOST

Figure 4

Existing System Pipeline Improvements

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure5_ExtSysCC_MDDFF.mxd - cpittner - 4/21/2022



0 600 1,200

Scale in Feet

Symbology

Pipelines

Available Fire Flow

- Less than 1,500 gpm
- 1,500 to 2,499 gpm
- 2,500 to 3,999 gpm
- Greater than 4,000 gpm
- Insufficient Fire Flow

Proposed Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

Notes:

1. Hydraulic model results shown include the pipeline improvements from Figure 4.

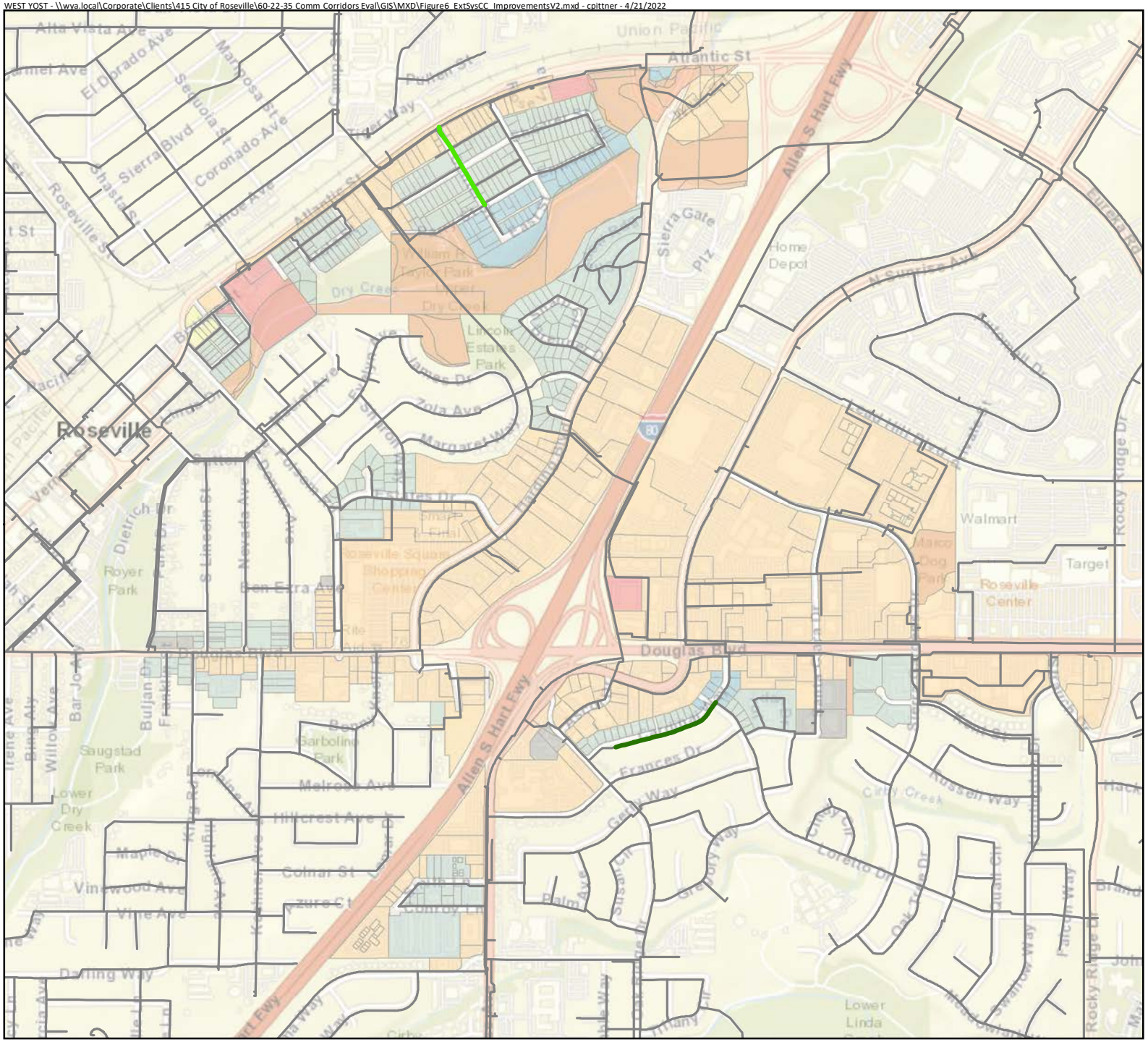
WEST YOST

Figure 5

Existing System + Corridors Available Fire Flow

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure6_ExtSysCC_ImprovementsV2.mxd - cpittner - 4/21/2022



0 600 1,200

Scale in Feet

Symbology

- Pipelines

Pipeline Improvements

- Upsize to 8-inch
- Upsize to 10-inch
- Upsize to 12-inch

Proposed Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

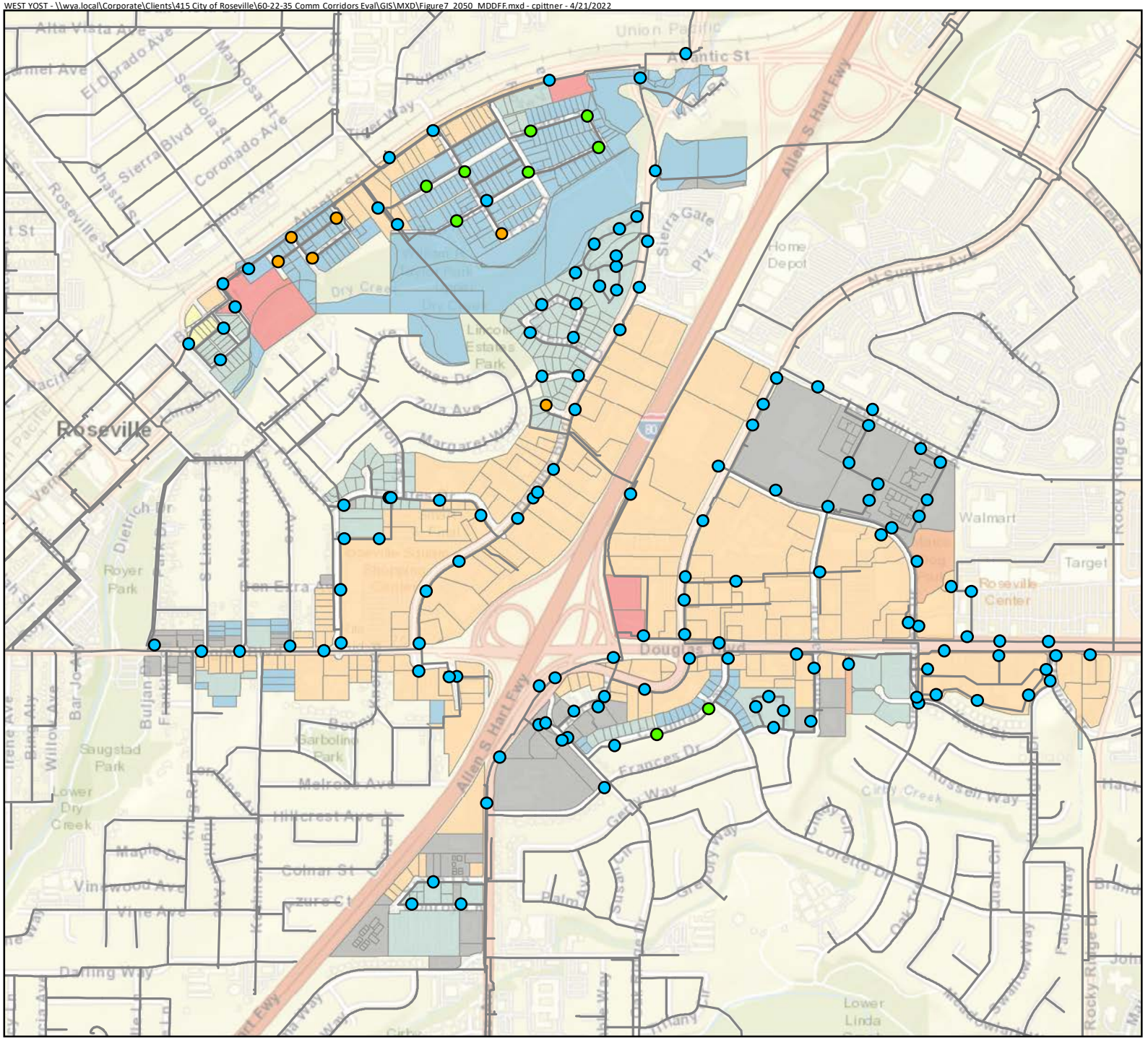
WEST YOST

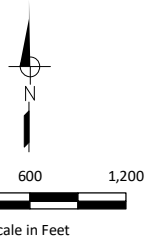
Figure 6

Existing System + Corridors Pipeline Improvements

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure7_2050_MDDFF.mxd - cpittner - 4/21/2022





Symbology

Pipelines

Available Fire Flow

- Less than 1,500 gpm
- 1,500 to 2,499 gpm
- 2,500 to 3,999 gpm
- Greater than 4,000 gpm
- Insufficient Fire Flow

Extisting Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

Notes:

1. Hydraulic model results shown include the pipeline improvements from Figure 4.

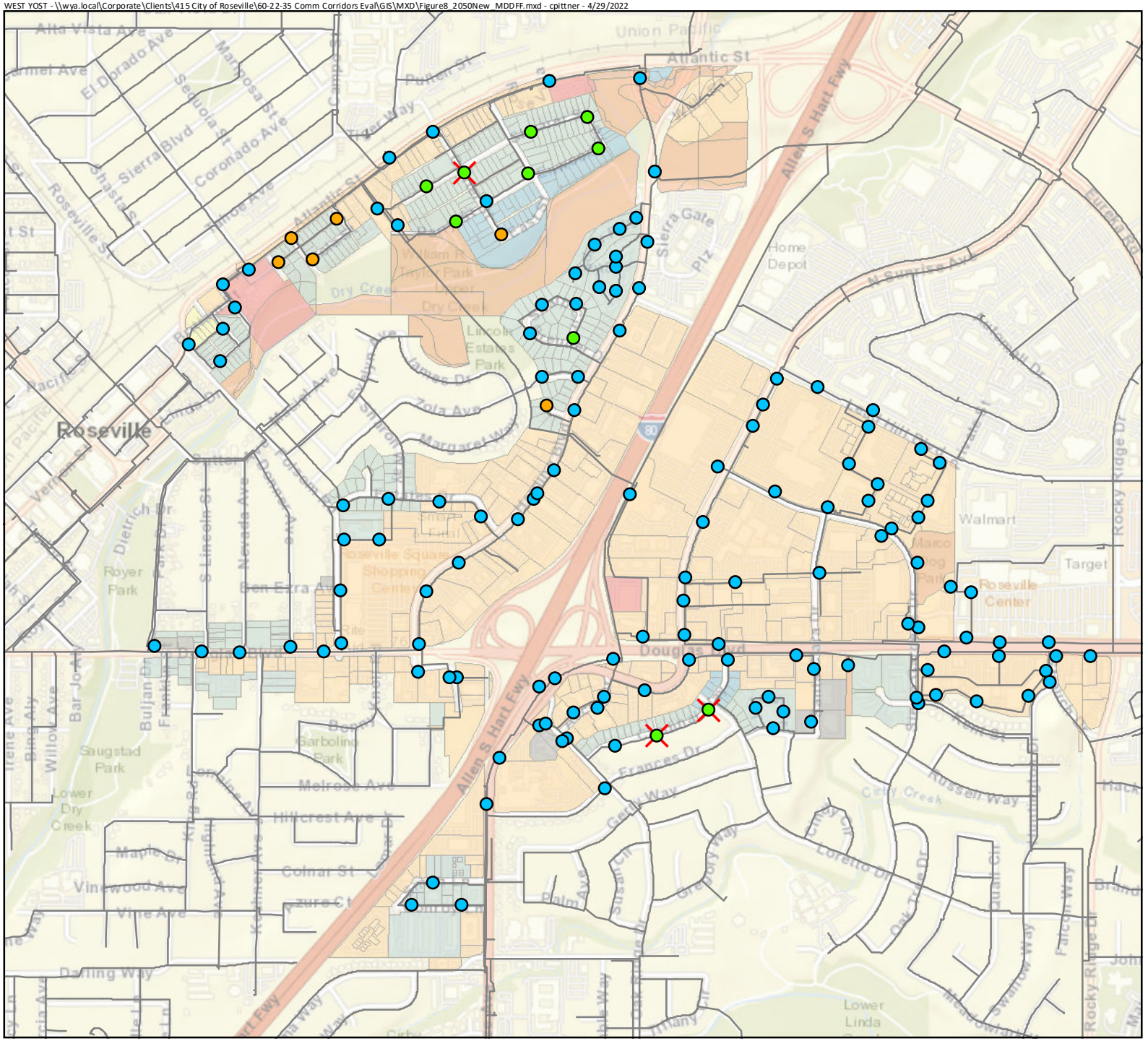
WEST YOST

Figure 7

2050 System Available Fire Flow

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure8_2050New_MDDFF.mxd - cpittner - 4/29/2022



N

0 600 1,200

Scale in Feet

Symbology

Pipelines

Available Fire Flow

- Less than 1,500 gpm
- 1,500 to 2,499 gpm
- 2,500 to 3,999 gpm
- Greater than 4,000 gpm
- Insufficient Fire Flow

Proposed Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

Notes:

1. Hydraulic model results shown include the pipeline improvements from Figure 4 and Figure 6.

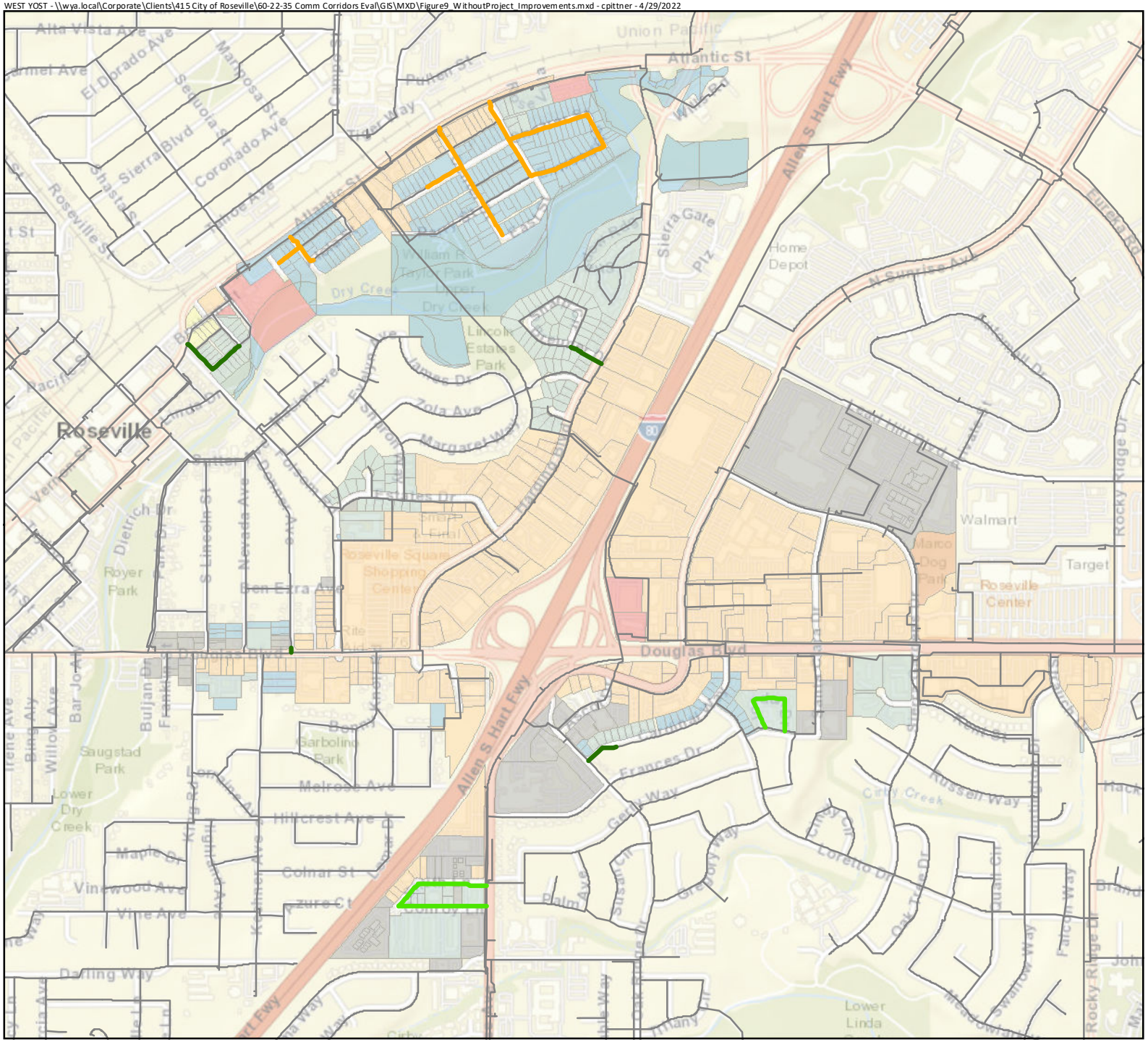
WEST YOST

Figure 8

2050 System + Corridors Available Fire Flow

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure9_WithoutProject_Improvements.mxd - cpittner - 4/29/2022



N

0 600 1,200

Scale in Feet

Symbology

Pipelines

Pipeline Improvements

- Upsize to 8-inch
- Upsize to 10-inch
- Upsize to 12-inch

Extisting Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

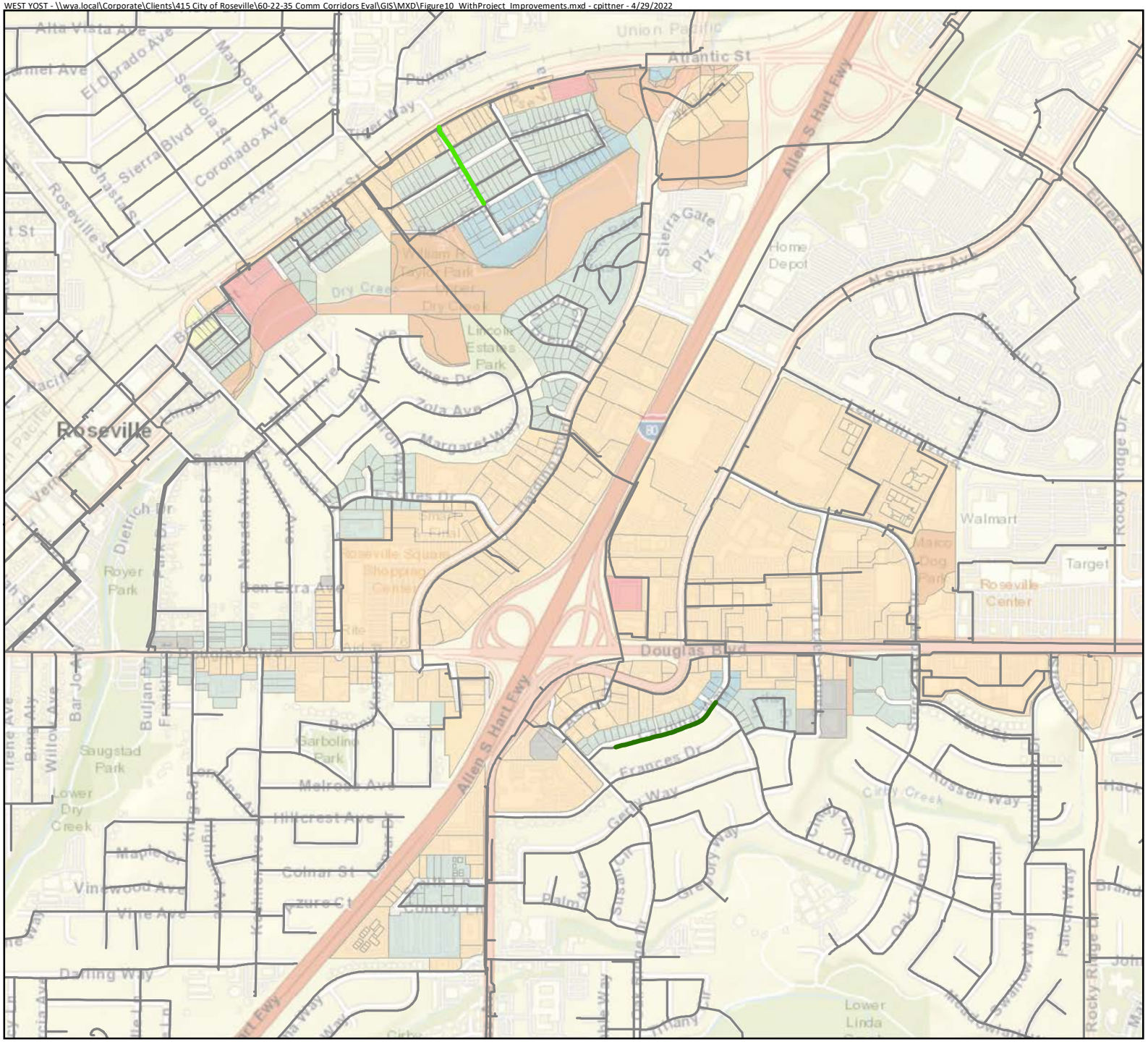
WEST YOST

Figure 9

Pipeline Improvements Without Corridors Project

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

WEST YOST - \\wya.local\Corporate\Clients\415 City of Roseville\60-22-35 Comm Corridors Eval\GIS\MXD\Figure10_WithProject_Improvements.mxd - cpittner - 4/29/2022



0 600 1,200

Scale in Feet

Symbology

Pipelines

Pipeline Improvements

- Upsize to 8-inch
- Upsize to 10-inch
- Upsize to 12-inch

Proposed Land Use

- LDR
- MDR
- HDR
- BP
- CBD
- CC
- OS
- OS/FP
- P/QP

WEST YOST

Figure 10

Pipeline Improvements With Corridors Project

City of Roseville
Commercial Corridors SP
Hydraulic Evaluation

Technical Memorandum

11020 White Rock Road, Suite 200
Rancho Cordova, CA 95670

T: 916-444-0123

Prepared for: City of Roseville

Project Title: Roseville Commercial Corridors Specific Plans Water Modeling Support

Project No.: 156832

Technical Memorandum

Subject: Criteria and Assumptions

Date: July 9, 2021

To: Gina McColl

From: Micaela Nino

Copy to: Melanie Holton, Tracie Mueller

Prepared by: _____
Micaela Nino, Project Manager, P.E. CA License C90041

Reviewed by: _____
Melanie Holton, P.E., CA License C64983

Limitations:

This document was prepared solely for the City of Roseville in accordance with professional standards at the time the services were performed and in accordance with the contract between the City of Roseville and Brown and Caldwell dated May 19, 2021. This document is governed by the specific scope of work authorized by the City of Roseville; it is not intended to be relied upon by any other party except for regulatory authorities contemplated by the scope of work. We have relied on information or instructions provided by the City of Roseville and other parties and, unless otherwise expressly indicated, have made no independent investigation as to the validity, completeness, or accuracy of such information.

Table of Contents

List of Figures

List of Tables

Section 1: Introduction

The City of Roseville wants to evaluate the ability of its water system to properly serve proposed changes in development in the following three commercial corridors:

- Atlantic Street Corridor
- Douglas-Harding Corridor
- Douglas-Sunrise Corridor

This criteria and assumptions technical memorandum (TM) defines criteria to be used to analyze model results and recommend infrastructure improvements. This TM also documents data inputs and updates in the City's InfoWater water distribution system hydraulic model for the required analyses, including estimated water demands for each commercial corridor.

Section 2: Hydraulic Model Criteria

This section summarizes criteria used to analyze model results and recommend infrastructure improvements. Pressure, head loss, and velocity criteria used are summarized Table 1.

Table 1. Hydraulic Performance Criteria for Pipelines

Component	Criterion
Minimum Pressure [a]	50 pounds per square inch (psi) for normal operating conditions (which is assumed to include maximum day and peak hour demands) 20 psi under maximum day demand plus fire flow conditions
Maximum Pressure [a]	100 psi for normal operating conditions
Maximum Head loss [b]	10 feet per 1,000 feet of pipe (k/ft)
Maximum Velocity [b]	10 feet per second (fps)

a. *Source: Section 8- Domestic Water Supply System Design, City of Roseville Design Standards, January 2020*

b. *Industry standard*

Section 3: Model Inputs and Updates

This section summarizes data inputs and updates made to the hydraulic model for the required analyses, including estimated water demands for each commercial corridor.

3.1 Model Updates

The City's hydraulic model was updated and calibrated in August 2020. The City has constructed water infrastructure improvements as part of its capital improvements program (CIP). The following pipeline improvements were constructed after the completion of the 2020 model and were added to the model as part of this project. The locations of the improvements are shown in Figure 1:

a) **Tiger Way Union Pacific Railroad (UPRR) crossing:** Abandon 6-inch diameter line crossing UPRR between Atlantic Street and Tiger Way and replace with new 12-inch diameter connection along Tiger Way between existing 12-inch diameter pipelines from Campo Street to end of abandoned 6-inch diameter pipeline.
b) **Atlantic Street slip line:** Slip line two 12-inch diameter pipelines crossing Atlantic Street with 8-inch diameter pipelines and abandon two 12-inch diameter UPRR crossings.
c) **Evelyn Way and Folsom Road:** Connect existing pipelines on and crossing the alley near Evelyn Way, and connect pipelines that cross at the intersection of Evelyn Way and Folsom Road.
d) **Hillcrest area:** Install various 8-inch diameter and 12-inch diameter pipelines in the neighborhood near Hillcrest Avenue.
e) **I-80 crossings:** Abandon three pipelines (5-inch, 6-inch, and 8-inch diameter) crossing I-80 and install two 8-inch diameter pipelines (Douglas Boulevard and South Harding to Wayne Drive) to reconnect and loop the system in the area.

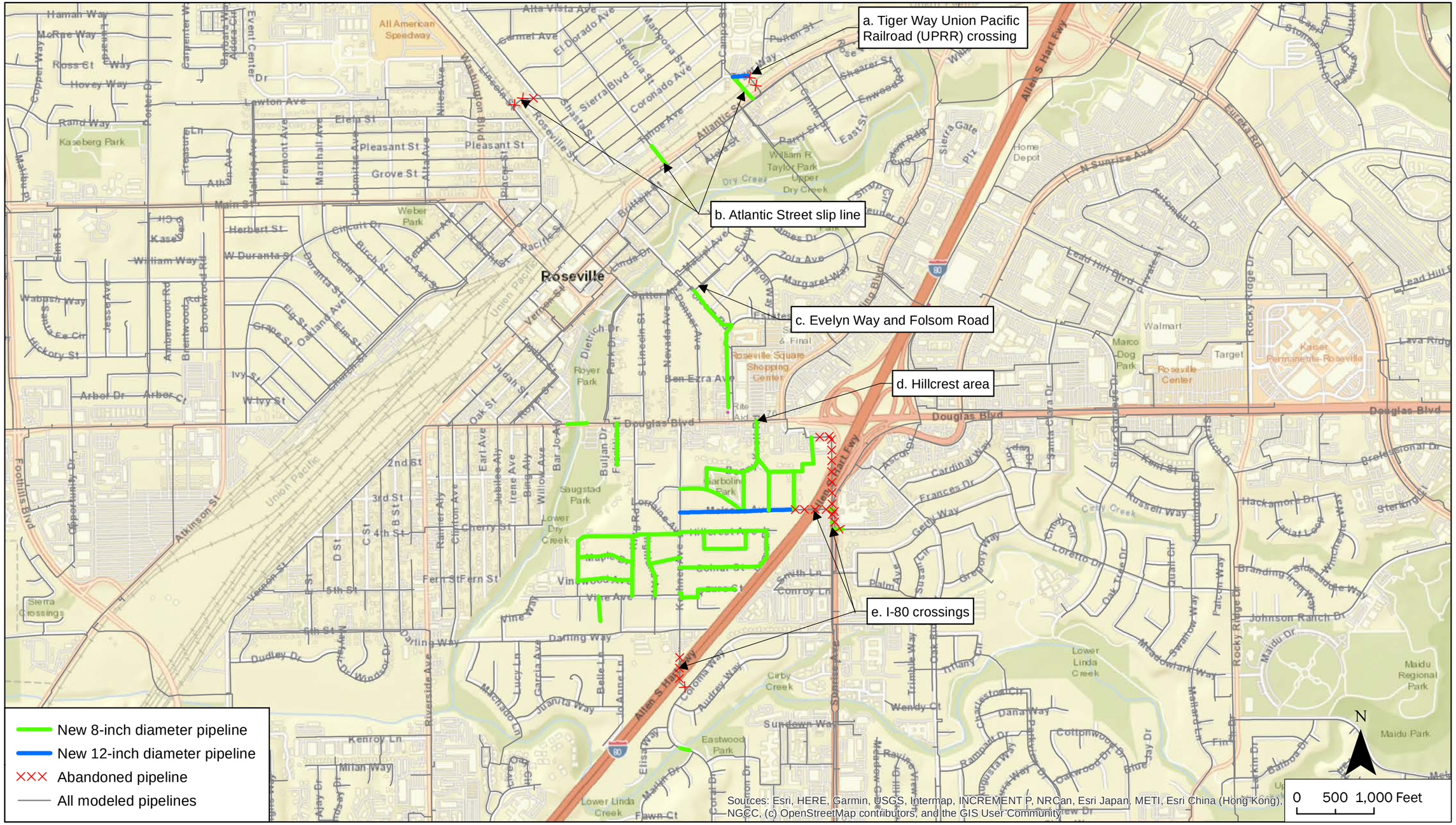


Figure 1. Model Updates

3.2 Water Demands

This section summarizes water demand estimates for each commercial corridor using proposed land uses combined with land use based unit water demand factors provided by the City.

3.2.1 Land Use Summary

Figure 2 shows existing land use and Figure 3 shows proposed land use. According to the City, each corridor will have increased water use due to following new High Density Residential (HDR) dwelling units (DUs):

- Atlantic Street Corridor = 50 new HDR dwelling units
- Douglas-Harding Corridor = 250 new HDR dwelling units
- Douglas-Sunrise Corridor = 100 new HDR dwelling units

3.2.2 Unit Water Demand Factor

A unit water demand factor of 177 gallons per day (gpd) per DU was used to calculated average day demands for the new HDR DUs. This factor is from Section 8 in Domestic Water Supply System Design, City of Roseville Design Standards (Roseville, 2020) for areas with greater than 16 DUs per acre.

3.2.3 Peaking Factors and Required Fire Flows

Peak hour demands and maximum day demands occurring in conjunction with a fire flow demand will be used to determine the hydraulic constraints on the existing water system. Based on City design standards, the average day demand to maximum day demand peaking factor is 2.0 and the maximum day demand to peak hour demand peaking factor is 1.7. Required fire flow demands by land use are listed in Table 2.

Table 2. Fire Flow Demand by Land Use

Land Use Category	Fire Flow Demand (gpm)
Residential (LDR)	1,500
Multi-Family (MDR, HDR)	4,000
Commercial, Business, Industrial, or School	4,000

Source: Section 8- Domestic Water Supply System Design, City of Roseville Design Standards, January 2020

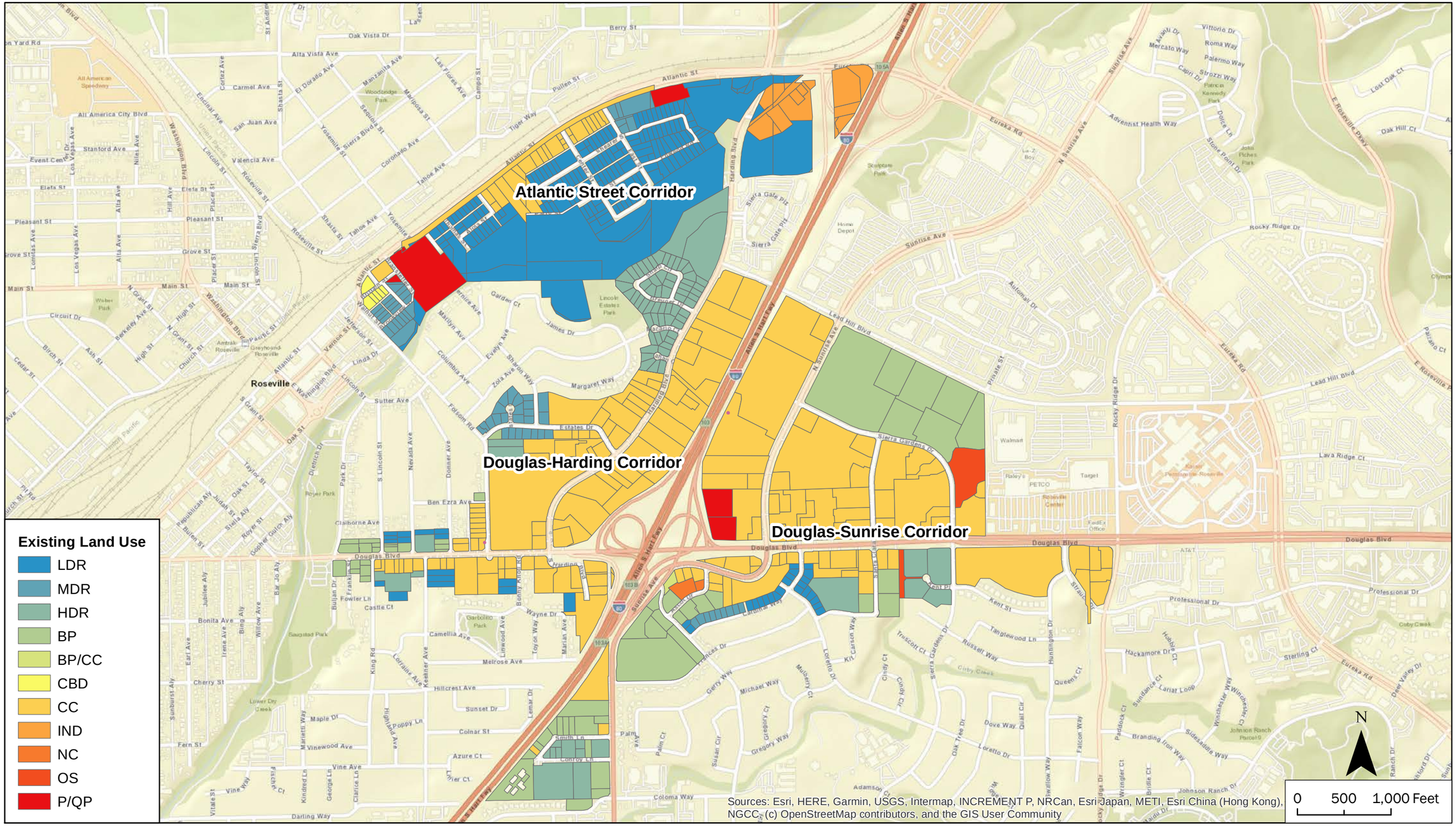


Figure 2. Existing Land Use

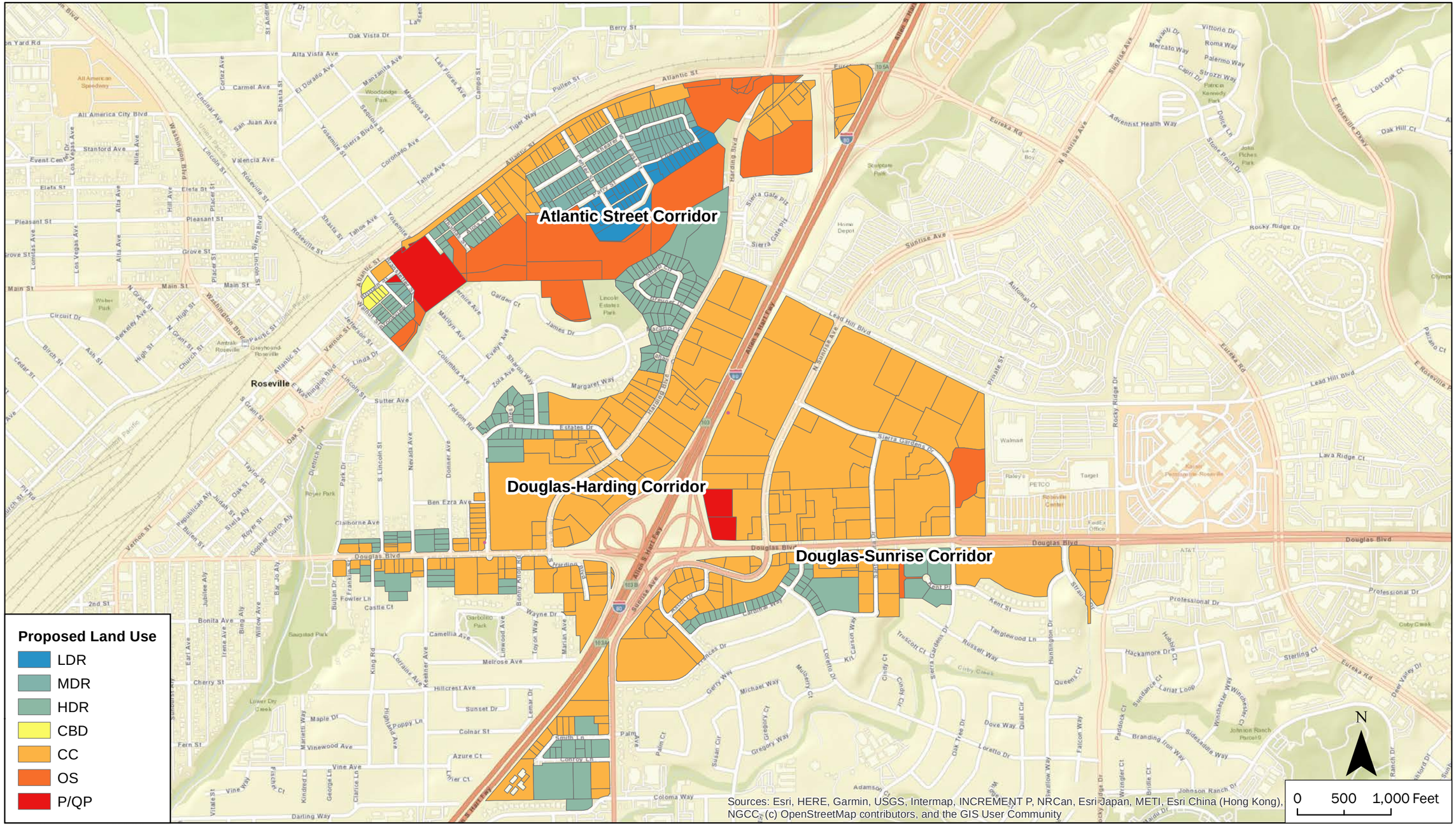


Figure 3. Proposed Land Use

3.2.4 Estimated Water Demands

The increase in water demands for each corridor was calculated using the number of DUs and unit demand factors discussed above. Table 3 summarizes the increase in water demands associated with redevelopment of the corridors.

Table 3. Increase in Water Demand Due to Redevelopment

Corridor	Land Use Categories		DUs	Unit Demand Factor (gpd/DU)	Average Day Demand (ADD) (gpd)	Maximum Day Demand (MDD) (gpd)
Atlantic Street	HDR	High Density Residential	50	177	8,850	17,700
Douglas-Harding	HDR	High Density Residential	250	177	44,250	88,500
Douglas-Sunrise	HDR	High Density Residential	100	177	17,700	35,400

The demands in Table 3 will be added to both the existing and 2050 model scenarios. Table 4 lists the demands used in this modeling analysis. The currently modeled MDD, based on year 2019 actual demand data, was extracted from the model for each corridor and is listed in Table 4. 2050 demands, based on the City's "Estimated Growth Matrix" dated October 2019 were also extracted from the model and are listed in the table.

Table 4. Demands Modeled in this Analysis per Corridor by Scenario (gpd)

Model Scenario	Description	Atlantic Street	Douglas-Harding	Douglas-Sunrise
1. Baseline Conditions	Existing modeled MDD (2019 actual)	280,552	472,272	680,043
2. Existing System Normal Scenario	Existing modeled MDD (listed first) plus the MDD associated with proposed HDR dwelling units from Table 3	280,552 + 17,700 = 298,252	472,272 + 88,500 = 560,772	680,043 + 35,400 = 715,443
3. 2050 System Normal Scenario	2050 modeled MDD (listed first and based on the City's spreadsheet titled "Estimated Growth Matrix" dated October 2019) plus the MDD associated with proposed HDR dwelling units from Table 3	582,929 + 17,700 = 600,629	660,779 + 88,500 = 749,279	1,246,094 + 35,400 = 1,281,494

References

City of Roseville, *City of Roseville Design Standards*, Section 8, "Domestic Water Supply System", January 2020.

City of Roseville, Commercial Corridors Development Standards and Regulatory Incentives.

City of Roseville, Project Maps (recent CIP drawings), provided via email from Tracie Mueller on June 9, 2021.

Addendum Attachment 2

TECHNICAL MEMORANDUM

TO: Lauren Hocker, City of Roseville

PREPARED BY: Dylan Merlo, Woodard & Curran
Chris van Lienden, CA PE 75034, Woodard & Curran

REVIEWED BY: Gisa Ju, CA PE 31823, Woodard & Curran
Dave Richardson, Woodard & Curran

DATE: April 25, 2022

RE: Commercial Corridors Specific Plans Sewer Evaluation

The City of Roseville is proposing new specific plans to support development in three adjacent commercial corridors: Atlantic Street Corridor, Douglas-Harding Corridor, and the Douglas-Sunrise Corridor. The specific plans anticipate new residential and commercial mixed-use zones in each commercial corridor, with a significant increase in the number of multi-family residential units. Figure 1 shows the conceptual land uses proposed for these areas.

Sewer flows from the three specific plan areas are conveyed through local sewers to the South Placer Wastewater Authority (SPWA) Dry Creek Sewer Interceptor and two trunk sewers (referred to as Cirby Creek Trunk A and B in this evaluation) near south of Douglas Blvd, which carry flows from the City and South Placer Municipal Utility District (SPMUD) to the Dry Creek Wastewater Treatment Plant (Dry Creek WWTP). The purpose of this study is to identify any potential capacity deficiencies in the sewers that the specific plan developments would cause, and develop potential improvements to mitigate those deficiencies.

This Technical Memorandum (TM) describes the approach used for the assessment, the criteria applied to estimate potential flows and identify capacity deficiencies, and the results of the modeling. To conservatively estimate potential future flows, the specific plans were evaluated collectively; that is, it has been assumed that all three specific plans will be implemented concurrently.

1. MODEL NETWORKS

A sewer model including all of the sewers in the City was recently developed as part of the 2017 City of Roseville Sewer Model Update (2017 Model Update). Subsequently, a capacity evaluation of the SPWA trunk sewers was also conducted for the 2020 South Placer Wastewater Authority Systems Evaluation (2020 Systems Evaluation), which also updated flow projections from Placer County and SPMUD (the City indicated that flow projections from the 2017 Model Update were sufficiently up to date). In addition, the 2020 Systems Evaluation proposed capacity improvements that could increase flows through the Dry Creek Sewer Interceptor under future design storm conditions. As the model used in the 2020 Systems Evaluation included only trunk sewers (including the Dry Creek Interceptor), the all-pipe model from the 2017 Model Update was updated to reflect updates from the 2020 Systems Evaluation, and used as the basis for the evaluation for this study. The modeled network, including the location of the proposed capacity improvement projects and the specific plan areas, are shown in Figure 2.

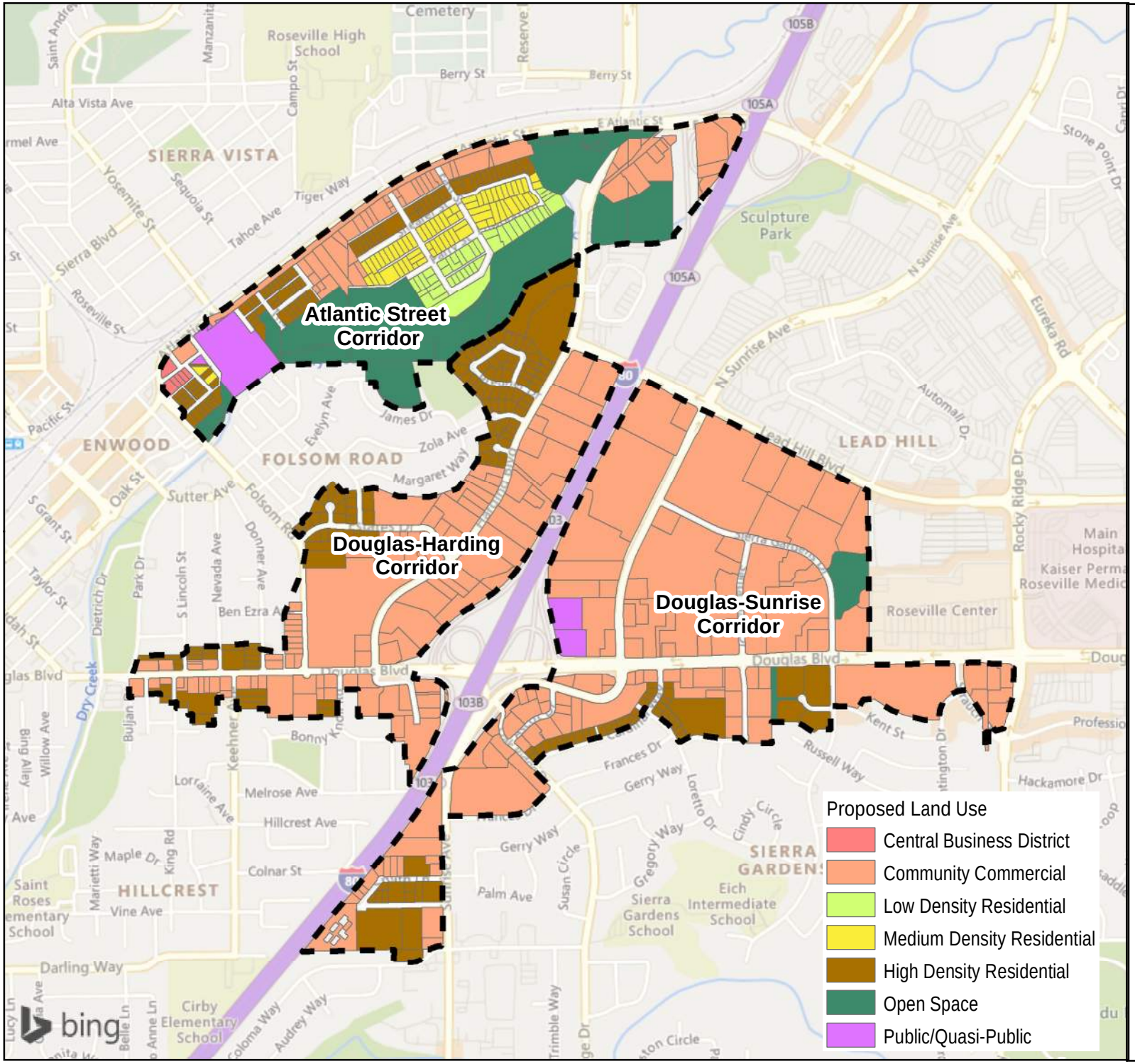


Figure 1 Conceptual Proposed Land Uses

City of Roseville
Commercial Corridors
Specific Plans
Sewer Evaluation

CITY OF ROSEVILLE CALIFORNIA

WOODARD & CURRAN

Project #: 001967.00
Map Created: August 2021

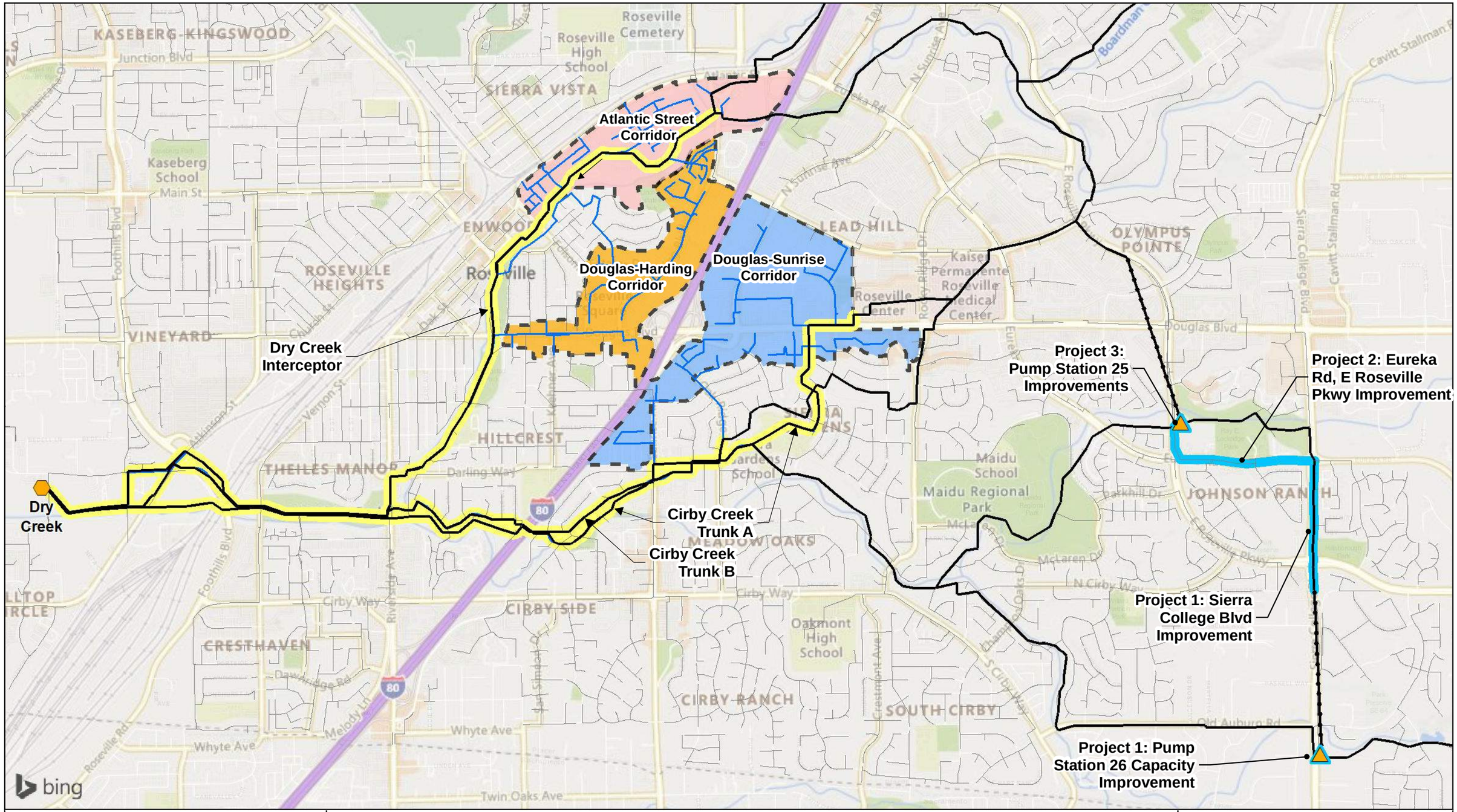


Figure 2
Proposed Specific Plans and Sewer System

City of Roseville
Commercial Corridors Specific Plans
Sewer Evaluation

- Pump station
- Wastewater treatment plant
- Regional gravity sewer
- Regional force main
- City sewer with Specific Plan flows
- Other City sewer
- Regional sewer with Specific Plan flows
- 2020 Systems Evaluation identified improvement projects
- Atlantic Coridor
- Douglas-Harding Corridor
- Douglas-Sunrise Corridor

0 500 1,000 2,000 3,000 4,000 Feet

N

Project #: 001967.00

Map Created: August 2021

CITY OF ROSEVILLE CALIFORNIA

WOODARD & CURRAN

Figure Exported: 8/18/2021 By: cvanlienden Using: \\woodardcurran.net\shared\Projects\0011967.00 Roseville Com Corridors Sewer Model Support\wip\C. GIS\MXDs\2 - Specific Plan Areas & Sewer System.mxd

Note that the model includes the proposed projects from the 2020 Systems Evaluation. These improvements divert flow from the trunk sewers on Old Auburn Road and Sierra College Boulevard to the north, upstream of the proposed Corridor developments. Project 1, capacity improvements at Pump Station 26 and downstream gravity sewers, was identified as an improvement needed under existing conditions. The project is anticipated to be completed in the near future and was included in the Existing Network for this study to conservatively represent flows. Projects 2 and 3, which include improvements along Eureka Road, and E. Roseville Parkway, as well as capacity improvements to Pump Station 25, were identified as improvements needed under buildout conditions, and were included in the Buildout Network.

2. BASIS OF FLOW ESTIMATES

This section describes the wastewater flow components used in the hydraulic model and the existing and projected future land uses for the service area, which form the basis for generating base wastewater flows. Design flow estimates were developed based on criteria developed for each flow component: base wastewater flow (BWF), groundwater infiltration (GWI), and rainfall-dependent infiltration and inflow (RDI/I), and confirmed through model calibration as part of the 2017 City of Roseville Sewer Model Update.

2.1 Loading Scenarios

The model network includes four loading scenarios developed for the 2017 Model Update and updated for the 2020 Systems Evaluation:

- Existing Scenario – representing sewer flows based on model calibration.
- Existing Scenario plus Drought Rebound – representing sewer flows in the existing system that would be expected after water consumption is no longer affected by drought-induced conservation.
- Buildout Scenario – representing sewer flows incorporating currently anticipated development density.
- Buildout-Sensitivity Scenario – a theoretical scenario representing higher density development in Placer County, plus intensification and redevelopment in the downtown Roseville area.

For this study, the Existing Scenario plus Drought Rebound, the Buildout Scenario, and the Buildout-Sensitivity Scenario were used to evaluate the impacts of the proposed specific plan developments. Note that the Buildout-Sensitivity Scenario assumed redevelopment and intensification of portions of all three proposed specific plan areas (Figure 3), based on parcel-based classifications developed for the 2009 Systems Evaluation. Unit flow factors for the parcels in the redevelopment area are summarized in Table 1. More detailed information on the redevelopment land uses inside the City is included in TM 9C of the 2009 Systems Evaluation. For the purpose of the Buildout-Sensitivity Scenario evaluation, the projected flows based on the specific plan land uses were compared to projected flows based on redevelopment for these areas, and the larger flows were used. Based on this comparison (see section 2.2), the Buildout-Sensitivity Scenario used the redevelopment flow projections for these areas.

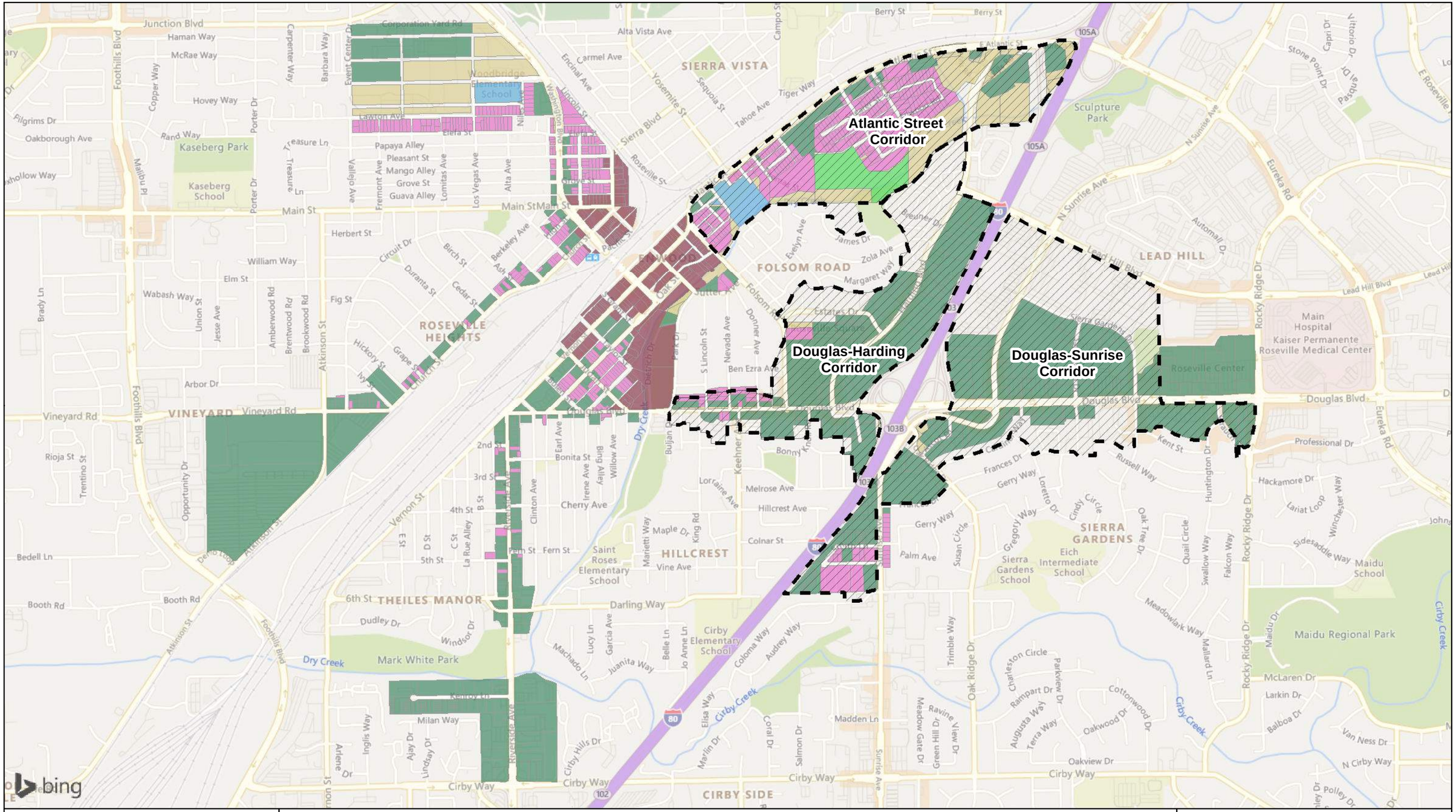


Figure 3
Buildout-Sensitivity Scenario Land Uses

City of Roseville
Commercial Corridors Specific Plans
Sewer Evaluation

Specific Plan Area

Redevelopment Land Use

- Open Space
- Parks
- Schools
- Residential Multi-Family
- Intense Commercial
- Very Intense Commercial

0 500 1,000 2,000 Feet

N

Project #: 001967.00

Map Created: August 2021

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CITY OF ROSEVILLE CALIFORNIA

WOODARD & CURRAN

Figure Exported: 8/18/2021 By: cvanlienden Using: \\woodardcurran.net\shared\Projects\001967.00 Roseville Com Corridors Sewer Model Support\wip\C. GIS\MXDs\3 - Buildout-Sensitivity Land uses.mxd

Table 1: Redevelopment Land Use Flow Factors

Corridor	Unit Flow Factor[a]
Multi-Family Residential	2,040 gpd/acre[b] OR 130 gpd/unit
Intense Commercial	2,720 gpd/acre
Very Intense Commercial	10,200 gpd/acre
Open Space	0 gpd/acre
Parks > 10 Acres	10 gpd/acre
Vacant	0 gpd/acre
Multi-Family Residential	2,040 gpd/acre[b] OR 130 gpd/unit

Footnotes:
a. Flow factors based on the 2009 *SPWA Systems Evaluation*
b. Equivalent to 17 multi-family dwelling units per acre

2.2 Flow Projection Updates

The flows for the three specific plan areas were estimated based on the projected units summarized in Table 2 below. Note that 500 of the 600 additional residential units in the Douglas-Sunrise Corridor were assigned to a proposed development at 201 North Sunrise Avenue. The additional proposed residential units were estimated using the unit factor 130 gallons per day per dwelling unit (gpd/DU) used for multi-family units in the 2017 Model Update. These loads were distributed amongst the identified residential development parcels in proportion to parcel area (acreage).

Table 2: Commercial Corridor Development

Corridor	Additional Residential Units
Atlantic Street Corridor	50
Douglas-Harding Corridor	200
Douglas-Sunrise Corridor[a]	600

Footnotes:
a. 500 of the additional residential units were assigned to a proposed development at 201 North Sunrise Avenue.

The specific plans envision redevelopment and reinvestment of commercial uses, rather than adding additional square footage. Therefore, the model does not include additional estimated commercial flows beyond what is already included for commercial development in the loading scenarios.

The sewer flows from each specific plan area for each of the modeled scenarios are summarized in Table 3.

Table 3: Modeled Dry Weather Sewer Flows

Corridor	Existing + Specific Plans (mgd)	Buildout + Specific Plans (mgd)	Buildout-Sensitivity[a] (mgd)
Atlantic Street Corridor	0.06	0.08	0.17
Douglas-Harding Corridor	0.23	0.25	0.34
Douglas-Sunrise Corridor	0.33	0.34	0.49

Footnotes:
a. Incorporates redevelopment land uses and flow factors described in Section 2.1.

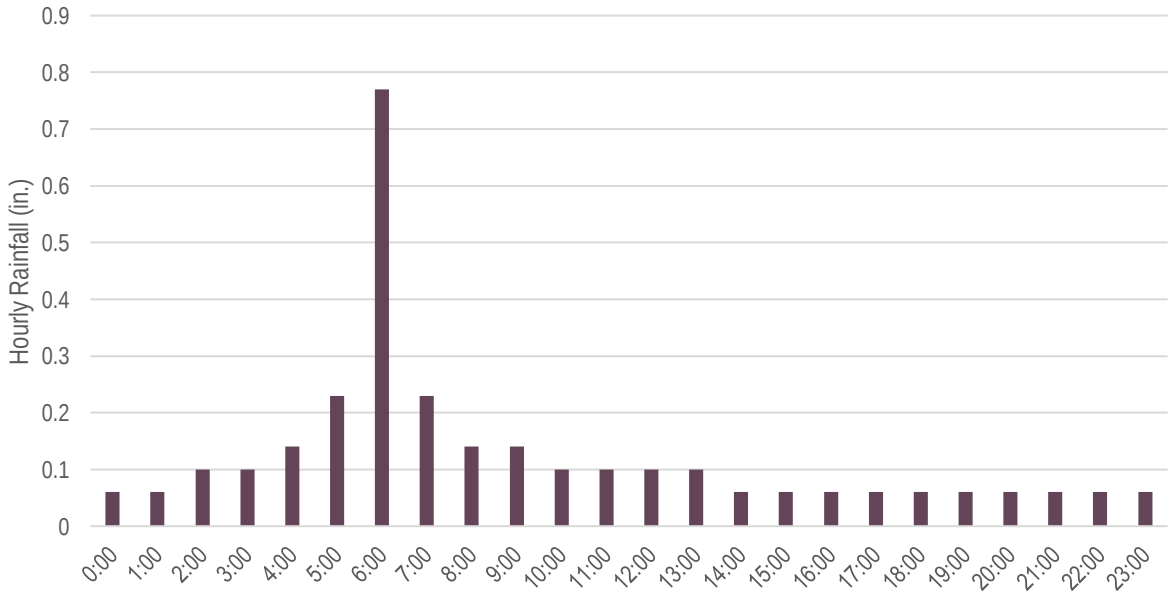
3. DESIGN CRITERA

Evaluation of system capacity was based on the design flow and capacity criteria applied in the 2020 Systems Evaluation, and summarized below. It should be noted that this methodology differs somewhat from the flow and capacity criteria in the City's design standards, which are intended for evaluation of sewers 15 inches and smaller and generally used for areas without an existing hydraulic model.

3.1.1 Design Flow Criteria

Design flows for sewer systems consist of BWF, GWI, and RDI/I. Criteria for computing existing and future BWF, GWI, and RDI/I (developed as part of model calibration) were discussed in the 2020 Systems Evaluation Report. Design RDI/I is based on a 10-year, 24-hour synthetic rainfall pattern that occurs uniformly across the entire SPWA service area. The intensity and timing of the design storm is presented in Figure 4.

Figure 4: SPWA 10-year Design Storm Event



3.1.2 Hydraulic Capacity Criteria

Capacity deficiency or performance criteria are used to determine when the capacity of a sewer pipeline or pump station is exceeded to the extent that a capacity improvement project (e.g., a relief sewer or larger replacement sewer or pump station upgrade) is required. Capacity deficiency criteria are sometimes called "trigger" criteria in that they trigger the need for a capacity improvement project. These criteria may differ from "design criteria" that are applied to determine the size of a new facility, which may be more conservative than the performance criteria. The 2020 Systems Evaluation used the following hydraulic capacity criteria:

- Surcharging up to within 5 feet of the manhole rims (ground surface) is considered acceptable under 10-year design storm peak wet weather flow (PWWF), as long as the surcharge (flow height in the manhole) does not exceed 4 feet above the top of the pipe.

- Pump stations are considered capacity deficient if the design storm PWWF exceeds the pump station capacity with the largest pumping unit out of service (firm capacity).
- Force mains with velocities exceeding 7 feet per second under PWWF may require further investigation, although would not trigger a project unless the pump station required additional capacity.

For the current study, the same criteria have been applied.

4. MODEL RESULTS

Model results indicating the locations of model-predicted surcharge are shown in Figure 4 (existing with drought rebound) and Figure 5 (buildout). Note that Figure 5 shows the results for both the Buildout and Buildout-Sensitivity senarios (i.e. there is no difference in modeled surcharge between the scenarios). Hydraulic profiles of the trunk sewers downstream of the proposed specific plan areas are presented in Appendix A.

The results indicate no significant surcharge in the sewers downstream of the Douglas-Harding and Atlantic Street Corridors, but some surcharge is predicted downstream of the Douglas-Sunrise Corridor in Cirby Creek trunk sewer A. Table 4 summarizes the surcharge extent, depth, and freeboard. As summarized in Table 4, the surcharge exceeds the criteria described above for some sewers in the Buildout and Buildout-Sensitivity scenarios. These results indicate somewhat increased surcharge compared to the surcharge reported in the 2020 Systems Evaluation. This difference is because the City recently abandoned a connection that moved sewer flow from Cirby Trunk A into Cirby Trunk B, resulting in additional flow in Cirby Trunk A.

It should be noted that four manholes on Cirby Creek trunk sewer A (B06-340, B06-341, B06-343, and B06-344) on an 18-inch sewer following a creek and adjacent to the Warren T. Eich Middle School are shallow (crown of pipe is less than 5 feet below the manhole rim). Under buildout conditions (with or without the proposed Douglas-Sunrise Corridor), the model predicts that the backup surcharge would extend to these manholes, exceeding the minimum freeboard criterion. The surcharge also exceeds maximum surcharge criteria and minimum freeboard within Cirby Trunk A. The shallow manholes are indicated in Figure 5 and indicated on the profile in Appendix A. While the Douglas-Sunrise Corridor does not trigger the capacity deficiency in any of the loading scenarios, the development would slightly increase the extent of surcharge in all scenarios.

Table 4: Surcharge downstream of Douglas-Sunrise Corridor

	Length of Throttle Surcharge (ft)	Maximum Surcharge Depth (ft) (4 ft max criterion)	Minimum Freeboard (ft) (5 ft minimum criterion)
Existing (plus Drought Rebound)	1,670	1.8	8.8
Buildout	4,250	6.2	1.0 at 4 shallow manholes (see text) 3.3 elsewhere
Buildout-Sensitivity	4,250	6.6	0.3 at 4 shallow manholes (see text) 4.4 elsewhere

5. CONCLUSIONS AND RECOMMENDATIONS

Mitigating the deficiency identified above would require relieving Cirby Trunk A. A potential improvement project has been developed that would alleviate the deficiency by installing a relief sewer to convey excess flows into Cirby Trunk B. A description of the project and an estimated capital cost of the project is included in Appendix B. As indicated, the project is estimated to cost approximately $12.4 million. The relatively high cost of the project is partially due to the depth of the sewer needed (up to 37 feet) along part of Caloma Way, likely requiring trenchless construction techniques. It is possible that project alternatives could be considered that would reduce the cost of the project and/or provide additional benefits (such as allowing abandonment of backyard sewers). Additional alternatives have not been evaluated in this study, but we recommended further study prior to implementation.

The proposed project is required due to flows from the sewershed upstream, which includes development both in the City of Roseville as well as the other SPWA partner agencies. As noted above, the improvement is not needed for existing flows, but will be required to meet buildout flows. The proposed Commercial Corridors specific plans would not by themselves trigger the need for the project but would contribute to the overall flows at buildout. Table 5 summarizes the Equivalent Dwelling Units (EDUs) contributing to the project deficiency.

Table 5: Equivalent Dwelling Units in Upstream Sewershed Contributing to Deficiency

	Equivalent Dwelling Units	Increase from Existing
Existing	19,000	
Existing + Douglas-Sunrise Commercial Corridor	19,600	+600
Buildout	23,020	+4,020
Buildout + Douglas-Sunrise Commercial Corridor	23,620	+4,620
Buildout-Sensitivity	24,334	+5,334
Buildout-Sensitivity + Douglas-Sunrise Commercial Corridor	24,994	+5,934

The model indicates that the project would be needed when the units upstream of the project reach approximately 20,700 EDUs, or about 1,700 EDUs more than existing. Note that, this will depend on I&I rates of future growth areas within Placer County. We recommended that the City perform additional studies to evaluate potential project alternatives and implement a project prior to development of 1,700 units of additional growth, or perform additional flow monitoring as development occurs to confirm the need for the project.

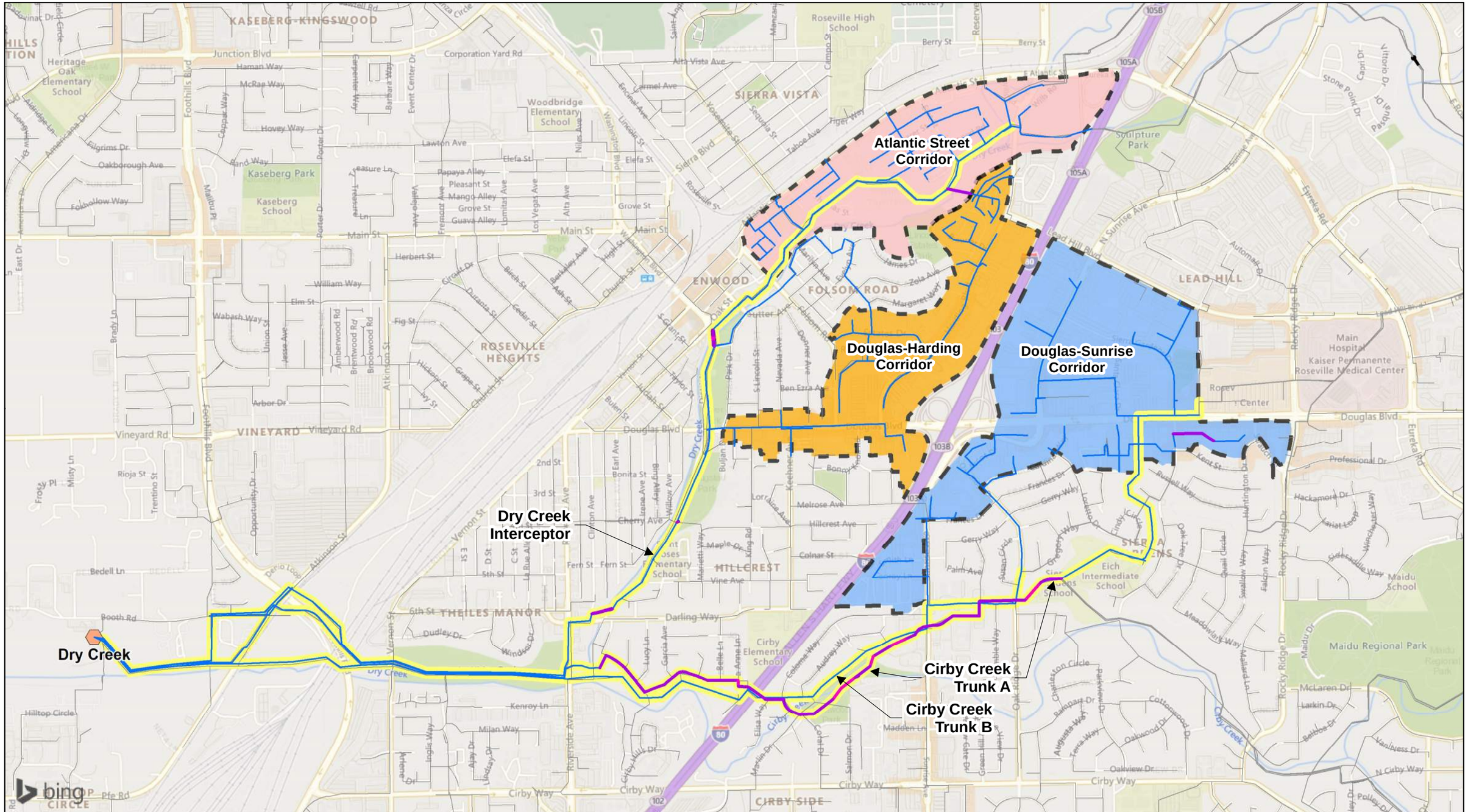


Figure 4
Model Results (Existing PWWF)

City of Roseville
Commercial Corridors Specific Plans
Sewer Evaluation

Modeled Results (sewers with Specific Plan flows only)

- Model predicted overflow
- Backwater surcharge
- Throttle surcharge
- Not surcharged
- Wastewater Treatment Plant
- Trunk sewers downstream of proposed specific plans
- Sewer not downstream of proposed specific plans
- Atlantic Coridor
- Douglas-Harding Corridor
- Douglas-Sunrise Corridor

0 375 750 1,500 2,250 3,000 Feet

N

Figure Exported: 2/11/2022 By: dmerlo Using: \\woodardcurran.net\shared\Projects\0011967.00 Roseville Com Corridors Sewer Model Support\wip\C. GIS\MXDs\4 - Rebound Model Results.mxd

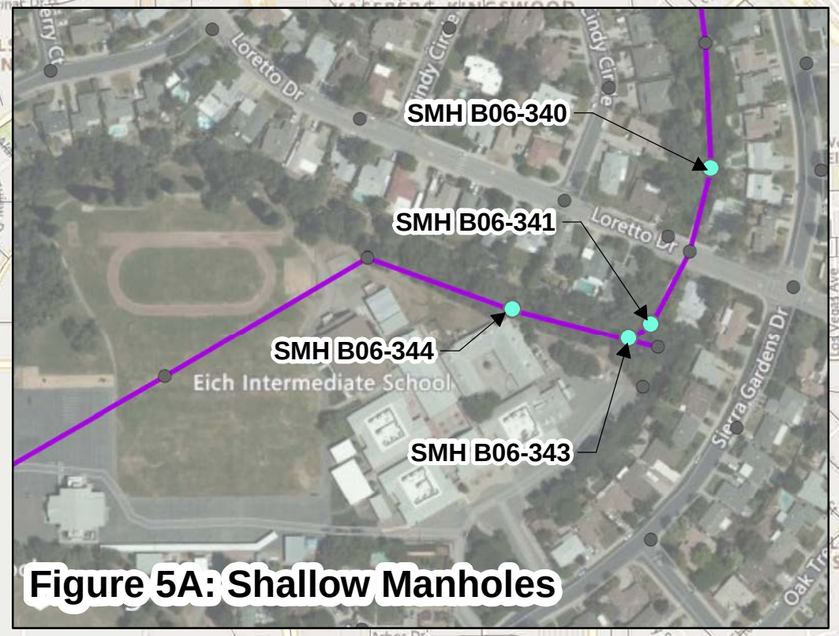


Figure 5A: Shallow Manholes

Atlantic Street Corridor

Douglas-Harding Corridor

Douglas-Sunrise Corridor

Dry Creek Interceptor

Dry Creek

See Figure 5A

Cirby Creek Trunk A

Cirby Creek Trunk B

Figure 5
Model Results (Buildout PWWF)

City of Roseville
Commercial Corridors Specific Plans
Sewer Evaluation

Modeled Results (sewers with Specific Plan flows only)

- Model predicted overflow
- Backwater surcharge
- Throttle surcharge
- Not surcharged
- Wastewater Treatment Plant
- Trunk sewers downstream of proposed specific plans
- Sewer not downstream of proposed specific plans
- Atlantic Coridor
- Douglas-Harding Corridor
- Douglas-Sunrise Corridor

0 375 750 1,500 2,250 3,000 Feet

N

Figure Exported: 2/11/2022 By: dmerlo Using: \\woodardcurran.net\shared\Projects\0011967.00 Roseville Com Corridors Sewer Model Support\wip\C. GIS\MXDs\5 - Sensitivity Model Results.mxd

APPENDIX A – HYDRAULIC PROFILES

Figure A-1: Dry Creek Interceptor Hydraulic Profile (Existing plus Specific Plans Design Storm Results)

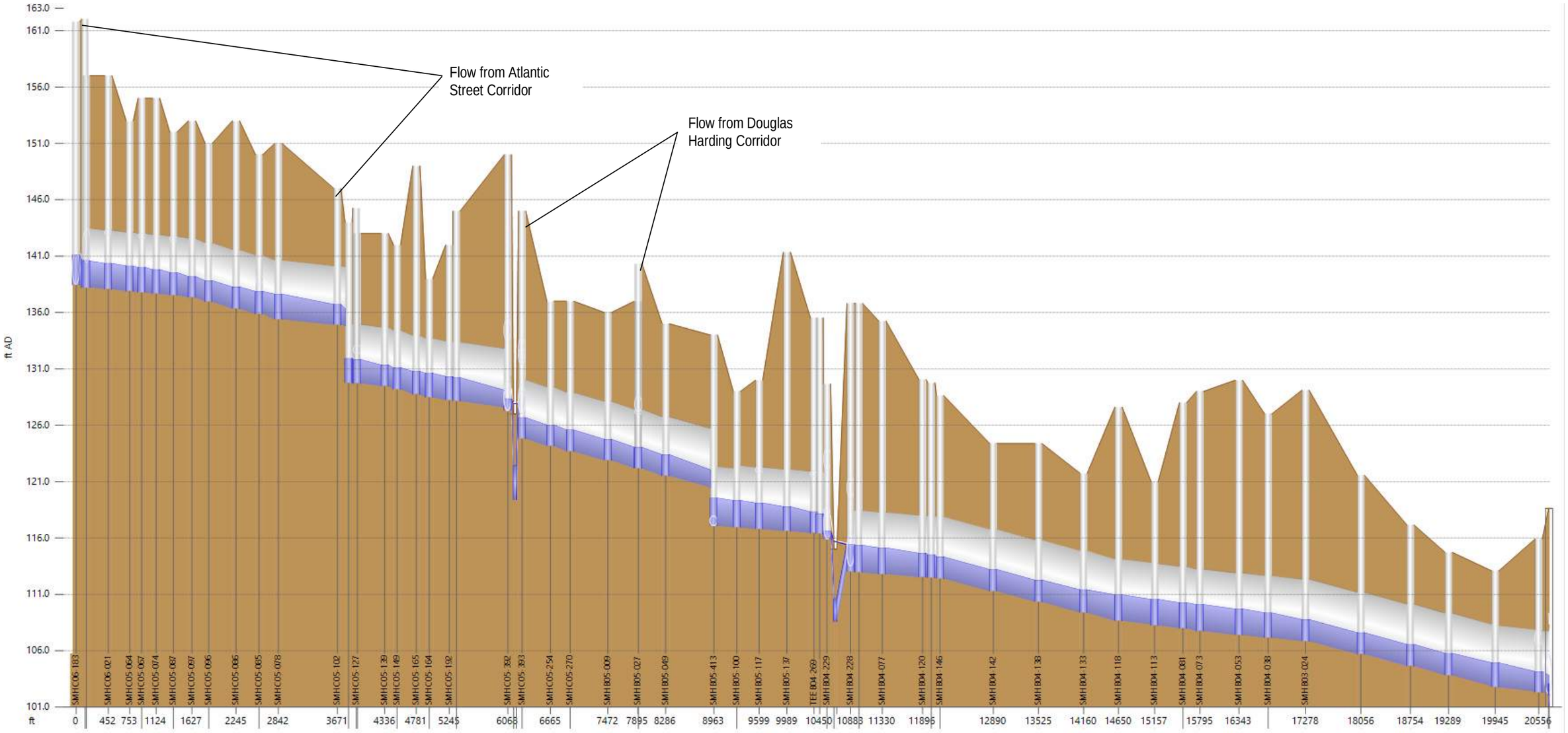


Figure A-2: Cirby Creek Trunk A Hydraulic Profile (Existing plus Specific Plans Design Storm Results)

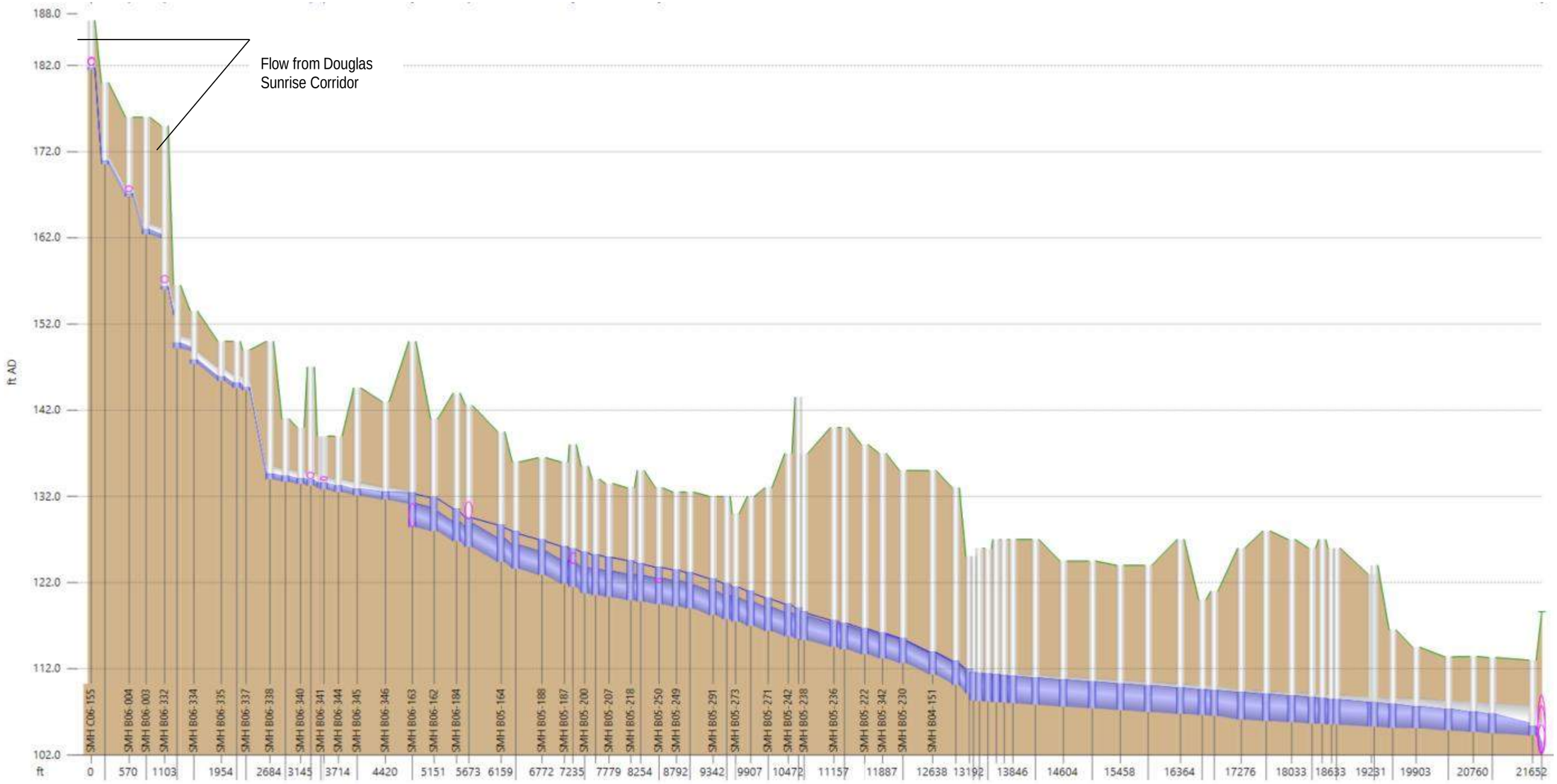


Figure A-3: Cirby Creek Trunk B Hydraulic Profile (Existing Rebound plus Specific Plans Design Storm Results)

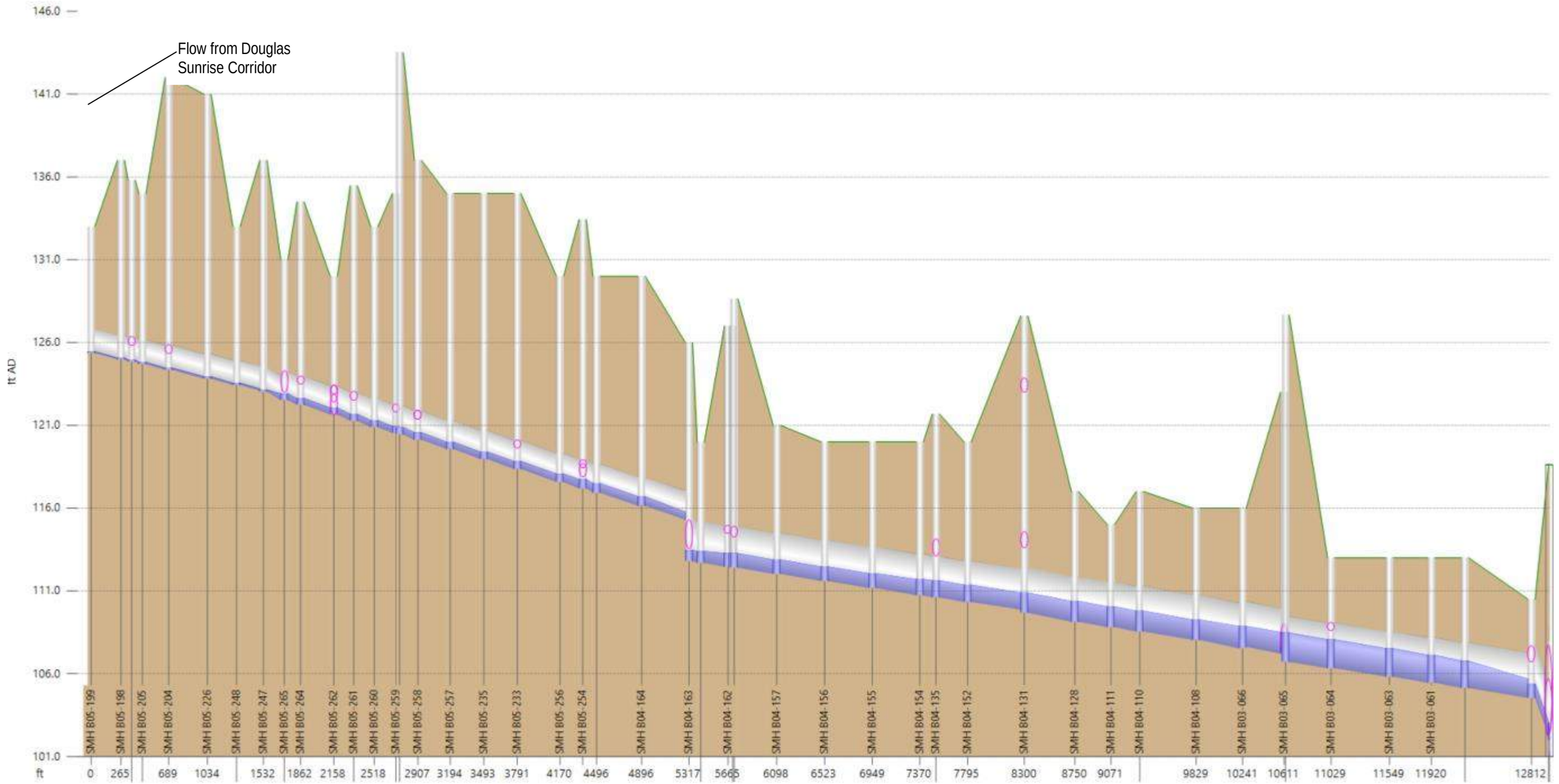


Figure A-4: Dry Creek Interceptor Hydraulic Profile (Buildout plus Specific Plans and Buildout-Sensitivity Design Storm Results)

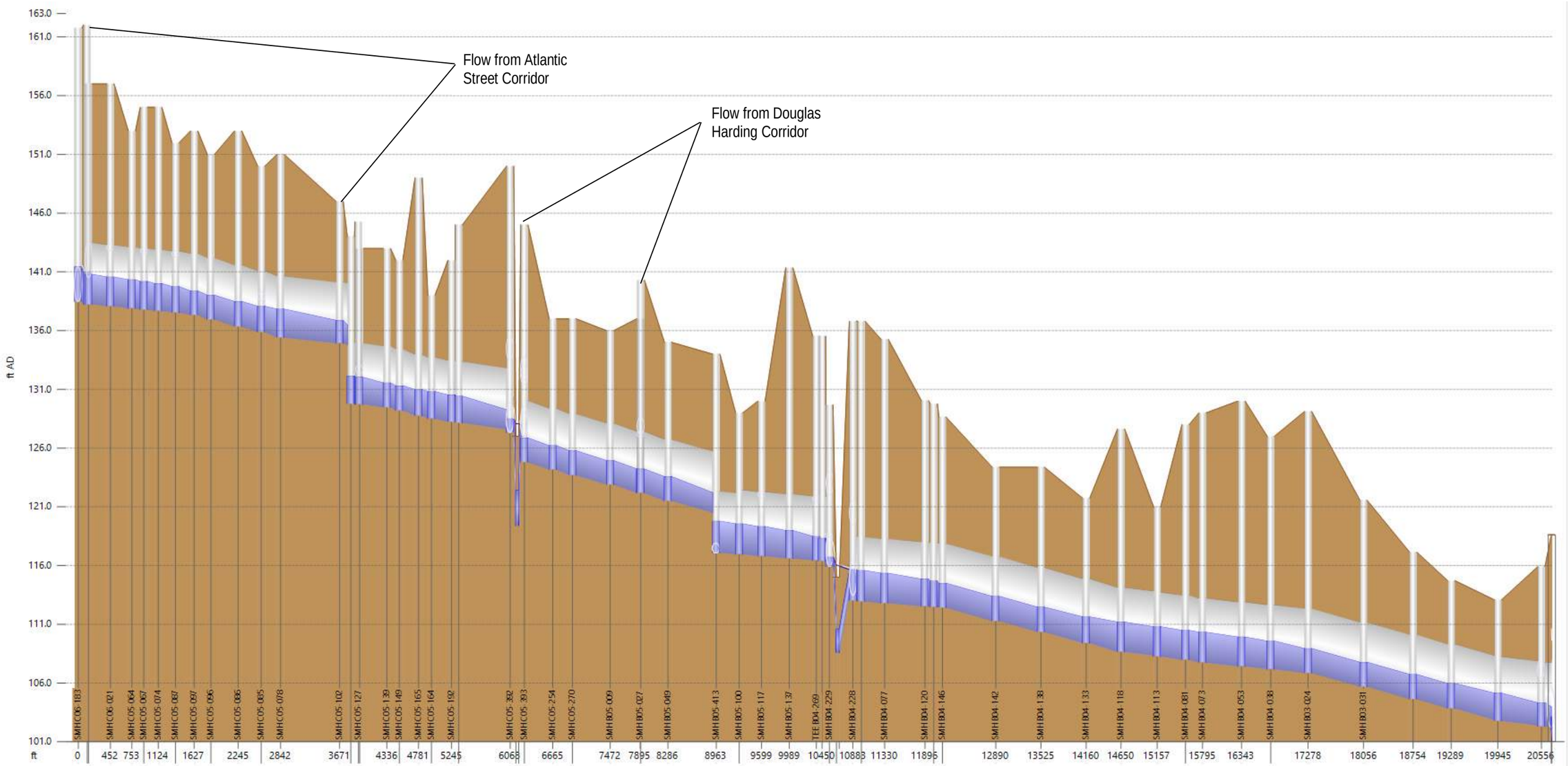


Figure A-5: Cirby Creek Trunk A Hydraulic Profile (Buildout Design Storm Results)

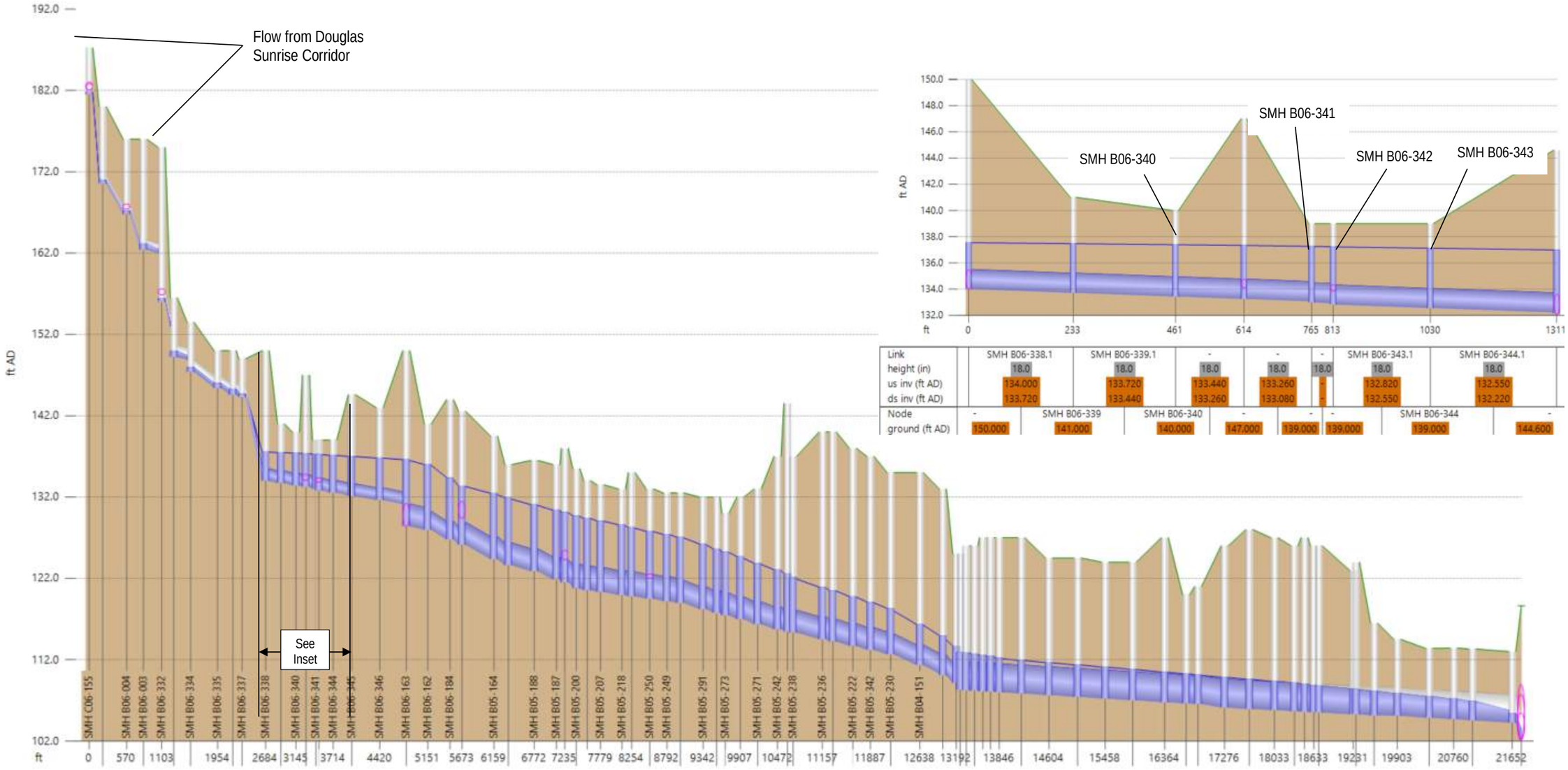
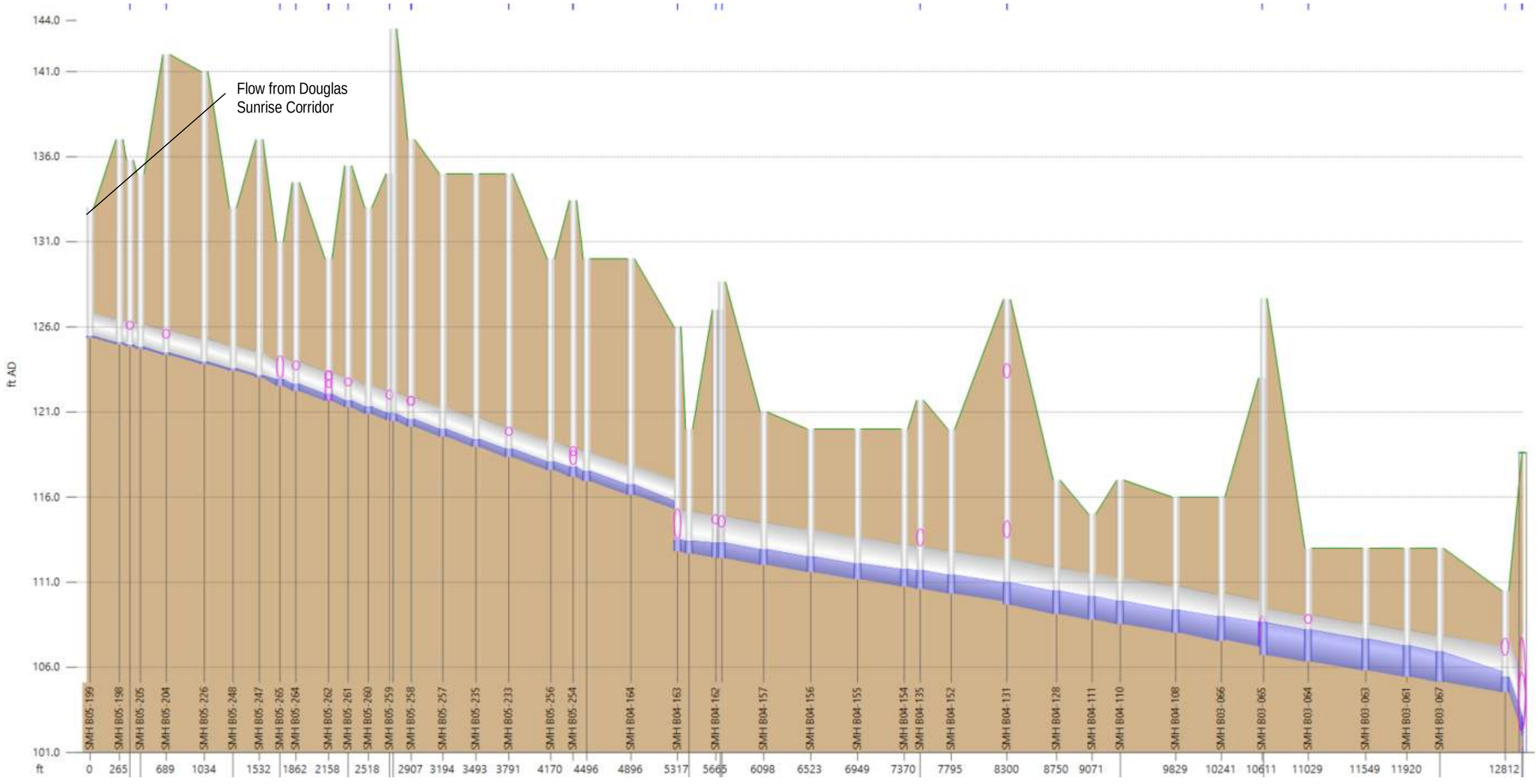


Figure A-6: Cirby Creek Trunk B Hydraulic Profile (Buildout plus Specific Plans and Buildout-Sensitivity Design Storm Results)



APPENDIX B – PROJECT DESCRIPTION AND COST ESTIMATE

Project: 1 - Cirby Creek Sewer Relief

PROJECT DESCRIPTION

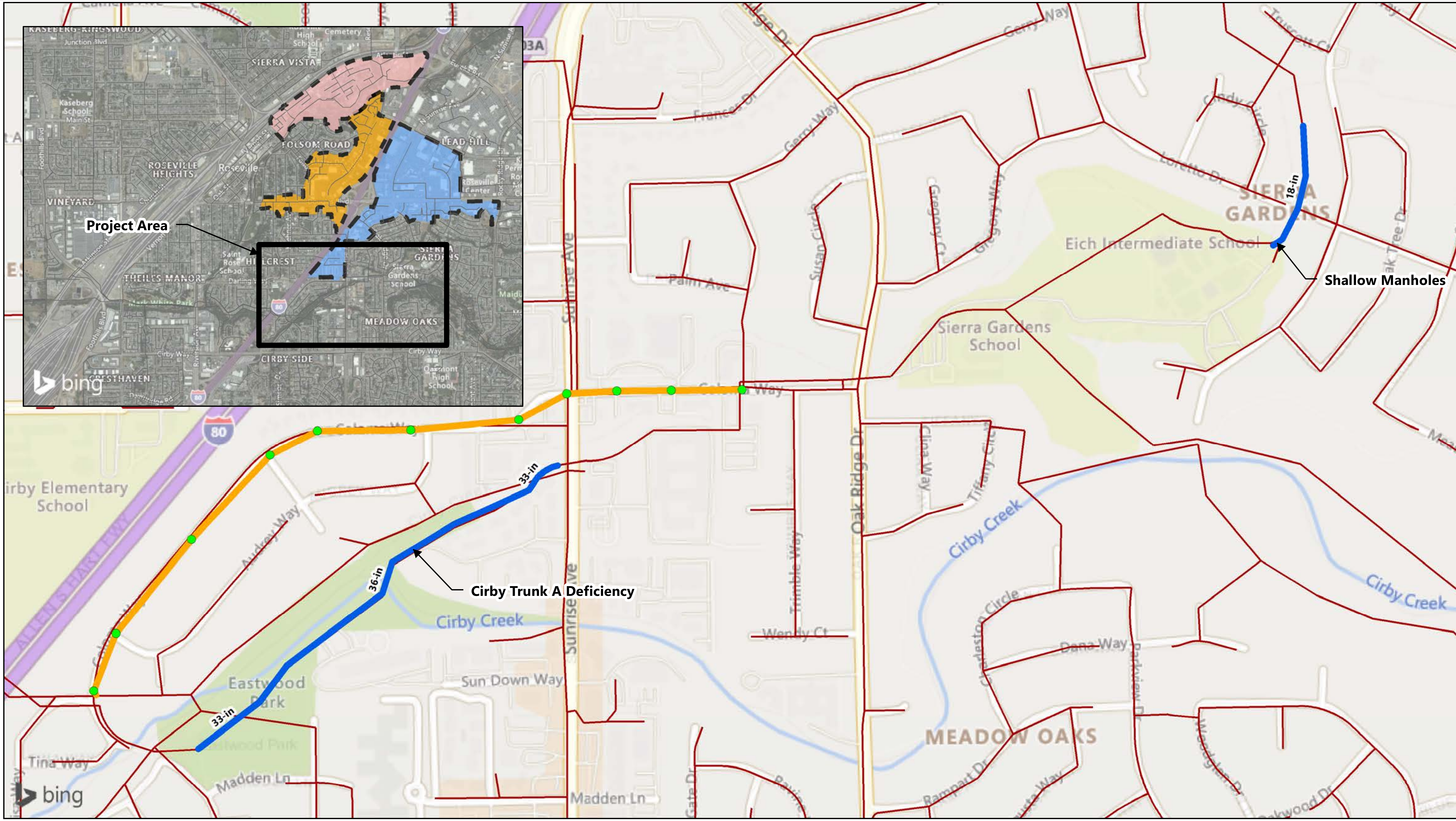
Project ID	1 - Cirby Creek Sewer Relief
Project Location	Coloma Way from east of the intersection at Sunrise Ave. to the intersection at Elisa Way
Description	Install approximately 3600 linear feet of new relief sewer to relieve capacity deficiencies associated with low lying manholes near Cirby Creek at Sierra Gardens Park and also west of Sunrise Ave and south of Coloma Way.
Estimated Capital Improvement Cost	$12,403,000
Comments	(i) Pipes are listed in order from upstream to downstream.
Assumptions	(i) Pipes deeper than 25-feet are assumed to be installed using trenchless methods. Pilot tube guided auger boring (PTGAB) was selected as the trenchless method for estimating purposes. PTGAB requires a rigid pipe to jack into place so for this reason the unit cost shown includes the estimated cost of a 24" steel casing with a 21" PVC pipe set on center and grouted in place.
	(ii) New diameter based on sizing criteria per the City of Roseville's design standards
	(iii) Cost estimates are based on CCI of 13959.14, an average of the San Francisco and 20 Cities Average for the March 2022 ENR.
Alternatives	1. Upsize existing line or parallel sewer.

PROJECT COST DETAIL

U/S MH ID	D/S MH ID	New Diameter (inches)[1]	Length (feet)	Slope (%)	Pipe Depth (feet BGL)	Pipe Capacity (mgd)	Installation Technology	Unit Cost ($/LF)	Total Cost ($)
SMH B05-164	Coloma Way-11	15	40	0.15%	10	1.61	Open-Cut	$413	$ 16,479
SMH B05-173	Coloma Way-11	15	14	7.26%	10	11.17	Open-Cut	$413	$ 5,782
Coloma Way-11	Coloma Way-10	21	319	0.12%	20	3.52	Open-Cut	$553	$ 176,309
Coloma Way-10	Coloma Way-9	21	245	0.12%	17	3.52	Open-Cut	$553	$ 135,358
Coloma Way-9	Coloma Way-8	21	225	0.12%	15	3.52	Open-Cut	$553	$ 124,457
Coloma Way-8	Coloma Way-7	21	245	0.12%	20	3.52	Open-Cut	$553	$ 135,580
Coloma Way-7	Coloma Way-6	21	488	0.12%	37	3.52	PTGAB	$1,650	$ 804,540
Coloma Way-6	Coloma Way-5	21	420	0.12%	35	3.52	PTGAB	$1,650	$ 693,000
Coloma Way-5	Coloma Way-4	21	238	0.12%	30	3.52	PTGAB	$1,650	$ 393,030
Coloma Way-4	Coloma Way-3	21	517	0.12%	27	3.52	PTGAB	$1,650	$ 853,050
Coloma Way-3	Coloma Way-2	21	543	0.12%	25	3.52	PTGAB	$1,650	$ 895,125
Coloma Way-2	Coloma Way-1	21	277	0.12%	15	3.52	Open-Cut	$553	$ 153,288
Coloma Way-1	SMH B05-262	21	20	0.12%	8	3.52	Open-Cut	$509	$ 10,386

Jacking Shaft, Assume 3	$	660,000
Receiving Shaft, Assume 4	$	680,000
Total Baseline Pipe Construction Cost	$	5,714,122
Modify Existing Manholes, Approx. 2	$	50,000
Install New Manhole, Approx. 11	$	210,000
Baseline Construction Cost:	**$**	**5,974,122**
Dewatering	$	100,000
Bypass Pumping (10% of baseline construction cost)	$	597,412
Traffic Control (10% of baseline construction cost)	$	597,412
Subtotal:	**$**	**7,268,946**
Mobilization/Demobilization (5% of subtotal)	$	363,447
Estimated Construction Cost Subtotal:	**$**	**7,632,394**
Contingencies (30% of construction subtotal)	$	2,289,718
Estimated Construction Cost:	**$**	**9,922,112**
Engineering, Administration, Legal (25% of construction cost)	$	2,480,528
Estimated Capital Improvement Cost:	**$**	**12,403,000**

(Note: Cost estimates are based on March 2022 ENR CCI of 13959.14)



Project 1 - Cirby Creek

City of Roseville
Commercial Corridors Specific Plans
Sewer Evaluation

Proposed Manholes
Deficient Sewers
Proposed Relief Sewer

0 115 230 460 690 920 Feet

N

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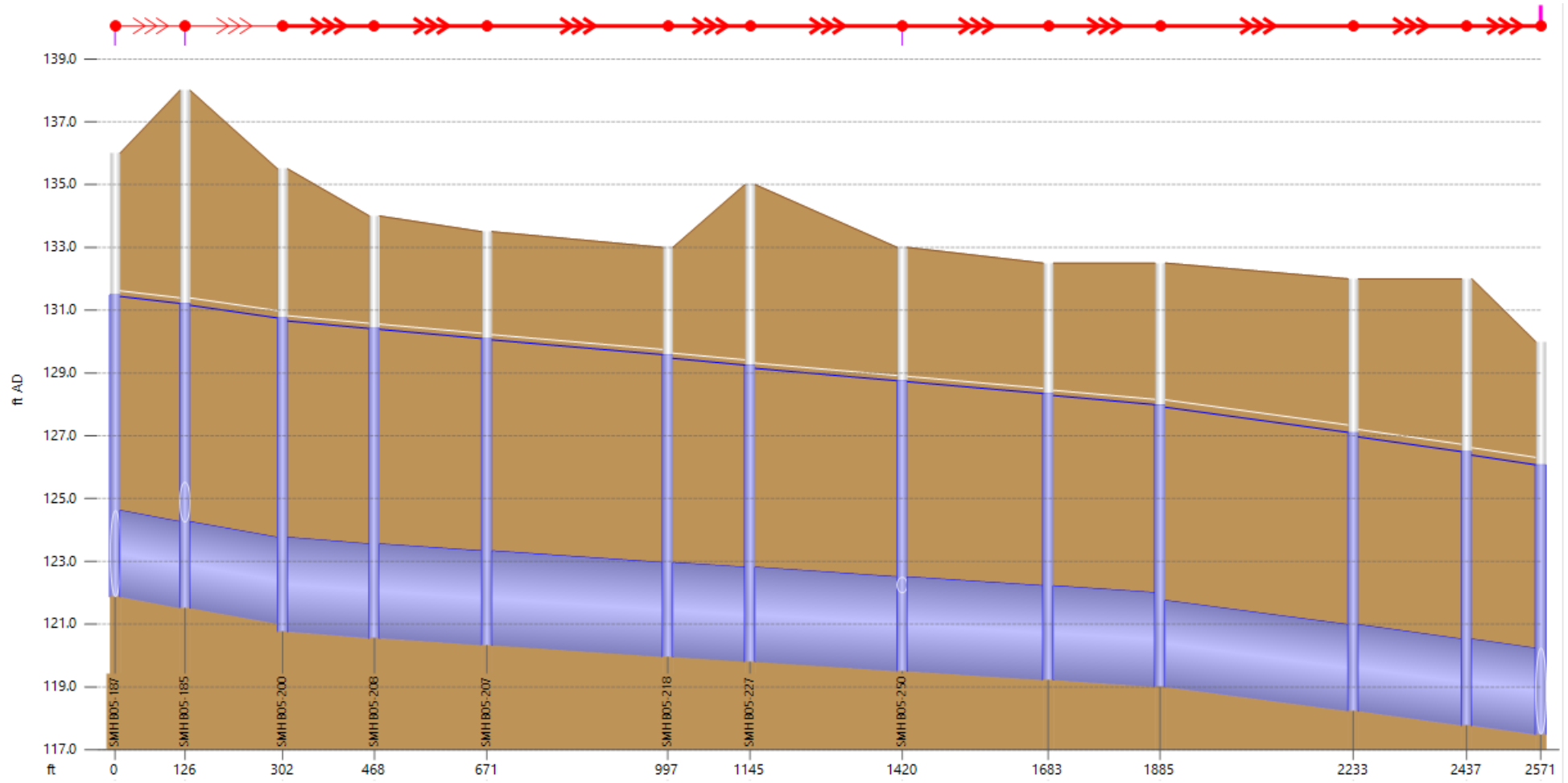
CITY OF ROSEVILLE CALIFORNIA
WOODARD &CURRAN

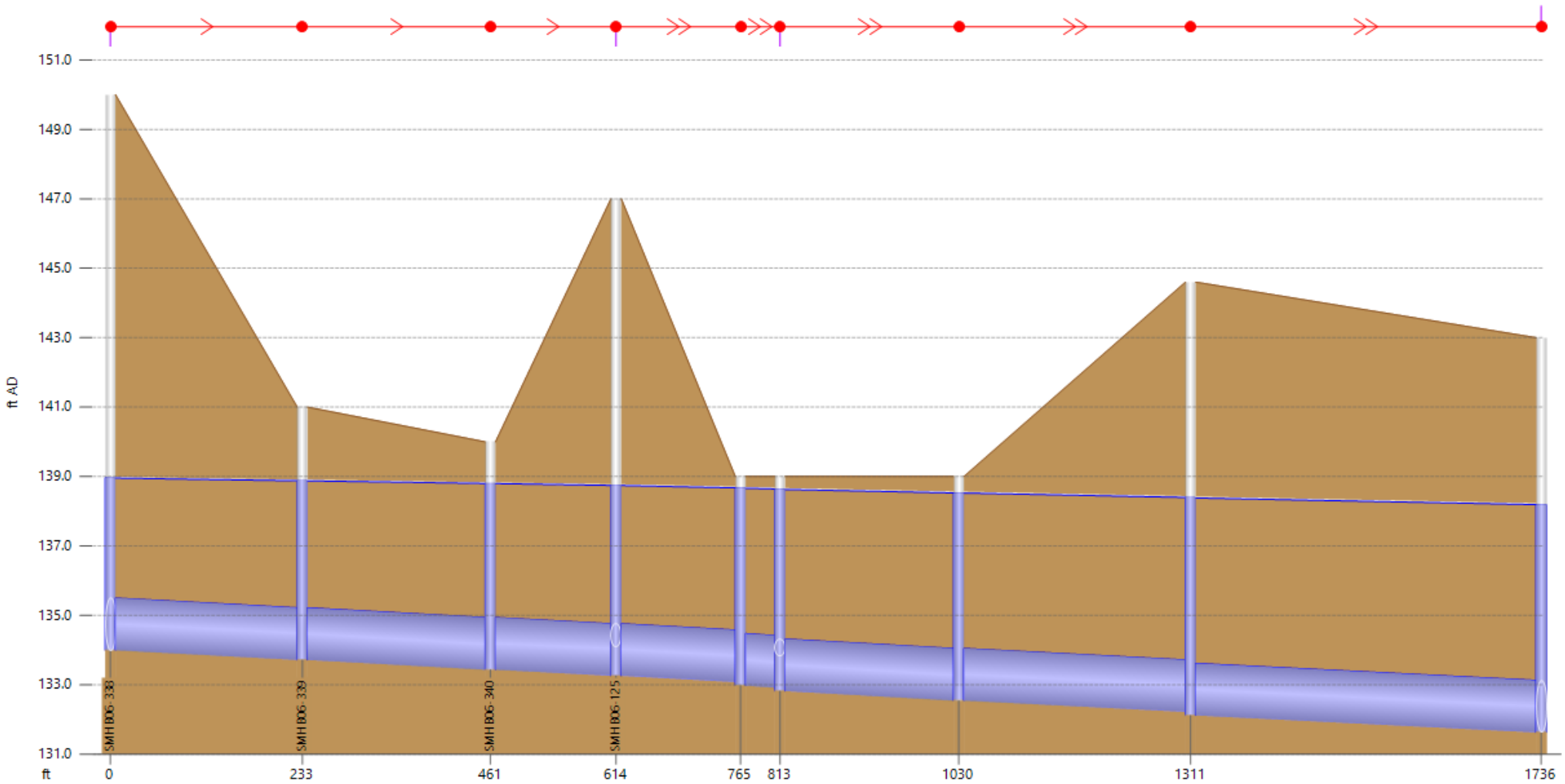
Cirby Trunk A Deficiency



Link	-	-	-	SMH B05-208.1	SMH B05-207.1	-	SMH B05-227.1	SMH B05-250.1	SMH B05-249.1	SMH B05-266.1	SMH B05-291.1	-
length (ft)	126.4	176.0	165.7	202.7	326.1	148.3	274.6	263.3	201.7	348.2	204.6	133.6
width (in)	33.0	33.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	33.0	33.0	33.0
us inv (ft AD)	121.870	121.510	120.760	120.550	120.330	119.960	119.810	119.500	119.220	119.000	118.230	117.770
ds inv (ft AD)	121.510	121.010	120.550	120.330	119.960	119.810	119.500	119.220	119.000	118.230	117.770	117.480
grad (%)	0.285	0.284	0.127	0.109	0.113	0.101	0.113	0.106	0.109	0.221	0.225	0.217
surc	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00	2.00
US flow (MGD)	14.5381	16.2992	16.2991	16.2991	16.3018	16.3013	16.3011	16.3144	16.3159	16.3156	16.3154	16.3152

Node	-	-	-	-	SMH B05-207	SMH B05-218	SMH B05-227	SMH B05-250	SMH B05-249	SMH B05-266	SMH B05-291	-	-
ground (ft AD)	-	138.000	135.500	134.000	133.500	133.000	135.000	133.000	132.500	132.500	132.000	132.000	-
level (ft AD)	-	131.212	130.742	130.415	130.094	129.574	129.244	128.750	128.339	127.986	127.096	126.485	-
flood dep (ft)	-	-6.788	-4.758	-3.585	-3.406	-3.426	-5.756	-4.250	-4.161	-4.514	-4.904	-5.515	-

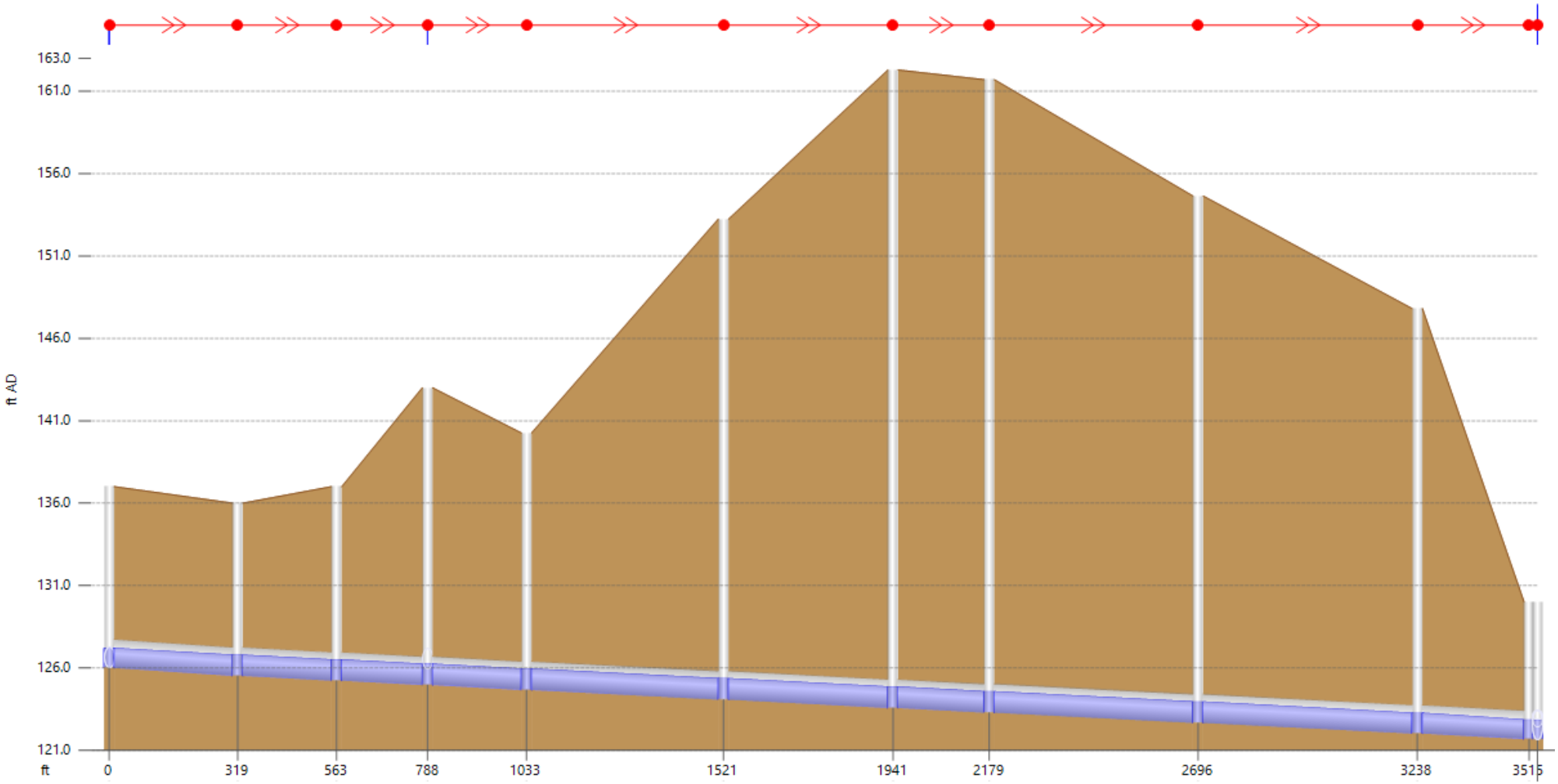
Shallow Manholes



Link	SMH B06-338.1	SMH B06-339.1	SMH B06-340.1	SMH B06-125.1	-	SMH B06-343.1	SMH B06-344.1	SMH B06-345.1
length (ft)	233.2	228.0	152.6	150.9	48.0	216.8	281.3	425.4
width (in)	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
us inv (ft AD)	134.000	133.720	133.440	133.260	-	132.820	132.550	132.120
ds inv (ft AD)	133.720	133.440	133.260	133.080	-	132.550	132.220	131.630
grad (%)	0.120	0.123	0.118	0.119	0.125	0.125	0.117	0.115
surc	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
US flow (MGD)	1.2590	1.2580	1.2562	1.4268	-	1.4420	1.4407	1.4394

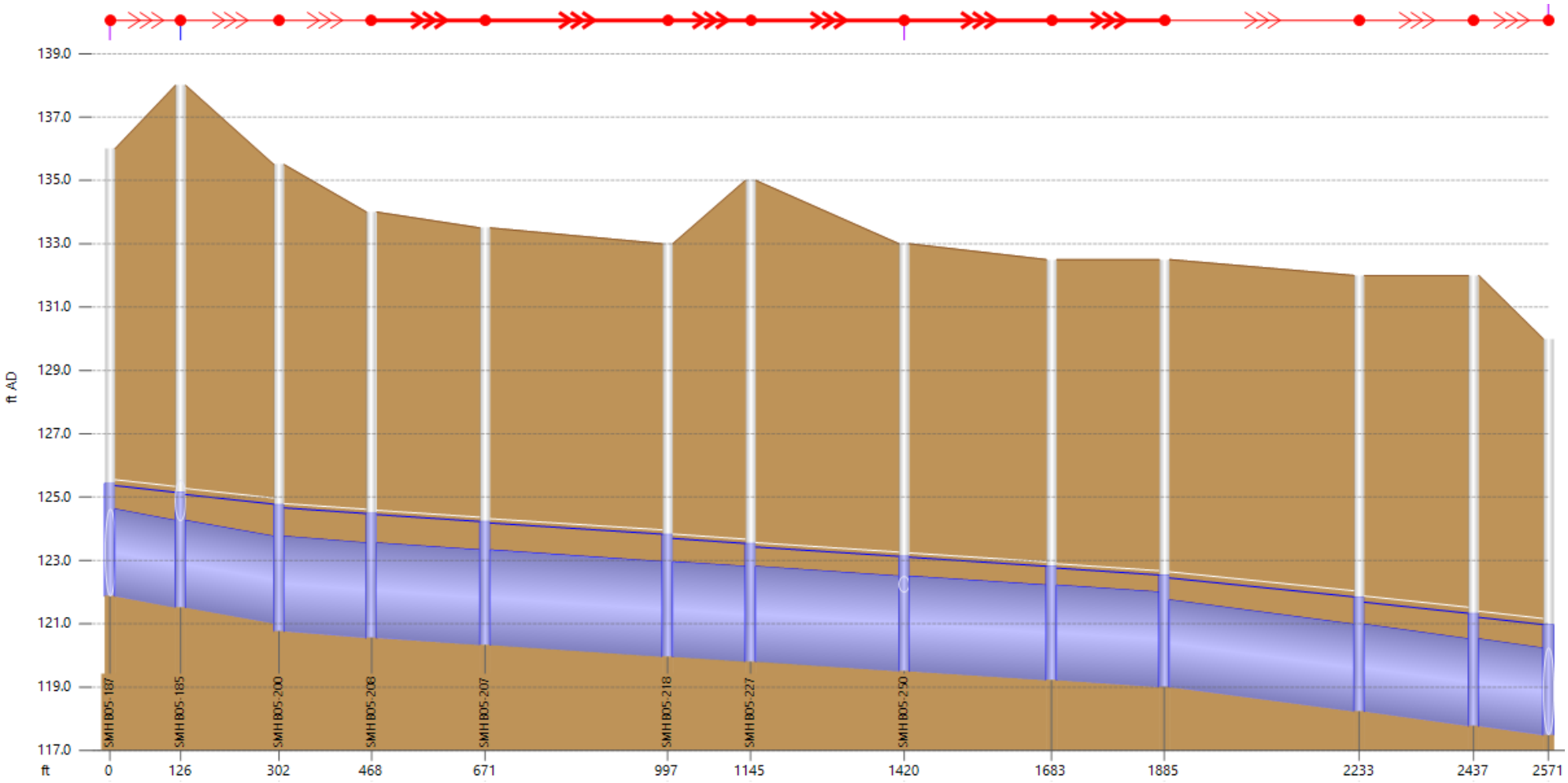
Node	-	SMH B06-339	SMH B06-340	SMH B06-125	-	SMH B06-343	SMH B06-344	SMH B06-345	SMH B06-346
ground (ft AD)	150.000	141.000	140.000	147.000	139.000	139.000	139.000	144.600	143.000
level (ft AD)	138.966	138.879	138.801	138.746	138.674	138.642	138.530	138.398	138.193
flood dep (ft)	-11.034	-2.121	-1.199	-8.254	-0.326	-0.358	-0.470	-6.202	-4.807

Project 1 - Cirby Creek (Proposed Relief Sewer)



Link		Coloma Way-11.1	-	-	-	Coloma Way-7.1	Coloma Way-6.1	-	Coloma Way-4.1	Coloma Way-3.1	Coloma Way-2.1	
length (ft)		318.6	244.6	224.9	245.0	487.6	420.0	238.2	517.0	542.5	277.0	
width (in)		21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	21.0	
us inv (ft AD)		126.000	125.520	125.230	124.960	124.660	124.080	123.570	123.290	122.670	122.020	
ds inv (ft AD)		125.520	125.230	124.960	124.660	124.080	123.570	123.290	122.670	122.020	121.680	
grad (%)		0.151	0.119	0.120	0.122	0.119	0.121	0.118	0.120	0.120	0.123	
surc		0.72	0.72	0.73	0.73	0.73	0.73	0.73	0.73	0.72	0.70	
US flow (MGD)		3.0105	3.0104	3.0102	3.1211	3.1209	3.1205	3.1202	3.1200	3.1198	3.1195	
Node	-	-	-	-	Coloma Way-7	Coloma Way-6	Coloma Way-5	Coloma Way-4	Coloma Way-3	Coloma Way-2	-	
ground (ft AD)	-	136.000	137.000	143.000	140.263	153.238	162.286	161.702	154.637	147.807	-	
level (ft AD)	-	126.777	126.490	126.231	125.936	125.351	124.849	124.562	123.938	123.255	-	
flood dep (ft)	-9.813	-9.223	-10.510	-16.769	-14.327	-27.886	-37.437	-37.140	-30.699	-24.552	-7.155	

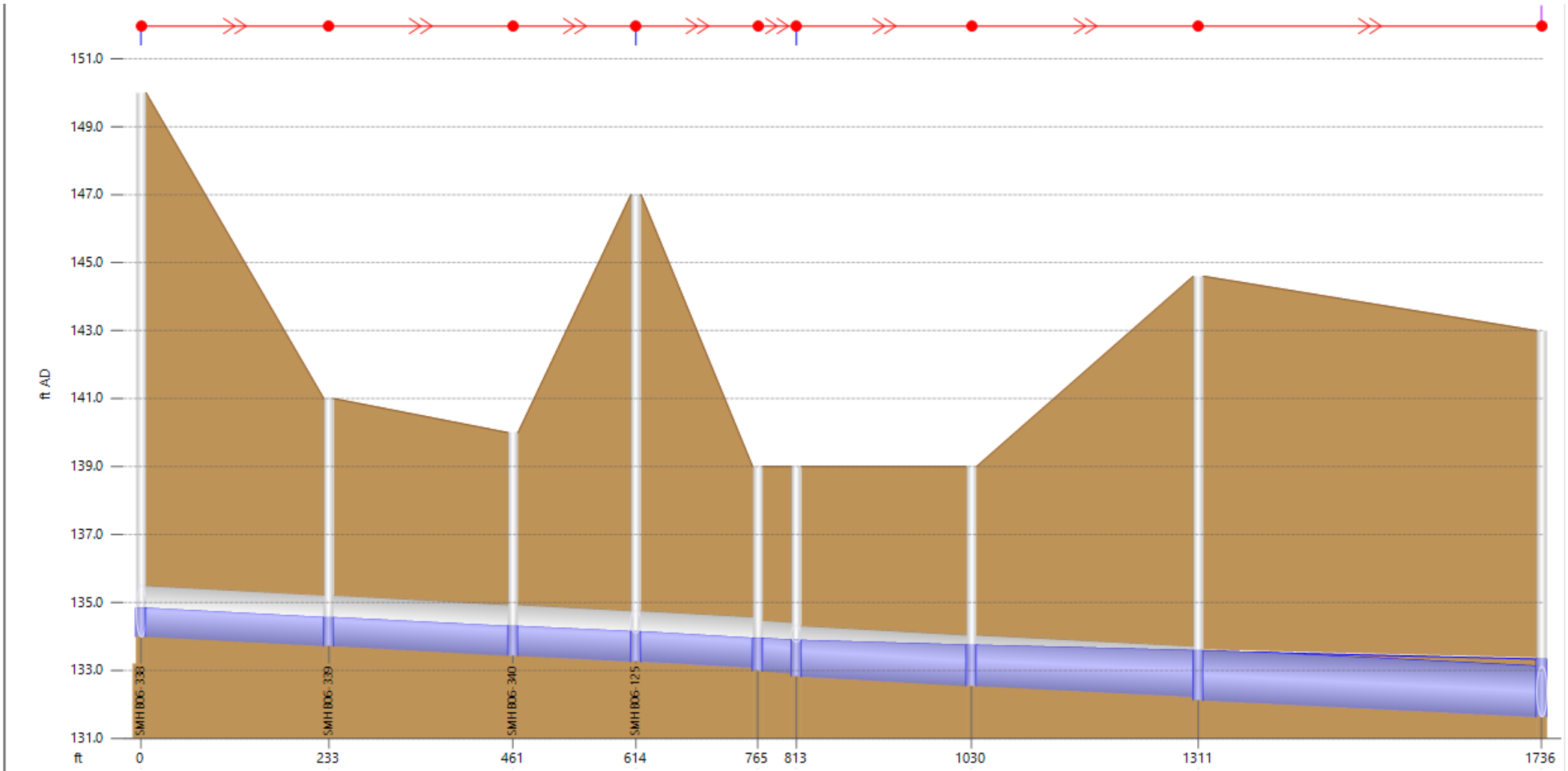
Cirby Trunk A (with proposed relief sewer)



Link	-	-	-	SMH B05-208.1	SMH B05-207.1	-	SMH B05-227.1	SMH B05-250.1	SMH B05-249.1	SMH B05-266.1	SMH B05-291.1	-
length (ft)	126.4	176.0	165.7	202.7	326.1	148.3	274.6	263.3	201.7	348.2	204.6	133.6
width (in)	33.0	33.0	36.0	36.0	36.0	36.0	36.0	36.0	36.0	33.0	33.0	33.0
us inv (ft AD)	121.870	121.510	120.760	120.550	120.330	119.960	119.810	119.500	119.220	119.000	118.230	117.770
ds inv (ft AD)	121.510	121.010	120.550	120.330	119.960	119.810	119.500	119.220	119.000	118.230	117.770	117.480
grad (%)	0.285	0.284	0.127	0.109	0.113	0.101	0.113	0.106	0.109	0.221	0.225	0.217
surc	1.00	1.00	1.00	2.00	2.00	2.00	2.00	2.00	2.00	1.00	1.00	1.00
US flow (MGD)	14.7792	14.8873	14.8530	14.8231	14.7886	14.7245	14.6874	14.6246	14.5446	14.4729	14.3969	14.3584

Node	-	-	-	-	SMH B05-207	SMH B05-218	SMH B05-227	SMH B05-250	SMH B05-249	SMH B05-266	SMH B05-291	-	-
ground (ft AD)	-	138.000	135.500	134.000	133.500	133.000	135.000	133.000	132.500	132.500	132.000	132.000	-
level (ft AD)	-	125.145	124.763	124.479	124.227	123.819	123.528	123.128	122.813	122.537	121.836	121.320	-
flood dep (ft)	-	-12.855	-10.737	-9.521	-9.273	-9.181	-11.472	-9.872	-9.686	-9.963	-10.164	-10.680	-

Shallow Manholes (with proposed relief sewer)



Link		SMH B06-338.1		SMH B06-339.1		SMH B06-340.1	SMH B06-125.1	-	SMH B06-343.1		SMH B06-344.1		SMH B06-345.1	
length (ft)		233.2		228.0		152.6	150.9	48.0	216.8		281.3		425.4	
width (in)		18.0		18.0		18.0	18.0	18.0	18.0		18.0		18.0	
us inv (ft AD)		134.000		133.720		133.440	133.260	-	132.820		132.550		132.120	
ds inv (ft AD)		133.720		133.440		133.260	133.080	-	132.550		132.220		131.630	
grad (%)		0.120		0.123		0.118	0.119	0.125	0.125		0.117		0.115	
surc		0.56		0.57		0.59	0.59	0.65	0.80		0.91		1.00	
US flow (MGD)		1.3680		1.3699		1.3707	1.5719	-	1.5924		1.5979		1.6058	
Node	-		SMH B06-339		SMH B06-340	SMH B06-125	-	SMH B06-343		SMH B06-344		SMH B06-345		SMH B06-346
ground (ft AD)	150.000		141.000		140.000	147.000	139.000	139.000		139.000		144.600		143.000
level (ft AD)	134.838		134.558		134.299	134.146	133.949	133.898		133.749		133.587		133.339
flood dep (ft)	-15.162		-6.442		-5.701	-12.854	-5.051	-5.102		-5.251		-11.013		-9.661