

Initial Study
Esplanade Corridor Safety and Accessibility Improvement Project
Capital Project # 50355



Lead Agency:

City of Chico
Public Works - Engineering
411 Main Street
Chico, CA 95928

June 22, 2020

Prepared By:

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and

ICF

Initial Study
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Esplanade Corridor Safety and Accessibility Improvement Project
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Note: Hard copies of the appendices are not attached. These documents are available for review on the City of Chico website at:

http://www.chico.ca.us/capital_project_services/EsplanadeCorridorImprovementStudy.asp

- A. Visual Impact Assessment (Tehama Environmental Solutions, Inc. 2020)
- B. Air Quality and Greenhouse Gas Analysis Memorandum (ICF 2020a)
- C. Natural Environment Study (Burleson Consulting, Inc. 2020)
- D. Historic Property Survey Report (with Archaeological Survey Report and Finding of No Adverse Effect) (ICF 2020d)
- E. Initial Site Assessment (Burleson Consulting, Inc. 2019)
- F. Community Impact Memorandum (ICF 2019a)
- G. Construction Noise Technical Memorandum (ICF 2019b)
- H. Traffic Technical Memorandum (KD Anderson & Associates, Inc. 2020)

I. PROJECT DESCRIPTION

- A. **Project Title:** Esplanade Corridor Safety and Accessibility Improvement Project
- B. **Project Location:** The proposed project is located along an approximate 1.25-mile segment of the Esplanade within the City of Chico between Memorial Way and East 11th Avenue, along Oleander Avenue between Memorial Way and East 10th Avenue, along East 10th Avenue between Esplanade and Oleander Avenue, and along Memorial Way between Esplanade and approximately 0.06 miles (335 feet) east of the Memorial Way and Oleander Avenue intersection. The project is in the “Chico, CA” USGS Quadrangle, Sections 22 and 27, of Township 22 North, Range 1 East. See **Figures 1 and 2**.
- C. **Application(s):** City of Chico Capital Improvement Project No. 50355.
- D. **Assessor’s Parcel Number (APN):** Within road right-of-way and a portion of APN 003-180-022.
- E. **Project Size:** The project area is approximately 39.6 acres and about 2.7 miles of roadway.
- F. **General Plan Designation:** Road right-of-way (ROW), adjacent to Public Facilities and Services, Medium-High Density Residential, Low Density Residential, Office Mixed Use, Neighborhood Commercial, Commercial Mixed Use, and Manufacturing and Warehousing.
- G. **City of Chico Zoning:** Road ROW, adjacent to Public/Quasi Public Facilities, Medium-High Density Residential, Low Density Residential, Office Residential, Neighborhood Commercial, Office Commercial, Community Commercial, and Light Manufacturing.
- H. **Environmental Setting:** The project is in central Chico which is relatively flat with an elevation of approximately 194 feet above sea level. The Esplanade roadway corridor is served with frontage roads separated by medians with a wider median on the east side. The eastern median is an abandoned rail right-of-way (former Sacramento Northern railroad). Signalized intersections along Esplanade do not have north-south left-turn lanes. Unsignalized intersections are served by north-south left-turn lanes which result in narrow medians. Four rows of mature trees line Esplanade.

Oleander Avenue is a local street to the east of Esplanade. The south end of Oleander Avenue connects to Memorial Avenue and the north end terminates at 10th Avenue. The intersections on Oleander Avenue are all controlled with stop signs with some oriented to stop north-south traffic and others to stop east-west traffic.

Land use within the project area is dominated by transportation infrastructure intermixed with commercial and residential development in all directions and interspersed with disturbed open parcels. Due to the presence of vehicular traffic and development, the project area is consistently exposed to noise, light, dust, emissions, and roadway maintenance activities.

- I. **Project Description:** The project includes various non-motorized “complete streets” improvements along the Esplanade corridor between Memorial Way and 11th Avenue and on Oleander Avenue from Memorial Way to 10th Avenue.

The objective of the project is to enhance mobility, connectivity, safety, and accessibility for roadway users of all ages and abilities, including automobiles, trucks, buses, and other large vehicles, bicyclists, and pedestrians, on the Esplanade from Memorial Way to 11th Avenue in Chico. The City's primary goal is to incorporate "complete streets" features and provide safer connectivity for all users between the downtown and destinations along the corridor.

The City of Chico, in cooperation with the California Department of Transportation (Caltrans), proposes to create a separated and paved Class I multi-use bicycle/pedestrian path along the Esplanade, connecting downtown; California State University, Chico; Chico Junior and Senior High Schools; a regional hospital; and neighborhoods adjacent to the existing Airport Class I multi-use path at 11th Avenue. The parallel street to the east of the Esplanade, Oleander Avenue, would also receive signage, sidewalk, signal, and stop control improvements between 10th Avenue and Memorial Way. A roundabout would be installed at the intersection of Oleander Avenue and Memorial Way adjacent to Chico Junior High School. Two traffic signals are proposed to be installed at the intersections of Oleander Avenue/1st Avenue and West Sacramento Avenue/Esplanade.

Existing traffic signals would be outfitted with pedestrian signal crossing equipment (now absent), updated detection equipment, an associated traffic signal timing plan to accommodate the added pedestrian phases, and pedestrian refuge islands where applicable. Appropriate Americans with Disabilities Act (ADA) ramps and sidewalks would be added.

The project is needed due to multi-modal operational deficiencies and lack of sufficient facilities for pedestrian and bicycle travel modes on the Esplanade, and the parallel roadway, Oleander Avenue. Currently, no facilities, signage, or pavement markings are provided for bicycle riders on the complex Esplanade boulevard or frontage roads. Car/bicycle collision rates are extremely high. Pedestrians have no pedestrian signal crossings indicators, compounded by a signal system which does not provide the minimum crossing time needed. Curb ramps are installed at marked crosswalk locations with sidewalks, but the ramp designs do not meet current ADA design requirements. There are substantial gaps in the sidewalk on the east side frontage road of the Esplanade between 8th and 11th Avenues, and in various locations on Oleander Avenue, as well as East 10th Avenue.

The proposed non-motorized "complete streets" improvements along the Esplanade corridor and on Oleander Avenue are listed in more detail in the sections below and are shown on **Figure 3**.

Pedestrian Improvements

- Install new pedestrian countdown crossing signal heads and pedestrian push button activation at all existing traffic signals on the Esplanade with sufficient crossing timing that meets Federal guidelines.
- Add vehicle detection as necessary replacing timed signalization with an on-demand detection system.
- Provide adequate pedestrian crossing refuge islands at unsignalized intersections on the Esplanade.
- Consistently mark pedestrian crosswalks at all crossing locations.
- Prepare enhanced signal timing plan to respond to vehicles, bikes and pedestrian needs.

- Maintain signal progression on the Esplanade during off-peak hours

ADA Improvements

- Improve connection to the 11th Avenue Airport Class I multi-use path with adequate walkway and ramps, on the southwest, southeast and northeast corner of the intersection.
- Install ADA accessible curb ramps at all crosswalk locations.
- Install missing sidewalks at identified gap closure locations (See **Figure 3**).

Bicycle Facility Improvements

- Install paved Class I multi-use bicycle/pedestrian path on an abandoned rail right-of-way (east side) with appropriate safety crossing measures.
- Discourage wrong-way riders on the west side frontage road by adding a shared space pavement design to slow vehicle and bicycle traffic through conflict zones.
- Add marked bicycle route on Oleander Avenue which favors minimal stopping except at 1st Avenue and 5th Avenue.
- Install traffic signals at West Sacramento Avenue/Esplanade and Oleander Avenue/1st Avenue with bike crossing emphasis.

Junior High School Area Improvements

- Change intersection design at Memorial Way/Oleander Avenue (near Chico Junior High School) to a single-lane roundabout.

General Vehicle Guidance Improvements

- Provide clear and consistent pavement markings at frontage road intersection areas.
- Create the shared space area at crossings of the east-west streets and frontage roads.
- Install traffic signal indications guiding cross traffic to stop “outside” of the frontage road where appropriate.

11th Avenue Connection Improvements

- Enhance connections between the 11th Avenue and the Airport Class I Multi-use path.

Other Amenities

- Install pedestrian-scale lighting in the form of full cutoff, energy-efficient LED fixtures restricted to illuminate pathways in order to minimize light “spill over” to adjacent properties.
- Install replacement landscaping within the project footprint.

Typical Signalized Intersection

- Provide a Class I multi-use path in the eastern median.
- Provide textured “mixing zone” at the intersection of southbound frontage and east-west cross streets.
- Eliminate northbound right-turn pocket, where applicable.

- Provide pedestrian refuge islands on medians.
- Update signal timing with adequate crossing time in the east-west directions.
- Refresh striping and add crosswalks, where applicable.

Typical Unsignalized Intersection

- Provide a Class I multi-use path in the eastern median.
- Provide textured “mixing zone” at the intersection of southbound frontage and east-west cross streets.
- Provide pedestrian refuge islands on medians.
- Refresh striping and add crosswalks, where applicable.

ROW Acquisition and Temporary Construction Easements

To construct the roundabout at the intersection of Memorial Way and Oleander Avenue, both temporary (1,200 square feet) and permanent (1,400 square feet) acquisition is needed from undeveloped land on a parcel containing several Butte County department offices (APN 003-180-022). Temporary and permanent acquisitions would be from a small portion of undeveloped land at the northwest corner of the intersection, away from structures, trees, and other parcel features.

Construction and Schedule

The project would be constructed in one phase. It is currently anticipated that the proposed improvements would be constructed over an approximate 9-month period starting in early Spring of 2022.

Typical construction equipment would include pneumatic jack hammers, excavators, grading equipment, paving equipment, concrete equipment, striping equipment, generators, or other similar devices. The maximum grading and excavation depth needed for most of the project is approximately 3 inches. However, for the roundabout excavation depths of 3 to 4 feet may be necessary. All construction noise would be temporary and subject to the noise limits in the Chico Municipal Code, Chapter 9.38 Noise Ordinance, which regulates noise generation within the City of Chico. Construction activity noise is typically restricted to the hours of 7:00 a.m. to 9:00 p.m. on weekdays (10:00 a.m. to 6:00 p.m. on weekends and holidays), unless otherwise approved by the City Engineer. No night or weekend work is anticipated for the proposed project.

Traffic Management

A traffic management plan would be developed and implemented during construction in accordance with Caltrans’ 2018 Standard Specifications and in compliance with the California Manual on Uniform Traffic Control Devices, Part 6, “Temporary Traffic Control.” The Esplanade and Oleander Avenue would remain open during construction; however, the project would temporarily impact traffic patterns with on-site traffic controls (e.g., flagging, pilot car) and episodic, temporary single-lane traffic closures. The proposed project would not permanently close roadways or block access to private or commercial properties.

J. Surrounding Land Uses: The project site is surrounded by the following land uses:

- Medium and low density residential

- Airport Bike Path at the north end of the study area
- Enloe Hospital between 5th and 6th Avenues
- State Route 99 to the east via 1st Avenue
- Chico High School between Sacramento and Lincoln Avenues
- Museum of Northern California Art at East Washington Avenue
- Bidwell Mansion Historic Park at Memorial Way
- Gateway Science Museum at Memorial Way
- Chico Junior High School at Oleander Avenue/Memorial Way
- Chico State University at the southwest end of the corridor
- Bidwell Park at the southeast end of the corridor
- Chico downtown at the south end of the corridor

K. Public Agency Approvals:

- 1) Caltrans: Approval of Categorical Exclusion under NEPA.
- 2) Central Valley Regional Water Quality Control Board: General construction activity storm water discharge permit.

- L. Native American Tribal Consultation:** Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun? ☐ Yes ☒ No

M. Project Sponsor/Lead Agency:

City of Chico
PO Box 3420
Chico, CA 95927

Property Owners:

City of Chico
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Chico, CA 95927

N. Prepared By:

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II. ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project and could involve at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| ☐ Aesthetics | ☐ Greenhouse Gas Emissions | ☐ Open Space/Recreation |
| ☐ Agriculture and Forest | ☐ Hazards/Hazardous Materials | ☐ Population/Housing |
| ☐ Air Quality | ☐ Hydrology/Water Quality | ☐ Public Services |
| ☐ Biological Resources | ☐ Land Use and Planning | ☐ Transportation/Circulation |
| ☐ Cultural Resources | ☐ Mineral Resources | ☐ Tribal Cultural Resources |
| ☐ Geology/Soils | ☐ Noise | ☐ Utilities |

III. COMMUNITY DEVELOPMENT DIRECTOR DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a potentially significant impact or have a potentially significant impact unless mitigated, but at least one effect has been adequately analyzed in an earlier document pursuant to applicable legal standards, and has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, there WILL NOT be a significant effect in this case because all potentially significant effects have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION including revisions or mitigation measures that are imposed upon the proposed project. No further study is required.


Signature

6/22/2020
Date

Tracy R. Bettencourt - MPA, AICP, Regulatory and Grants Manager

Printed Name (for Brendan Vieg, Deputy Community Development Director)

IV. EVALUATION OF ENVIRONMENTAL IMPACTS

- Responses to the following questions and related discussion indicate if the proposed project will have or potentially have a significant adverse impact on the environment.
- A brief explanation is required for all answers except “No Impact” answers that are adequately supported by referenced information sources. A “No Impact” answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A “No Impact” answer should be explained where it is based on project-specific factors or general standards.
- All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
- Once it has been determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. “Potentially Significant Impact” is appropriate if there is substantial evidence that an effect may be significant. If there is at least one “Potentially Significant Impact” entry when the determination is made, an EIR is required.
- Negative Declaration: “Less than Significant with Mitigation Incorporated” applies when the incorporation of mitigation measures has reduced an effect from “Potentially Significant Impact” to a “Less than Significant Impact.” The initial study will describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section 4, “Earlier Analysis,” may be cross-referenced).
- Earlier analyses may be used where, pursuant to tiering, a program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration [Section 15063(c)(3)(D)].
- Initial studies may incorporate references to information sources for potential impacts (e.g., the general plan or zoning ordinances, etc.). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated. A source list attached, and other sources used or individuals contacted, are cited in the discussion.
- The explanation of each issue should identify:
 - a. The significance criteria or threshold, if any, used to evaluate each question; and
 - b. The mitigation measure identified, if any, to reduce the impact to less than significant.

Figure 1. Project Vicinity

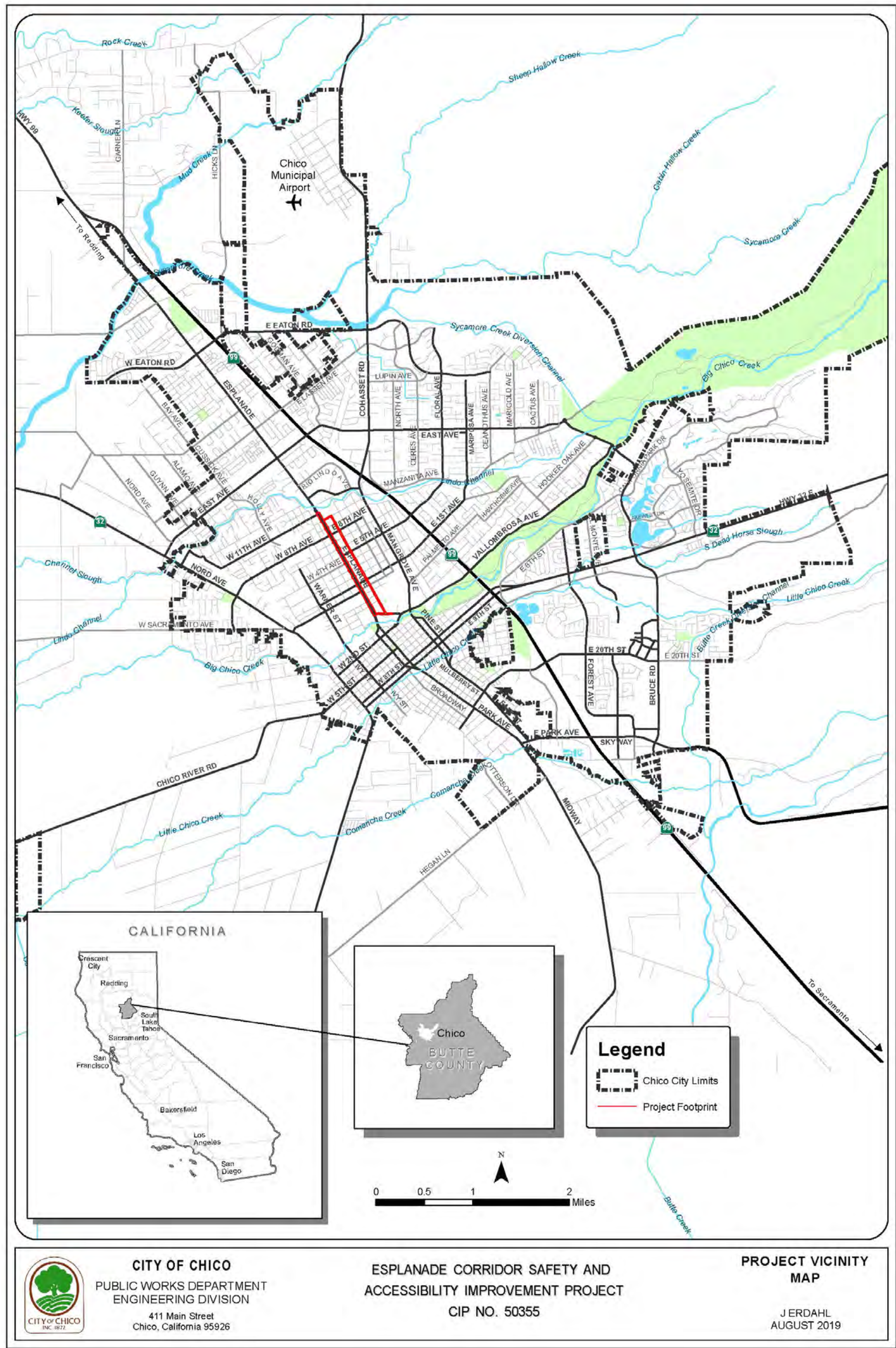


Figure 2. Project Location

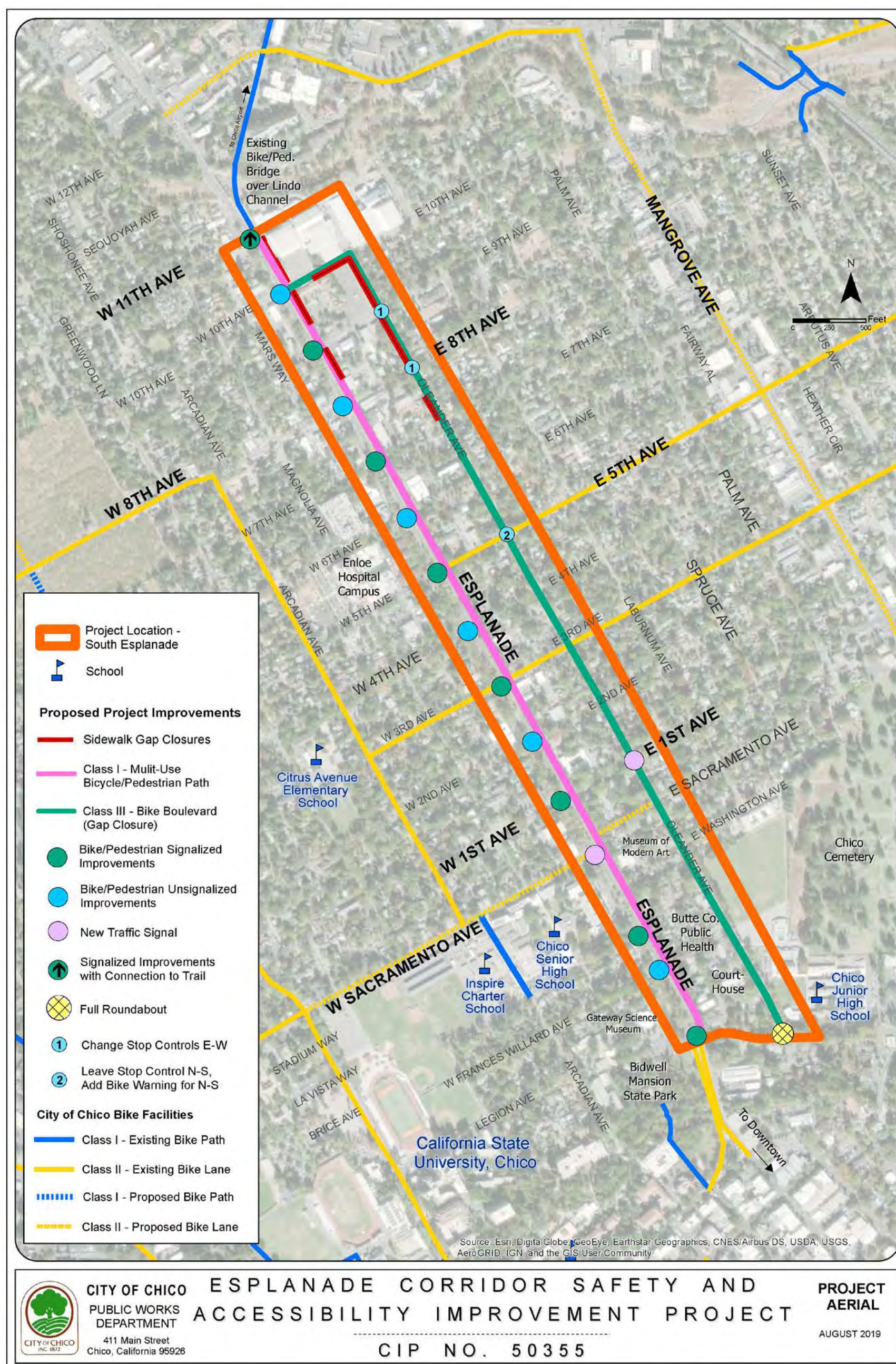


Figure 3. Project Footprint, Sheet 1

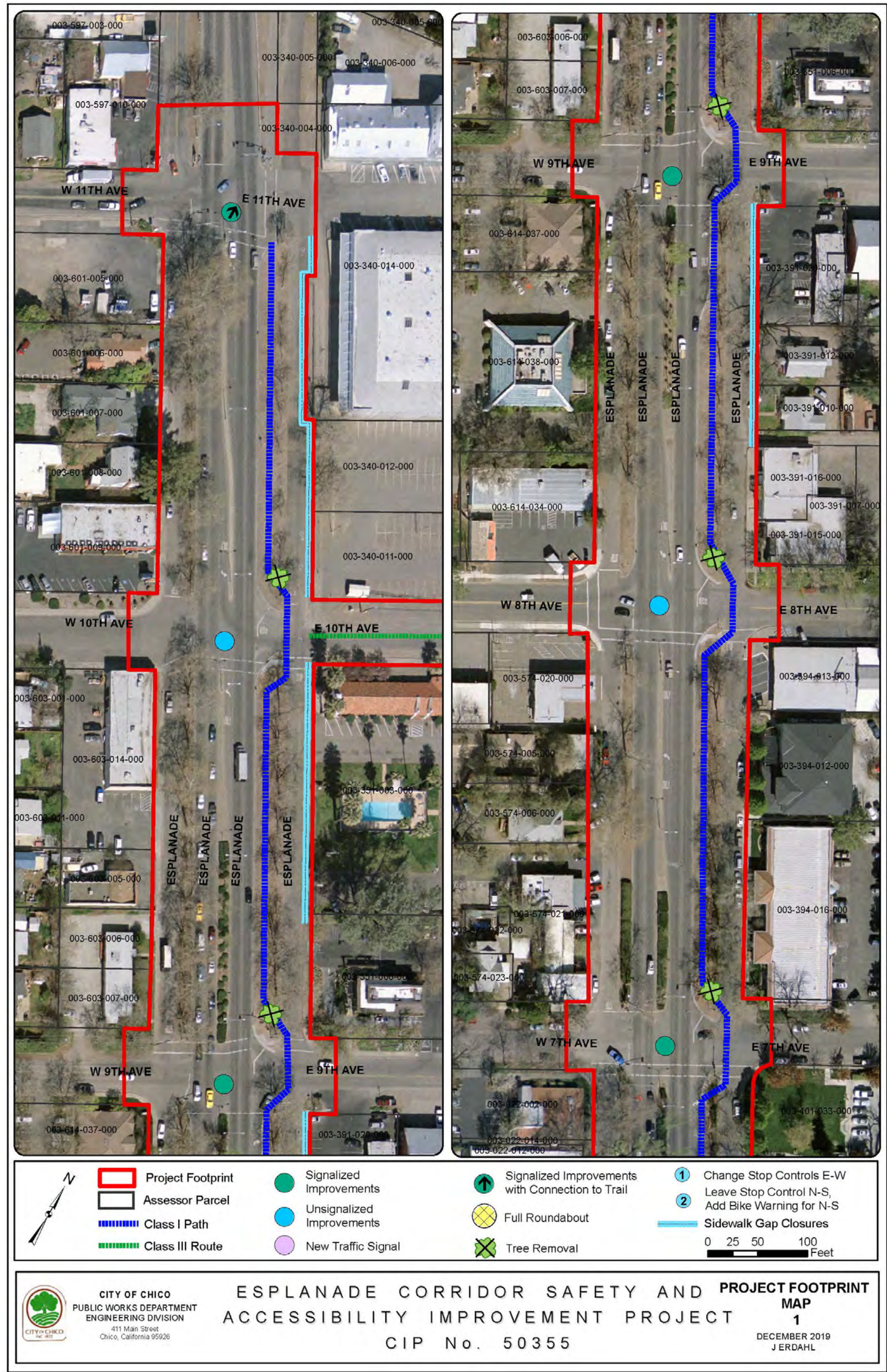


Figure 3. Project Footprint, Sheet 2

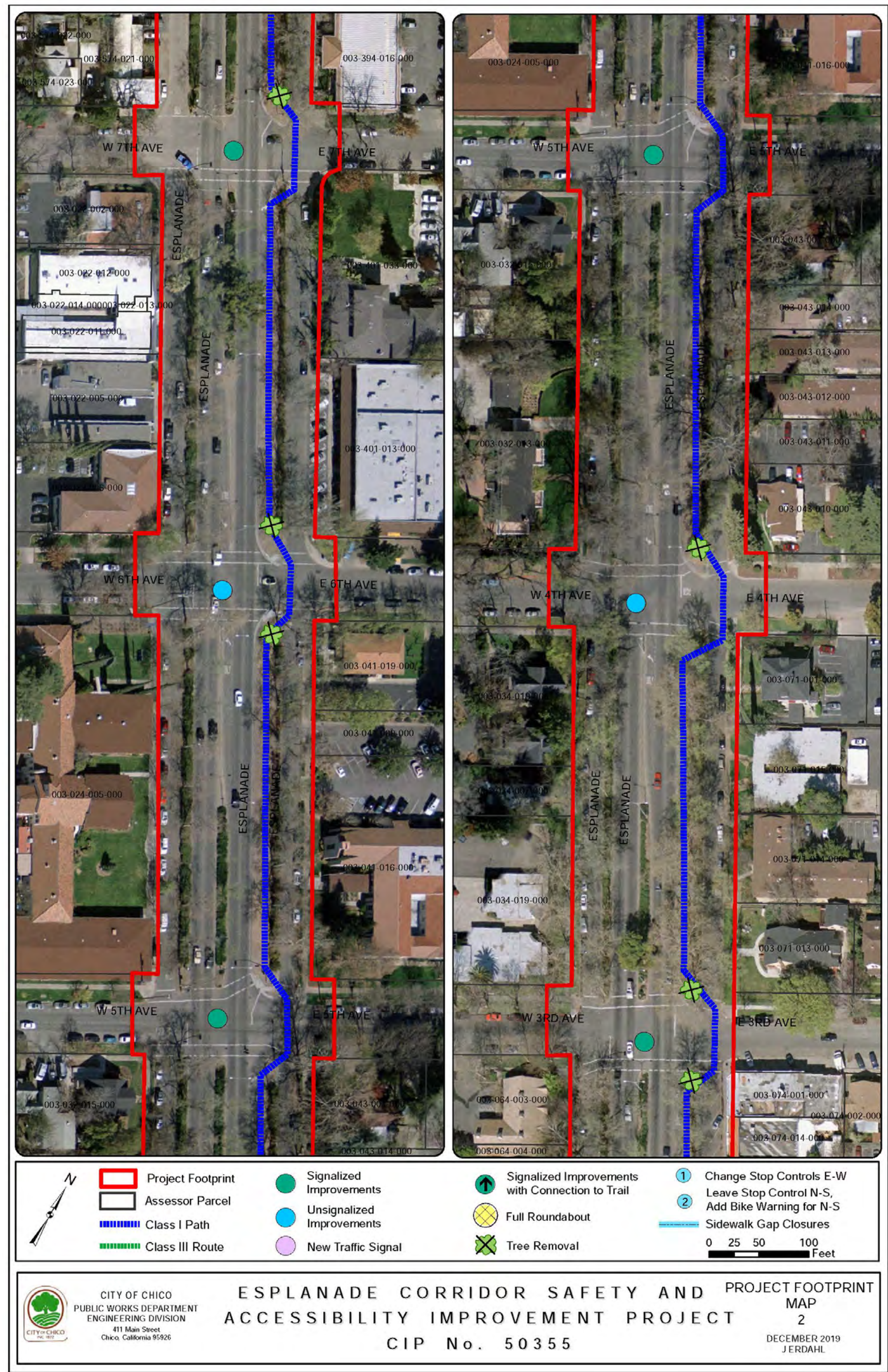


Figure 3. Project Footprint, Sheet 3

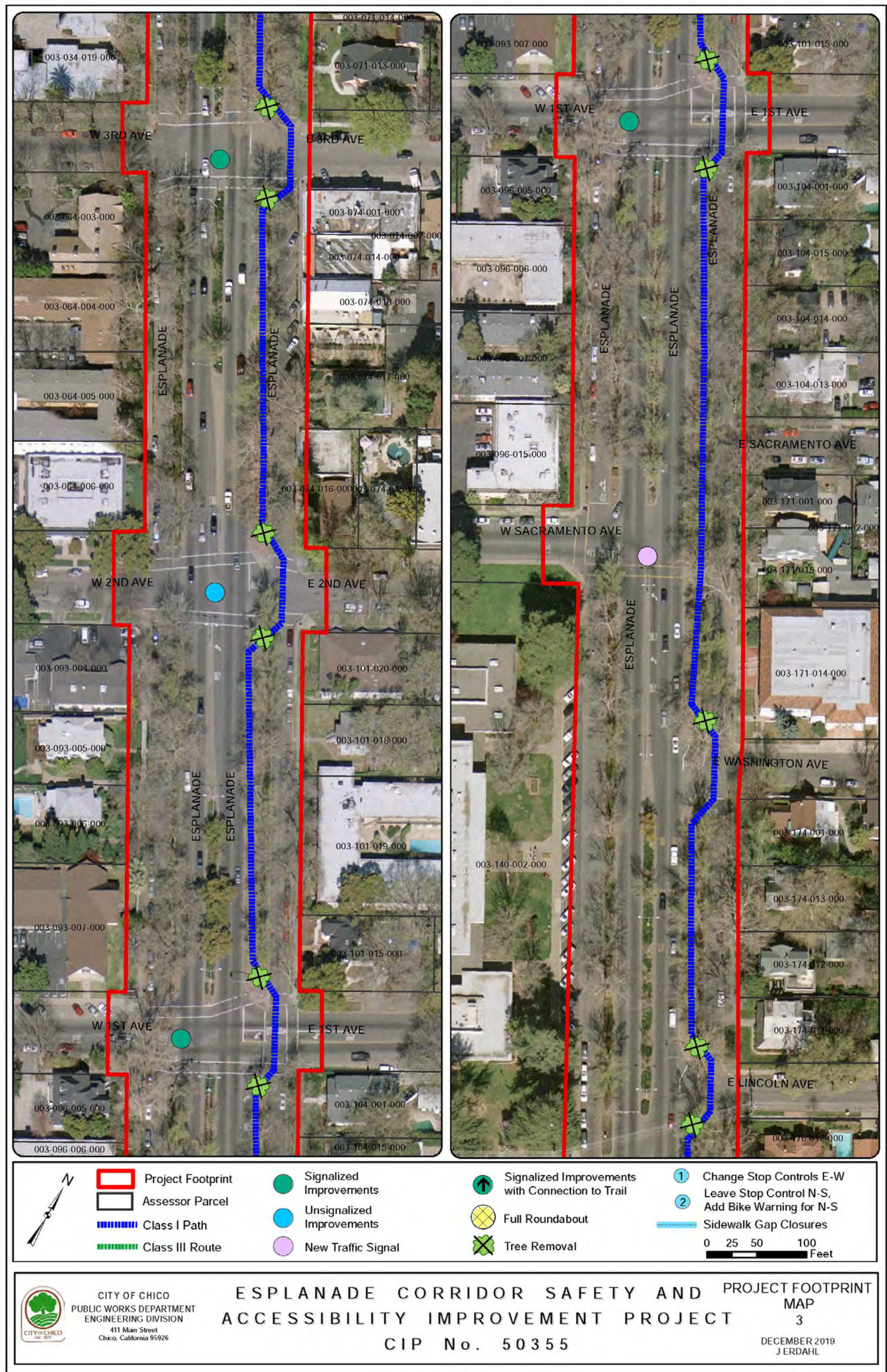


Figure 3. Project Footprint, Sheet 4

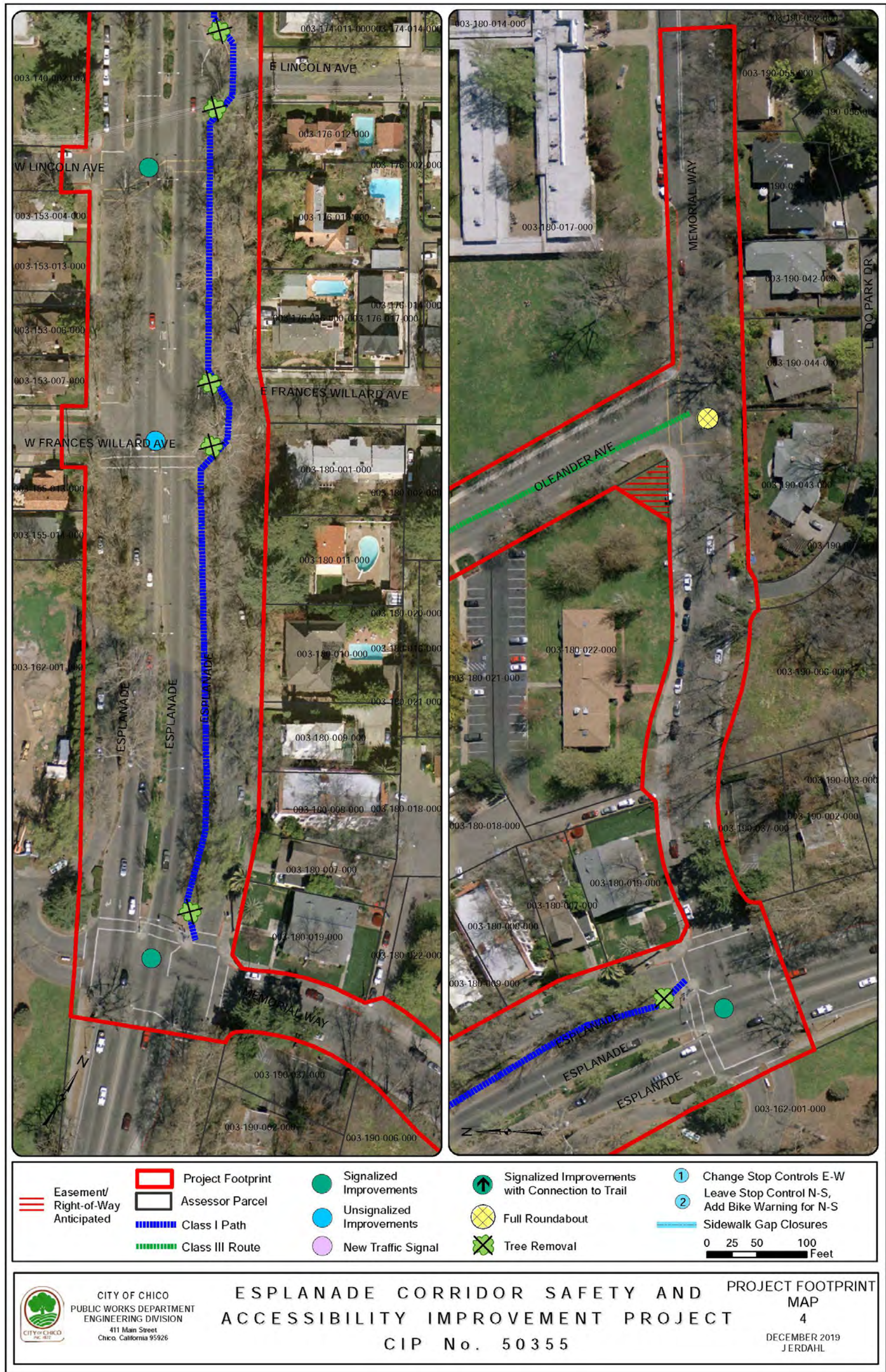


Figure 3. Project Footprint, Sheet 5

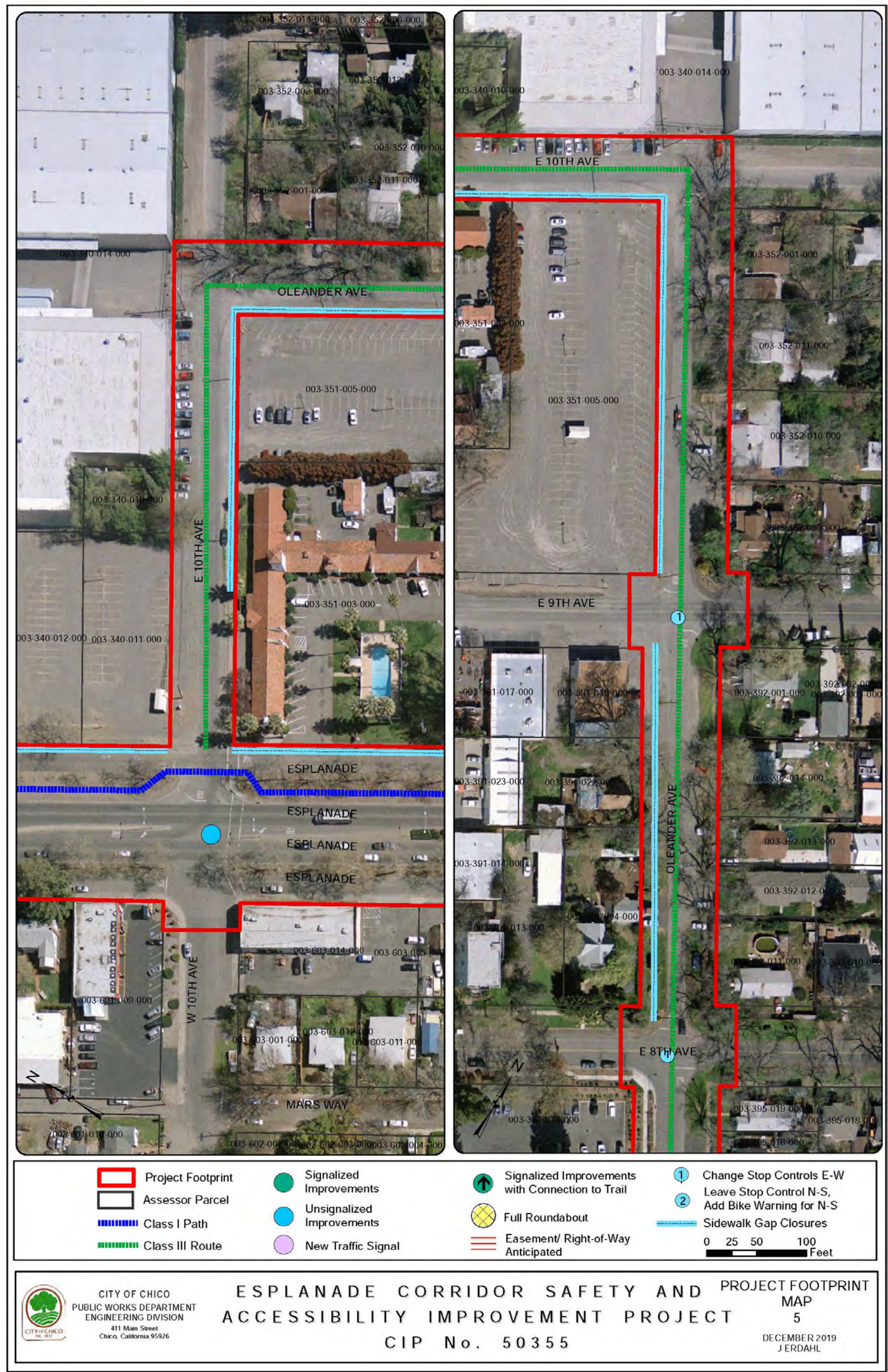


Figure 3. Project Footprint, Sheet 6

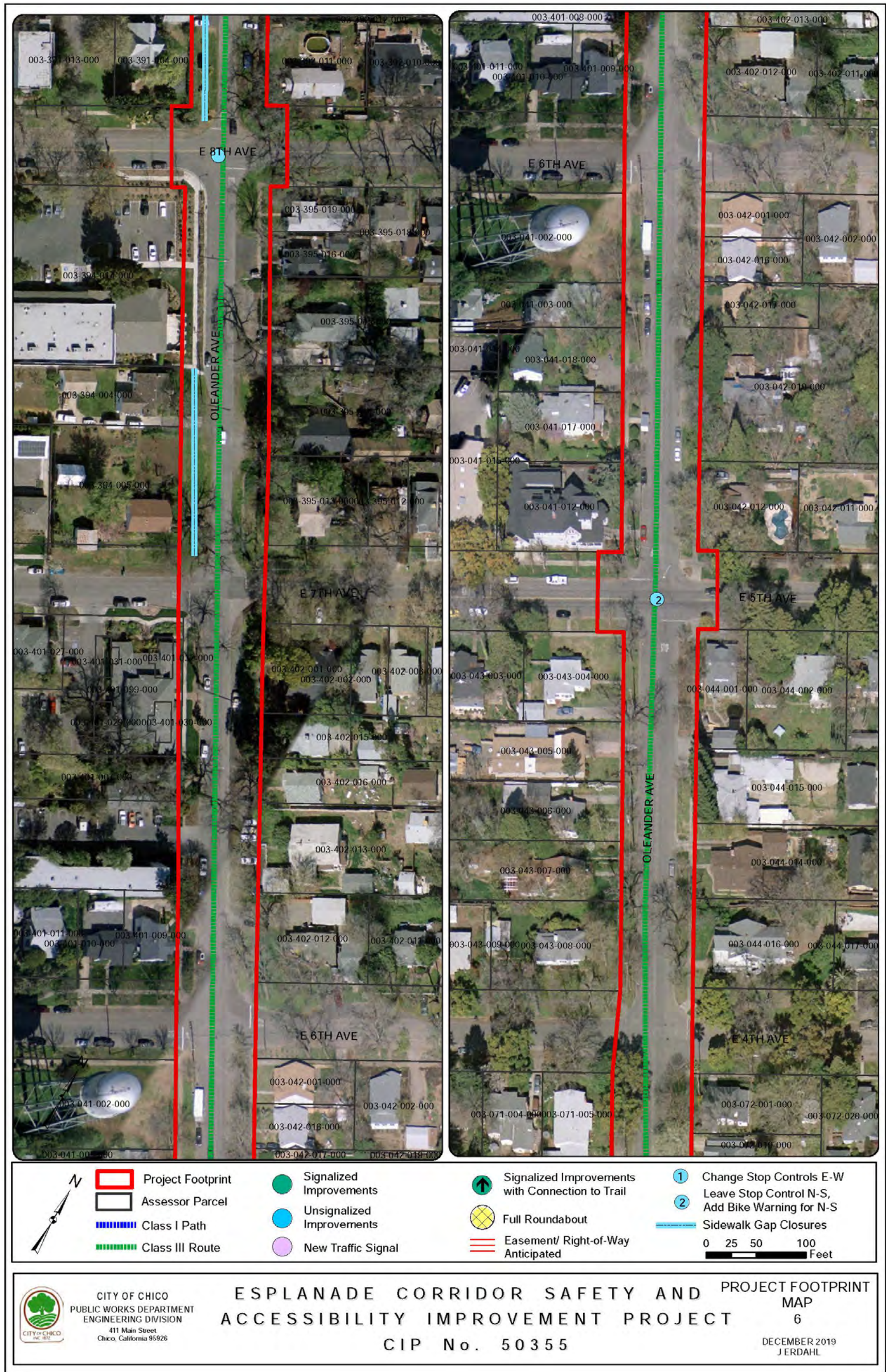
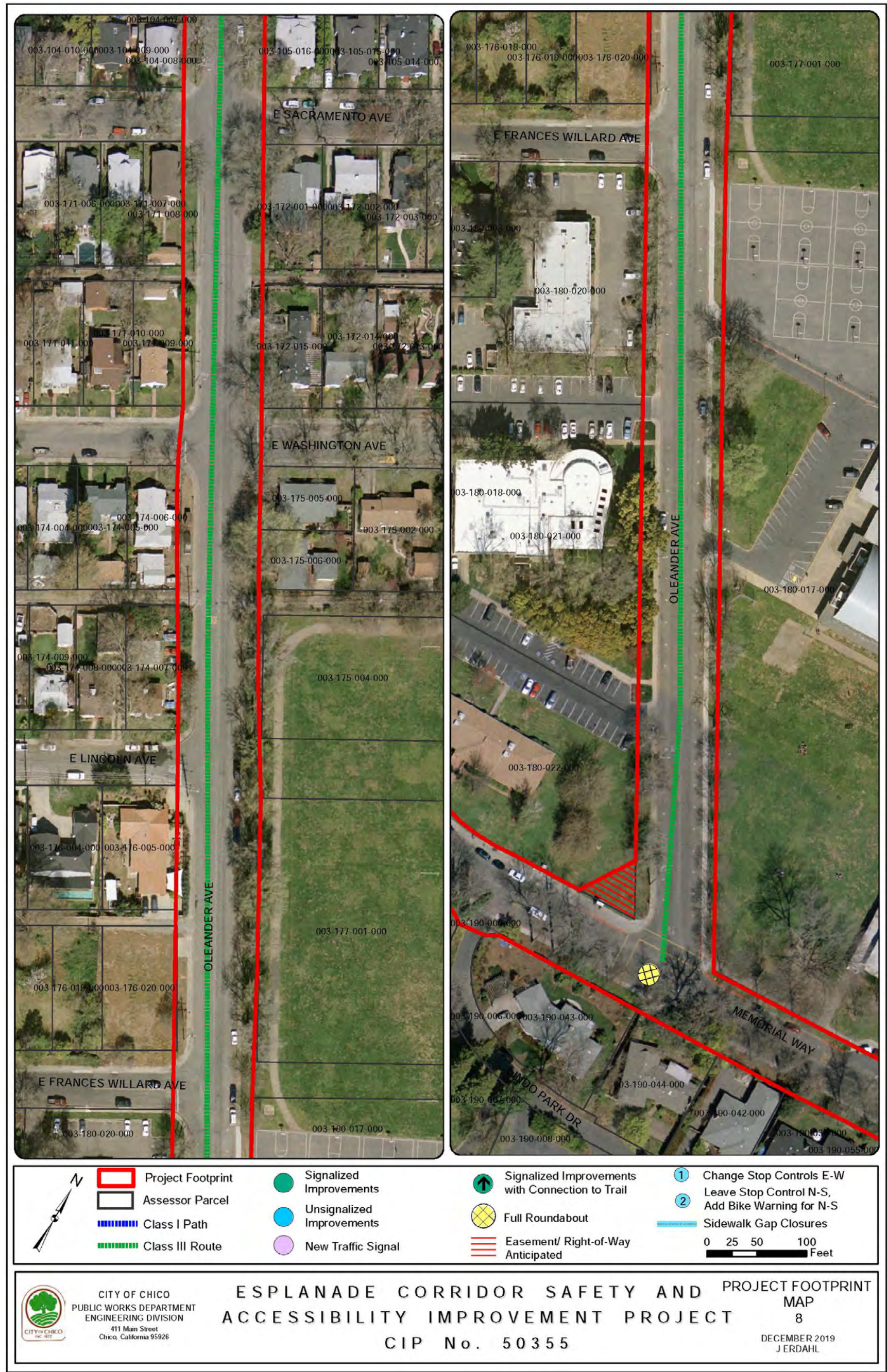


Figure 3. Project Footprint, Sheet 7



Figure 3. Project Footprint, Sheet 8



A. Aesthetics

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect on a scenic vista, including scenic roadways as defined in the General Plan, or a Federal Wild and Scenic River?				X
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
3. Affect lands preserved under a scenic easement or contract?				X
4. Substantially degrade the existing visual character or quality of the site and its surroundings including the scenic quality of the foothills as addressed in the General Plan?			X	
5. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

DISCUSSION: A.1–A.3. The project is not near and would not affect a Federal Wild and Scenic River. There are no scenic easements, preserves or contracts in the project vicinity. The City of Chico General Plan does not identify any scenic vistas within the city. The project would not construct any buildings or structures that would block long-range views or interfere with scenic vistas outside of the city limits. There are no designated state scenic highways in the city of Chico (California Department of Transportation 2019a). The Esplanade is identified in the Chico 2030 General Plan, Community Design Element as being a scenic roadway (City of Chico 2017). The General Plan calls to “Incorporate context sensitive roadway improvements on Chico’s scenic roads”, including the Esplanade (Action CD-2.3.2). As such, the project’s design roadway improvements are consistent with the existing roadway character and the General Plan goals. Therefore, there would be **No Impact** to designated scenic resources.

MITIGATION: None Required.

DISCUSSION: A.4. A *Visual Impact Assessment* was prepared for the proposed project (Tehama Environmental Solutions, Inc. 2020) (**Appendix A**). The assessment indicates that the project would alter the current visual conditions; however, the overall character of the area would not be substantially degraded. The project connectivity and safety design improvements would be similar to the existing visual roadway elements. The project is consistent with the General Plan’s complete street and scenic road goals where, “Well-designed streets accommodate multiple modes of transportation and exhibit identifiable design elements that complement the character of adjoining properties.” and to “...ensure that streets accommodate vehicle, transit, bicycle, and pedestrian travel.”

The project requires removing vegetation including up to 17 trees within the project limits. The trees to be removed are within the Esplanade eastern median. Tree removal is necessary for the ADA, safety and multi-use bicycle/pedestrian path improvements. Where the design allows, landscaping would be

replaced. Much of the Esplanade's visual character is defined by the linear pattern of tree lined boulevards between hardscaped transportation intersections. This pattern would remain unchanged. The greatest visual impact would occur at roadway intersections where tree removal is planned, but the visual continuity along the tree lined boulevard would remain dominated by mature canopies. None of the trees proposed for removal are listed in the City of Chico Heritage Tree Program.

The foothills are not visible from the project site. Construction and equipment associated with the proposed project would temporarily change surrounding views however these impacts are temporary and therefore not considered significant. While visual changes would occur, there would not be a substantial degradation to the defining visual pattern, character or quality of the site and its surroundings. The impacts are considered **Less Than Significant**.

MITIGATION: None Required.

DISCUSSION: A.5. The project would install pedestrian-scale lighting that would adhere to existing Chico Municipal Code (CMC) standards with lighting fixtures that possess full-cut off features and downward orientation to minimize off-site glare and spillage. Compliance with all applicable CMC requirements and standards will be verified by City of Chico staff. Therefore, the project would have a **Less Than Significant** impact on light or glare that could adversely affect day or nighttime views.

MITIGATION: None Required.

B. Agriculture and Forest Resources

Would the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. 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?				X
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
3. 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))?				X
4. Result in the loss of forest land or conversion of forest land to non-forest use?				X
5. 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?				X

DISCUSSION: B.1.–B.5. The project site is identified as “urban and built-up land,” by the California Department of Conservation Farmland Mapping and Monitoring Program (California Department of Conservation 2017). The site is not zoned for agricultural uses and the project would not result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. There is no conflict with an existing Williamson Act Contract (Butte County 2015) or zoning and the project would not result in impacts to agriculture and forest lands. The project site is primarily within road right-of-way with adjacent parcels zoned for residential, commercial, office and public facility uses. Therefore, the project would have **No Impact** on agricultural or forest resources; and no mitigation required.

MITIGATION: None required.

C. Air Quality

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Conflict with or obstruct implementation of the applicable air quality plans (e.g., Northern Sacramento Valley Planning Area 2015 Triennial Air Quality Attainment Plan)?			X	
2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation.			X	
3. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
4. Expose sensitive receptors to substantial pollutant concentrations?			X	
5. Create objectionable odors affecting a substantial number of people?			X	

The proposed project would not materially change traffic volume, fleet mix, speed, or any other factor that would cause an increase in emissions relative to existing conditions. Therefore, the proposed project would not result in an increase in operational emissions, and there would be no long-term air quality impact. Accordingly, the following analysis focuses on short-term construction-related emissions.

DISCUSSION: C.1. The project was included in Butte County Association of Governments’ (BCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). Projects included in the RTP/SCS are consistent with the planning goals of State Implementation Plans (SIP) adopted by local air quality management agencies. Accordingly, the project would not exacerbate nonattainment conditions within the County or conflict with air quality plans adopted to attain and maintain the CAAQS and NAAQS. This impact is **Less Than Significant**.

MITIGATION: None required.

DISCUSSION: C.2.–C.3. An assessment of construction-related emissions was conducted for the project (ICF 2020a) (**Appendix B**). Construction of pedestrian, bicycle, and various streetscape improvements would result in the temporary release of particulate emissions (airborne dust) during earthmoving activities. Emissions from construction equipment powered by gasoline and diesel engines are also anticipated and would include ozone precursors—reactive organic gases (ROG) and nitrogen oxides (NOx)—carbon monoxide (CO), coarse particulate matter (PM10), PM2.5, and sulfur dioxide (SO₂). Construction emissions were estimated using the Sacramento Metropolitan Air Quality Management District’s (SMAQMD) Road Construction Emissions Model (RCEM) (Version 9.0.0) based on the anticipated duration and required paving and earthmoving quantities (Erdahl pers. comm.). Construction would occur in 2022 and require approximately 180 working days (9 months). The emissions results are compared to Butte County Air Quality Management District (BCAQMD) thresholds, as shown in Table 1.

Table 1. Construction-Period Criteria Pollutant Emissions Estimates^a (pounds per day, unless otherwise stated)

Phase ^b	ROG	NOx	CO	PM10			PM2.5			
				Exhaust	Dust	Total	Exhaust	Dust	Total	SO ₂
Site Preparation	1	10	10	<1	40	40	<1	8	9	<1
Grading/Excavation	5	54	45	2	40	42	2	8	10	<1
Drainage/Utilities/Landscaping	3	29	29	1	40	41	1	8	10	<1
Paving Activities	1	13	17	1	<1	1	1	<1	1	<1
<i>Threshold (lbs/day)^c</i>	<i>137</i>	<i>137</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>80</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>
<i>Project Total (2022)</i>	<i><1</i>	<i>3</i>	<i>3</i>	<i><1</i>	<i>3</i>	<i>3</i>	<i><1</i>	<i>1</i>	<i>1</i>	<i><1</i>
<i>Threshold (ton/year)^c</i>	<i>4.5</i>	<i>4.5</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>

^a Because the RCEM does not have a “complete streets” project category, the “roadway widening” category was used to inform the equipment and vehicle inventory for emissions estimating purposes. While the proposed project includes some roadway improvements (e.g., pedestrian crossing islands), these are minor compared to widening activities, and as such, the emissions estimates are likely conservative.

^b All phases would occur sequentially (i.e., there would be no overlap among construction activities).

^c BCAQMD thresholds are derived from Rule 430 (New Source Review), which in turn is based upon the ambient air quality standards. Emissions below the thresholds would not be cumulatively considerable (BCAQMD 2014).

As shown in Table 1, construction emissions would not exceed BCAQMD’s thresholds, which were developed considering existing emissions concentrations and regional attainment designations under the ambient air quality standards (NAAQS and CAAQS). Compliance with BCAQMD Rule 205 (Fugitive Dust Emissions) and Caltrans Standard Specifications, Sections 14-9 and 7-1.02(C) (2015), would further reduce construction emissions. As such, construction of the project would not contribute a significant level of air pollution such that regional air quality would be degraded. This impact is **Less Than Significant**.

MITIGATION: None Required.

DISCUSSION: C.4. Typical sensitive receptors are residences, hospitals, schools, and parks. Residential uses are located along the project alignment to the west and east and Bidwell Mansion State Historic Park is located at the southwestern terminus of the project limits. Enloe Medical Center, La Casita

Primera Preschool, Chico High School and Chico Junior High School are adjacent to the project alignment. Sensitive receptors within 1,000 feet of the project may be exposed to criteria pollutants and toxic air contaminants (TAC) temporarily during construction.

All criteria pollutants are associated with some form of health risk (e.g., asthma, lower respiratory problems) at certain concentrations. For example, particulate matter has been linked to premature death in people with preexisting heart or lung disease and nonfatal heart attacks (USEPA 2018a). Exposure to ozone at certain concentrations can make breathing more difficult, cause shortness of breath and coughing, inflame and damage the airways, aggregate lung diseases, increase the frequency of asthma attacks, and cause chronic obstructive pulmonary disease (USEPA 2018a). Exposure to CO at high concentrations can cause fatigue, headaches, confusion, dizziness, and chest pain (CARB 2016). While construction of the project would generate criteria pollutants, as shown in Table 1, emissions are well below BCAQMD thresholds. BCAQMD's thresholds were adopted to support regional attainment of the NAAQS and CAAQS. The NAAQS and CAAQS are informed by a wide range of scientific evidence that demonstrates there are known safe concentrations of criteria pollutants. While recognizing that air quality is a cumulative problem, BCAQMD considers projects that generate criteria pollutant and ozone precursor emissions below these thresholds to be minor in nature and would not adversely affect air quality such that the NAAQS or CAAQS would be exceeded. Consequently, construction-generated criteria pollutants would be **Less Than Significant** and would not expose sensitive receptors to substantial pollutant concentrations.

The primary TAC of concern associated with project construction are asbestos and diesel particulate matter (DPM). The inhalation of asbestos fibers into the lungs can result in inflammation of the lungs, respiratory ailments (e.g., asbestosis), and cancer (e.g., lung cancer and mesothelioma). DPM is generated by diesel-fueled equipment and vehicles and may cause acute irritation (e.g., eye, throat, and bronchial), neurophysiological symptoms (e.g., lightheadedness and nausea), respiratory symptoms (e.g., cough and phlegm), and cancer. The project site does not have any reported historic asbestos mines, historic asbestos prospects, asbestos-bearing talc deposits, fibrous amphiboles, or ultramafic rock outcrops and the project does not involve the demolition or modification of structures or buildings that would release asbestos during construction (U.S. Geological Survey and California Geological Survey 2011; BCAQMD 2018). DPM generated during construction would be temporary and cease once construction (approximately 9 months) is complete. This is substantially lower than the 30-year exposure period typically associated with chronic cancer health risks (OEHHA 2015). Consequently, construction-generated TAC emissions would be **Less Than Significant** and would not expose sensitive receptors to substantial pollutant concentrations.

MITIGATION: None Required.

DISCUSSION: C.5. Potential sources of odors during construction include diesel exhaust and asphalt paving. Any odors from these activities would be temporary, minor, and are not likely to dominate ambient odors generated by the surrounding environment, which includes adjacent residential and commercial land uses. This impact is **Less Than Significant**.

MITIGATION: None Required.

D. Biological Resources

Will the project or its related activities result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species as listed and mapped in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?		X		
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.				X
3. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				X
4. 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?		X		
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

DISCUSSION: D.1, D.4. A *Natural Environment Study-Minimal Impacts* [NES (MI)] was prepared for the project in 2020 by Burleson Consulting, Inc (**Appendix C**). The NES (MI) identified that the project area contains minimal biological resources due to the limited suitable natural habitat. The project area is highly anthropogenically disturbed, and as a result, the project would occur within an existing disturbed setting containing limited native habitats. Common wildlife present in the project area have acclimated and developed tolerance to substantial disturbance resulting from the heavily utilized roadway infrastructure and surrounding land use. Although the project area is highly disturbed and contains limited natural habitats; trees within the project area provide potential nesting, roosting, and foraging habitat for sensitive bird and bat species.

Migratory Birds/Raptors

Potential suitable nesting habitat for a variety of migratory and non-migratory passerine and raptor species occurs within the project area. According to the NES (MI), several special status bird species

have the potential to occur including tricolored blackbird (*Agelaius tricolor*), burrowing owl (*Athene cunicularia*), Swainson's hawk (*Buteo swainsoni*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), American peregrine falcon (*Falco peregrinus anatum*), bald eagle (*Haliaeetus leucocephalus*), California black rail (*Laterallus jamaicensis coturniculus*), bank swallow (*Riparia riparia*), yellow warbler (*Setophaga petechial*), and least Bell's vireo (*Vireo bellii pusillus*). Although potential suitable habitat occurs within the project area, there is low potential for avian species to nest within the project area due to the highly disturbed area resulting in limited foraging habitat (Burleson Consulting, Inc. 2019).

Special Status Bat Species

The large trees located within the project area provide potentially suitable bat roosting habitat. According to the NES (MI), several special-status bat species have the potential to occur within the project area including pallid bat (*Antrozous pallidus*), western mastiff bat (*Eumops perotis californicus*), and western red bat (*Lasiurus blossevillei*). Although potentially suitable habitat occurs within the project area, the limited foraging habitat and highly disturbed nature of the area limits the potential for bat species to roost within the project limits (Burleson Consulting, Inc. 2019).

Although the potential for nesting bird and roosting bat species to be present in the project area are low, disturbances during construction could result in significant impacts. The following mitigation measures will be implemented to support federal and state endangered species acts, Section 10 of the federal Migratory Bird Treaty Act, and Fish and Game Code (e.g., 3503, 3503.4, 3504, 3505, et seq.).

Preconstruction surveys, avoidance buffers, and nesting bird/ bat roosting season avoidance would reduce the potential for impacts to **Less Than Significant with Mitigation Incorporated**.

MITIGATION D.1. (Biological Resources – Migratory and Non-Migratory Birds): In order to comply with Section 10 of the Migratory Bird Treaty Act and relevant sections of the California Fish and Game Code (e.g., 3503, 3503.4, 3504, 3505, et seq.), when feasible, project-related construction activities, including tree and vegetation removal, will be initiated or occur during the non-nesting season (August 16 through January 31).

If project-related construction activities, including tree and vegetation removal, must occur during the avian nesting season (February 1 through August 15), a preconstruction survey for nesting birds shall be conducted by a qualified biologist not more than 7 days prior to the start of noise-generating activities, ground-disturbing construction, or vegetation trimming or removal activities. The survey shall cover the area within the project footprint and 250 feet outside of the project boundary where accessible. To the maximum extent practicable, a minimum buffer zone from occupied nests shall be determined by the qualified biologist and maintained during physical ground-disturbing activities. Once nesting has ceased, the buffer may be removed.

If an active nest is found, then the biologist will map the nest location and establish an appropriate species protection buffer around the active nest(s), as determined by the biologist. The biologist will determine which construction and vegetation removal activities can proceed and which shall be prohibited within the buffer until the young have fledged (i.e., fly) or the nest fails. Active nests shall be monitored once per week and written findings reported to the City (e-mail OK).

Conduct an additional migratory bird and raptor survey if vegetation removal and/or construction stops for more than 15 days. The survey shall be conducted within seven (7) days prior to the continuation of activities.

MITIGATION D.2. (Biological Resources – Special Status Bat Species): A qualified biologist will conduct a habitat assessment of the project area to identify potential habitat for bat maternity roosts (e.g., human-made structures, large-diameter trees, snags). Removal of potential roost habitat identified during the assessment will be avoided during the bat maternity season (May through mid- August). If removal of potential roost habitat occurs outside of the maternity season, no further mitigation will be required.

If removal of potential roost habitat must be conducted during the maternity season, preconstruction inspections for bats will be conducted using appropriate methods (e.g., camera inspection, exit survey with night optics, acoustic survey) within 14 days of vegetation removal. If bats are found during inspections, removal of that roost feature will be delayed until the end of the maternity season or until a qualified bat biologist has determined that the young are capable of flight.

MITIGATION D.3. (Biological Resources – Project Site Management): To avoid attracting predators and nuisance species, the project area will be clear of debris, where possible. All food-related trash items will be enclosed in sealed containers and regularly removed from the project area. Limits of grading and construction activities within the project area will be clearly delineated.

DISCUSSION: D.2., D.3., and D.6: The project area does not contain any federal or state jurisdictional waters or wetlands, riparian habitat, or other sensitive natural communities. Project activity would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. The project area is dominated by urban managed and disturbed commercial and residential properties. The project would have **No Impact** on these resources.

MITIGATION: None Required.

DISCUSSION: D.5. A variety of tree species occur within the project limits, including California sycamore, sweetgum and California black walnut. The removal of up to 17 trees from the Esplanade eastern median is required for the project. Tree removal is necessary for the ADA, safety and multi-use bicycle/pedestrian path improvements. Where the design allows, landscaping will be replaced. Construction of the project will be subject to the City's Tree Preservation Regulations (CMC 16.66 and 19.68.060), which provides city discretion over any proposed tree removal and specifies appropriate replacement requirements for any trees that are approved for removal. Under existing City regulations, potential impacts resulting from the loss of existing trees would remain **Less Than Significant**.

MITIGATION: None Required.

E. Cultural Resources

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of an historical resource as defined in PRC Section 15064.5?			X	
2. Cause a substantial adverse change in the significance of an archaeological resource pursuant to PRC Section 15064.5?		X		

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
3. Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?		X		
4. Disturb any human remains, including those interred outside of formal cemeteries?		X		

DISCUSSION: E.1. ICF prepared an Historic Property Survey Report (including an Archaeological Survey Report [ICF 2020b] and Finding of No Adverse Effect document [ICF 2020c]) (ICF 2020d) for the project that documents the results of cultural resource records searches, surveys, and consultations (**Appendix D**). Based on a records search and literature review from the Northeast Information Center (NEIC), 13 previous cultural resources studies were identified as conducted within 0.25-mile of the project's area of potential effects (APE). Six of the 13 previous studies include a portion of the APE. The records search results also found that 83 cultural resources were previously recorded within 0.25-mile of the APE. Of those 83 cultural resources, none were within the APE. A built environment survey resulted in identification of one potentially historic property within the APE, a 1.25 miles segment of Chico's Esplanade roadway.

The Esplanade has potential historical significance as Chico's earliest and most identifiable thoroughfare in the City and for its distinctive characteristics of a type, period, and method of construction. For the purposes of this project the Esplanade is assumed to be eligible for listing in both the National Register of Historic Places and the California Register of Historical Resources; the Esplanade is considered an historical resource as defined in PRC Section 15064.5. Prior to Chico's founding, the Esplanade was known as "Shasta Road" and served as the main north-south wagon route between Marysville and Shasta as early as the 1850s, shuttling gold seekers to and from Shasta, Butte and Trinity counties (Booth et al. 2005:72). Officially established as a "tree-lined route" in 1870 by John Bidwell, the founder of Chico, the City paved gravel portions of the road in 1915 using concrete pavement 15-ft in width (Huberland 2016:1-2; Mulcahy 1948:13). The property has an assumed period of significance from 1915, when initial stages of paving the corridor began, to the year 1963, the period in which the Esplanade underwent significant redesign at the hand of Fred Davis, a prominent public servant in Chico. The assumed character-defining features of the Esplanade include:

- function as a transportation corridor,
- the central dividing median,
- the four lanes of travel framed by two outer service lanes,
- the curbed medians separating the main thoroughfare from the outer service lanes, and
- the four rows of trees true to Bidwell's original 1870 design and retained by Davis.

All proposed project construction in the APE generally involves minor activities. The project elements would not cause a significant visual effect to the setting of the Esplanade, nor would they involve a change in the character of the use or design features that support the resource to convey its assumed historic significance. The project would not remove any of the contributing features of the Esplanade corridor from their historic location. The proposed project would not diminish the integrity of the Esplanade and would not destroy or adversely affect any assumed qualifying characteristics of the

property. For these reasons, the project would result in a **Less-Than-Significant** impact on the Esplanade.

MITIGATION: None Required.

DISCUSSION: E.2., E.4. ICF contacted the Native American Heritage Commission (NAHC) to identify any areas of concern that may be listed in the NAHC's Sacred Lands File (SLF) and to provide a list of Native American representatives who may have interest in the project. No sacred land sites were identified in the SLF (ICF 2019b). Based on a records search and literature review from the NEIC, no previously recorded cultural resources are within the APE. In September 2019, the City of Chico sent letters to the representatives of the seven tribes identified by the NAHC requesting consultation under Section 106 of the National Historic Preservation Act and requesting information regarding sites, traditional cultural properties, values, or other cultural resource considerations within the project area. The Mooretown Rancheria of Maidu Indians and the Estom Yumeka Maidu Tribe of the Enterprise Rancheria responded indicating that the project is outside of their Tribal territory and that they have no further comment. The Greenville Rancheria also responded indicating that they had no comments or objections to the project, and the KonKow Valley Band of Maidu Indians indicated that they would defer consultation to the Mechoopda Tribe. No responses were received from either the Berry Creek Rancheria of Maidu Indians or the Tsi Akim Maidu. The Mechoopda Tribe responded and identified several areas near the project as highly sensitive including areas around Bidwell Mansion, Big Chico Creek, and in the vicinity of Esplanade and the Lindo Channel (ICF 2019b).

No archaeological sites were observed during the field survey conducted on August 8, 2019. Two isolated artifacts were identified and recorded in the APE: ESP-ISO-001 (ceramic fragment), and ESP-ISO-002 (railroad spike). Additional information is contained in the Archaeological Survey Report prepared for the project (**Appendix D**). Isolates are not considered eligible for listing in the California Register of Historical Resources; therefore, these two isolates are not considered archaeological resources under PRC Section 15064.5.

Soil map units of the APE, as described by the U.S. Department of Agriculture Natural Resources Conservation Service Web Soil Survey (USDA 2019), are presented in Table 2. The characteristics of these soils can be summarized as sandy loams and coarse sands. The surface and subsurface distributions of loam deposits are a function of the several creek drainages (Big [and Little] Chico Creeks, Comanche Creek, and Butte Creek) on the landscape and present-day geomorphic processes adjacent to the creek channels (i.e., flooding and deposition). Specifically, the area in which the APE is located is classified as Quaternary fan deposits (Burnett and Jennings 1962) associated with the Late Holocene. Much of the area, however, is developed and has been disturbed by road and sidewalk construction and various other development and landscaping. Because most of the APE has been developed with little surface exposure, it is unknown if intact soils described below remain in the APE and how deep they may be below the current ground surface.

Table 2. Soils in the Area of Potential Effects

Soil Series Name	Map Unit Symbol	Depth (inches)	USDA Texture
Almendra loam	418	0-52	Loam
		52-86	Fine sandy loam
	425	0-11	Fine sandy loam

Soil Series Name	Map Unit Symbol	Depth (inches)	USDA Texture
Vina fine sandy loam, sandy substratum		11-50	Sandy loam
		50-54	Loamy coarse sand
		54-80	Coarse sand

Source: USDA 2019.

Analysis of the soils and geology of the APE (presence of Late Holocene loam deposits, which are known to have supported prehistoric habitation), as well as the presence of isolated surface artifacts suggests that the APE has potential to contain buried archaeological material, including sites that contain human remains. Unearthing a resource has the potential to cause damage that could be considered a significant impact.

Despite this, given the anticipated depth of previous disturbance and fill within the limits of the existing transportation facilities and the adjacent development, and the shallow depth of proposed project activities (a few inches, except for the location of the proposed roundabout where excavated depths of up to 4 feet below surface are anticipated), the potential to encounter previously unrecorded prehistoric and historic-period resources during construction of the proposed project is considered low. In accordance with the intent of *Memorandum of Understanding Regarding Principles for the City of Chico Consultation with the Mechoopda Indian Tribe of Chico Rancheria* dated August 8, 2008, and in response to correspondence and consultation regarding this project received from Kyle McHenry (Tribal Historic Preservation Officer) on behalf of the Mechoopda Indian Tribe (November 2019 email correspondence), the City of Chico will implement the following mitigation measures. The potential for impacts relating to cultural resources or human remains is considered **Less-Than-Significant with Mitigation Incorporated**.

MITIGATION E.1. (Tribal Monitor): The City's contractor shall provide for the presence of a Mechoopda Indian Tribal Monitor during all earth moving and ground disturbing activities. The City shall provide the contractor's contact information for the purpose of providing direct information to the Tribal Monitor regarding project scheduling and safety protocol, as well as project scope, location of construction areas, and nature of work to be performed. The determination to be present for any, some, or all construction activities shall be at the discretion of the Tribal Monitor.

MITIGATION E.2. (Inadvertent Discovery): If during ground disturbing activities, any potentially prehistoric, protohistoric, and/or historic cultural resources are encountered, the supervising contractor shall cease all work within 10 feet of the find (100 feet for human remains) and notify the City. A professional archaeologist meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and being familiar with the archaeological record of Butte County, shall be retained to evaluate the significance of the find. City staff shall notify all local tribes on the consultation list maintained by the State of California Native American Heritage Commission, to provide local tribes the opportunity to monitor evaluation of the site. If human remains are uncovered, the project team shall notify the Butte County Coroner pursuant to Section 7050.5 of California's Health and Safety Code. Site work shall not resume until the archaeologist conducts sufficient research, testing and analysis of the archaeological evidence to make a determination that the resource is either not cultural in origin or not potentially significant. If a potentially significant resource is encountered, the archaeologist shall prepare a mitigation plan for review and approval by the City, including recommendations for total data recovery, Tribal monitoring, disposition protocol, or avoidance, if applicable. All measures determined by the City to be appropriate shall be implemented

pursuant to the terms of the archaeologist's report. The preceding requirement shall be incorporated into construction contracts and documents to ensure contractor knowledge and responsibility for the proper implementation.

If paleontological resources are encountered during Project subsurface construction, all ground-disturbing activities within 10 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery.

DISCUSSION: E.3. The project area is not underlain by, and does not contain, a unique geological feature. The underlying geology consists of Quaternary fan deposits dating to the late Holocene (see E.2., E.4, above). Late Holocene era sedimentary rock could contain fossils. While the shallow depth of proposed project activities makes the likelihood of encountering any paleontological resources unlikely, damage to a unique paleontological resource would be considered a significant impact. With implementation of appropriate protection and treatment measures for the discovery of paleontological resources, this impact is considered **Less-Than-Significant with Mitigation Incorporated**.

MITIGATION E.2. (Inadvertent Discovery): See full text of this measure above.

F. Geology/Soils

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Expose people or structure to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
a. Rupture 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 & Geology Special Publication 42)				X
b. Strong seismic ground shaking?				X
c. Seismic-related ground failure/liquefaction?				X
d. Landslides?				X
2. Result in substantial soil erosion or the loss of topsoil?			X	
3. Be located on a geologic 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?				X
4. 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?				X

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
5. 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 waste water, or is otherwise not consistent with the Nitrate Action Plan or policies for sewer service control?				X

DISCUSSION: F.1., F.3., F.4. The City of Chico and surrounding area is in a relatively flat area located in one of the least active seismic regions in California and contains no active faults. Currently, there are no designated Alquist-Priolo Special Studies Zones within the project area or immediate vicinity, nor are there any known or inferred active faults (California Department of Conservation 2019). Thus, the potential for ground rupture within the Chico area is considered very low. The proposed project does not include any pressurized pipes which could be subject to ground-shaking during an earthquake. Furthermore, construction of habitable structures is not part of the project. Therefore, the improvements proposed along the Esplanade and Oleander Avenue corridors would not expose people or structures to a potential substantial adverse geologic effect; including, the risk of loss, injury or death from seismic-related ground failure, including liquefaction or collapse, lateral spreading, subsidence, or on-site or off-site landslides. The plasticity index for project area soils (Almendra loam, 0 to 1 percent slopes and Vina fine sandy loam, sandy substratum, 0 to 2 percent slopes) is between six and 15 percent, which is considered slight to medium plasticity (United States Department of Agriculture 2019). Therefore, the proposed project would not result in impacts associated with being located on expansive soils. **No Impact** would occur.

MITIGATION: None Required.

DISCUSSION: F.2. The project area is underlain by Almendra loam and Vina fine sandy loam soils which are not highly erosive. During construction the grading and excavation needed to for the proposed improvements along the Esplanade and on Oleander Avenue could have the potential to cause erosion. Development of an erosion control plan, including incorporation of Best Management Practices (BMPs), are standard requirements of projects of this size. Additionally, the City has developed a Storm Water Management Program (SWMP) per Phase II of the National Pollutant Discharge Elimination System (NPDES) Program. The project would be constructed in full compliance with applicable standards of the SWMP, which includes both construction activity and post-construction storm water discharge BMPs.

The City and the BCAQMD require implementation of all applicable fugitive dust control measures, which further reduces the potential for construction-generated erosion. All projects disturbing greater than one acre, including the proposed project, must comply with and obtain coverage under the applicable National Pollution Discharge Elimination Permit (NPDES) from the Regional Water Quality Control Board (RWQCB) per §402 of the Clean Water Act. Compliance with the SWMP and existing regulations would reduce potential impacts relating to soil erosion or loss of topsoil to a **Less-Than-Significant** impact.

MITIGATION: None Required.

DISCUSSION: F.5. Septic tanks and alternative wastewater disposal systems would not be installed on the project site. Therefore, implementation of the proposed project would not result in impacts to soils

associated with the use of such wastewater treatment systems. Therefore, the project would have **No Impact**.

MITIGATION: None Required.

G. Greenhouse Gas Emissions

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Generate greenhouse gas (GHG) emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
2. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	

The proposed project would not materially change traffic volume, fleet mix, speed, or any other factor that would cause an increase in emissions relative to existing conditions. Therefore, proposed project would not result in an increase in operational emissions, and there would be no long-term greenhouse gas (GHG) impact. Accordingly, the following analysis focuses on short-term construction-related emissions.

DISCUSSION: G.1. Equipment and vehicles required during construction would result in the short-term generation of GHG emissions. Based on RCEM modeling, these sources would emit approximately 404 metric tons of carbon dioxide equivalent (CO₂e) over the nine-month construction period in 2022. BCAQMD does not have an adopted GHG threshold, but recommends projects comply with applicable GHG reduction strategies and the state's GHG reduction goals. Implementation of the measures described above for air quality would reduce GHG emissions resulting from construction activities (see Section C, *Air Quality*). Emissions are also well below numeric construction thresholds adopted by other regional air quality districts (e.g., SMAQMD's 1,100 metric tons CO₂e threshold, Placer County Air Pollution Control District's threshold of 10,000 metric tons CO₂e). This impact is **Less Than Significant**.

MITIGATION: None Required.

DISCUSSION: G.2. While construction would generate short-term GHGs, these emissions would be minor (404 metric tons CO₂e). The transportation improvements would not affect vehicle patterns or emissions. Rather, the project would promote a pedestrian and bicycle-friendly environment by providing safer pedestrian crossings, a connected bicycle network, and improved streetscapes. These improvements are consistent with the City's 2020 Climate Action Plan, BCAG's RTP/SCS, and CARB's 2017 Climate Change Scoping Plan, all of which have been adopted to support state and local GHG reduction goals (e.g., AB 32, SB 32). This impact is **Less Than Significant**.

MITIGATION: None Required.

H. Hazards/Hazardous Materials

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?			X	
2. Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?			X	
3. Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?			X	
4. 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?			X	
5. For a project located within the airport land use plan, would the project result in a safety hazard for people residing or working in the Study Area?				X
6. For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the Study Area?				X
7. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
8. Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				X

DISCUSSION: H.1., H.2., H.4. An Initial Site Assessment was prepared for the project (Burleson Consulting, Inc. 2019) to identify obvious, actual and potential environmental contamination concerns in the project area right-of-way (**Appendix E**). The Initial Site Assessment included a database search by Environmental Data Resources (EDR) of information published by the state and federal regulatory agencies for the project area, adjacent, and surrounding properties. The database search was completed in accordance with ASTM E 1527-05. The database query included search radii up to one mile from the project corridor. Based on EDR database records, 43 listings occur within the project area. Of the 43 results located in the 1-mile search radii, seven listed facilities or events are located near or adjacent to the proposed project and contain current or historical potential environmental concerns. One of the seven sites, the Chico Groundwater Central Plume, is under a large area of Chico at depths below the shallow grading proposed for the project improvements. Two properties not listed in the regulatory records were identified on the historic Sanborn Fire Insurance Map provided by EDR. In total, the Initial

Site Assessment identified four low risk Recognized Environmental Conditions (RECs) and five low risk historical RECs adjacent to or near the proposed project. The proposed project would not interfere with the Chico Groundwater Central Plume. The project also would not acquire any property from contaminated sites. The Initial Site Assessment also identified the potential for elevated lead in soil originating from aerial deposition and/or associated with lead-based paint in runoff from adjacent structures. If it is anticipated that excavated soil would need to be disposed of off-site, the soil will first be tested for the accumulation of lead following applicable local, state and federal laws and regulations.

Hazardous materials would be used during construction activities (e.g., equipment maintenance substances, fuel, solvents, and paving compounds). Grading and construction activities may involve the limited transport, storage, usage, or disposal of hazardous materials, such as the fueling/servicing of construction equipment. All hazardous material use would be required to comply with all applicable local, state, and federal laws and regulations associated with the handling and storage of hazardous materials.

Adherence to health and safety requirements and applicable laws and regulations would reduce any potential impacts associated with hazardous materials to **Less-Than-Significant** levels.

MITIGATION: None Required.

DISCUSSION: H.3. Three schools are within 0.25 mile of the project site: La Casita Primera Preschool (2035 Esplanade); Chico High School (901 Esplanade); Chico Junior High School (280 Memorial Way). Accidental release of hazardous materials during construction near a school would be a significant impact. However, as disclosed under DISCUSSION H.1, there is a low potential for construction or operation of the project to cause a significant hazard through transport, use, or disposal of hazardous materials because these activities would be required to comply with the regulations, standards, requirements, and guidelines established by federal and state law and overseen by the regulatory agencies. Accordingly, the potential for hazardous materials releases near an existing or proposed school are low. Therefore, the potential for impacts is **Less Than Significant**.

MITIGATION: None Required.

DISCUSSION: H.5., H.6. The Chico Municipal Airport is approximately 2.7 miles north of the project site. The northern border of the project is just outside the Compatibility Zone D (Butte County Airport Land Use Commission 2017:Map CIC-4.1A) of the airport, a zone commonly overflowed by aircraft. The project would not expose persons to additional airport-related hazards. The small, private Ranchoero Airport is located approximately 1.7 miles southwest of the project. The project is not located in an airport land use compatibility plan area of the Ranchoero Airport (Butte County Airport Land Use Commission 2017:Map RAN-4.4A). Therefore, the project would have **No Impacts** related to airport hazards.

MITIGATION: None Required.

DISCUSSION: H.7., H.8. The project would not interfere with an adopted emergency response plan or emergency evacuation plan. As presented under DISCUSSION P.5, the Esplanade and Oleander Avenue would remain open to traffic, but might experience episodic, temporary single-lane traffic closures. However, a traffic management plan would be developed, and emergency access would be maintained. The project is not in a wildland area. It is surrounded by urban uses and the area is within the service area of the City of Chico Fire Department. Therefore, the project is considered to have **No Impact** with regard to these hazards.

MITIGATION: None Required.

I. Hydrology/Water Quality

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Violate any water quality standards or waste discharge requirements?			X	
2. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
4. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
5. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
6. Otherwise substantially degrade water quality?			X	
7. Place real property within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
8. Place within a 100-year flood hazard area structures which would impede or redirect flood flows?				X
9. 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?				X
10. Inundation by seiche, tsunami, or mudflow?				X

DISCUSSION: I.1., and I.3.–I.6. The project would require shallow grading to install the non-motorized “complete streets” and other improvements within the project limits. Because of the shallow excavation proposed, no dewatering is anticipated. The project would not alter the existing drainage pattern of the project area, or substantially increase the rate or amount of surface runoff. Therefore, the project would not create surface runoff volumes that would result in flooding or exceed the capacity of the Water Pollution Control Plant.

Construction and operation of the project is not anticipated to result in violations of any water quality standards or waste discharge requirements. All work would be completed by licensed contractors utilizing industry standard practices to properly manage construction of the project. Development of an erosion control plan including incorporation of BMPs are standard requirements of projects of this size. Additionally, the City has developed a Storm Water Management Program (SWMP) per Phase II of the National Pollutant Discharge Elimination System (NPDES) Program. The project would be constructed in full compliance with applicable standards of the SWMP, which includes both construction activity and post-construction storm water discharge BMPs. Further, all projects disturbing greater than one acre, including the proposed project, must comply with and obtain coverage under the NPDES Construction General Permit (Water Quality Order 2009-0009-DWQ) to minimize water quality impacts. Therefore, the project would not violate any water quality or waste discharge requirements. Compliance with the SWMP and existing regulations would reduce potential impacts relating to water quality and waste discharge requirements to a **Less-Than-Significant** impact.

MITIGATION: None Required.

DISCUSSION: I.2. The small area of new impervious surface (e.g., the Class I path, very small areas of new sidewalk) would not interfere with groundwater recharge such that groundwater would be affected. No change in aquifer volume or local groundwater table level is anticipated. Impacts to groundwater supplies and recharge would be **Less Than Significant**.

MITIGATION: None Required.

DISCUSSION: I.7.–I.10. According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Maps No. 06007C0502E and 06007C0505E, revised January 6, 2011, the project site is in Zone X, which is outside the 500-year flood plain (FEMA 2011). The project is not within a designated flood hazard area. The project does not include construction of structures that would impede or redirect flood flows. The project would not change risk levels related to flooding as a result of dam or levee failure and is not within an area subject to inundation by seiche, tsunami, or mudflow. There would be **No Impact** related to these issue areas.

MITIGATION: None Required

J. Land Use and Planning

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Result in physically dividing an established community?				X
2. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the City of Chico General Plan, Title 19 "Land Use and Development Regulations", or any applicable specific plan) adopted for the purpose of avoiding or mitigating an environmental effect?				X
3. Results in a conflict with any applicable Resource Management or Resource Conservation Plan?				X

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
4. Result in substantial conflict with the established character, aesthetics or functioning of the surrounding community?			X	
5. Result in a project that is a part of a larger project involving a series of cumulative actions?				X
6. Result in displacement of people or business activity?				X

DISCUSSION: J.1.–J.3, J.5., J.6. An assessment of community related impacts was conducted for the proposed project (ICF 2019a) (**Appendix F**). The proposed non-motorized “complete streets” improvements on the Esplanade and Oleander Avenue are consistent with local, regional and state-wide planning documents including the *City of Chico 2030 General Plan* (City of Chico 2017), *Chico Bicycle Plan 2019 Update* (City of Chico 2019), *Butte County Regional Transportation Plan/Sustainable Communities Strategy* (Butte County Association of Governments 2016) and *Caltrans Active Transportation Program* (created by legislation in 2013 [Senate Bill 99, Chapter 359 and Assembly Bill 101, Chapter 354]). Because no new roadways would be constructed, and there would be no change to existing land uses or motor vehicle circulation patterns, the project would not physically divide an established community. The project would not conflict with any applicable land use plan or resource management or conservation plan. The project is independent in its function. It is not a component of a larger project and would not lead to a series of cumulative actions. All project work would occur within existing roadway rights-of-way except for a small area of undeveloped land needed for construction of the roundabout at Oleander Avenue and Memorial Way. The project would not result in displacement of people or business activities. The project would have **No Impact** on land use and planning.

MITIGATION: None Required.

DISCUSSION: J.4. The project would alter the visual conditions within the project limits; however, the project would not conflict with the overall character or aesthetics of the area and would not change the functioning of the surrounding community. The project is consistent with the 2030 General Plan complete street and scenic road goals. The impact is considered **Less Than Significant**.

MITIGATION: None Required.

K. Mineral Resources

Would the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. 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?				X

2. 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?	X
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DISCUSSION: K.1.–K.2. The project would not result in the loss of availability of a known mineral resource or mineral resource recovery site. Mineral resources are not associated with the project or located on the project site or in the project vicinity. Therefore, the project would have **No Impact** on mineral resources.

MITIGATION: None Required.

L. Noise

Will the project or its related activities result in:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Exposure of persons to or generation of noise levels in excess of standards established in the 2030 Chico General Plan, noise ordinance, or applicable standards of other agencies?				X
2. Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?			X	
3. Exposure of sensitive receptors (residential, parks, hospitals, schools) to exterior noise levels (CNEL) of 65 dBA or higher?			X	
4. A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
5. A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
6. For a project located within the airport land use plan, would the project expose people residing or working in the Study Area to excessive noise levels?				X
7. For a project within the vicinity of a private airstrip, would the project expose people residing or working in the Study Area to excessive noise levels?				X

DISCUSSION: L.1. During construction of the project, contractors will be required to comply with City noise regulations (Chapter 9.38 of the Chico Municipal Code [City of Chico 2020]) that limit hours of construction and minimize construction noise levels in the surrounding community. Operation of the project will not expose persons to or generate noise levels in excess of City standards. Once construction activities have ceased, day-to-day operation of the project would not contribute to a substantial increase in ambient noise levels. Therefore, there would be **No Impact**.

L.3.–L.5. The project does not involve construction of residences or other land uses that are sensitive to noise. Construction of the project is expected to take approximately 9 months to complete and would be done during weekday hours between 7:00 a.m. and 9:00 p.m. when noise from construction equipment is not regulated by the City noise regulations. Construction during nighttime hours or weekends is not proposed. Construction of the project would not require use of heavy impact equipment such as pile drivers. However, vibratory equipment such as jackhammers may be used during demolition work.

ICF conducted an analysis of construction noise that would be generated by the proposed project (ICF 2019b) (**Appendix G**). To characterize a worst-case noise condition for construction, noise levels of the two loudest pieces of equipment were combined to calculate an overall noise level value from simultaneously operating equipment. The worst-case noise condition is expected to occur during paving of the project, where a paver and a grader may be used simultaneously. Noise levels were calculated based on point-source attenuation over hard acoustically reflective ground. Construction noise levels typically attenuate at a rate of about 6 dB per doubling of distance.

The nearest noise sensitive locations are residences, lodging facilities, schools and places of worship located in the vicinity of areas where improvements would be built. The noise receivers that could potentially experience the highest levels are adjacent to the Esplanade, with outdoor areas as near as 50 feet away from project construction areas.

The worst-case analysis indicates that noise levels from construction may be up to 92 dBA L_{eq} at 50 feet from the source. However, given that construction would take place over a period of 9 months for the entire project and building improvements would progress over time along the 1.25-mile length of the project corridor, predicted noise levels would be at their highest only for a short period of time at a given location.

Operation of the project would not substantially change the ambient noise levels in the project vicinity. Automotive traffic volumes would not materially change. Non-motorized travel (e.g., bicycling and walking) may increase because of the improved facilities. But non-motorized travel modes are by their nature quiet and an increase in those modes would not result in a substantial permanent increase in noise levels. Impacts related to increases in noise levels are considered **Less than Significant**.

MITIGATION: None Required.

DISCUSSION: L.2. Operation of construction equipment may potentially result in perceptible levels of ground-borne vibration in the immediate vicinity of residences and other sensitive land uses during construction. In general vibration at noticeable levels is highly localized around the source of vibration. Heavy equipment that may be operated near residences include jackhammers, excavators, and pavement rollers. These types of equipment typically produce peak particle velocity vibration levels of less than 0.10 inches per second at a distance of 25 feet, which may intermittently be noticeable inside of buildings, but may only occur briefly during a period of time when equipment is operated near structures.

Use of heavy equipment during construction of the project would be temporary and would cease once construction is complete. The types of equipment scheduled for use in the work areas along the Esplanade would produce a level of vibration that is not expected to result in a negative community reaction, or cause building damage. Operation of the project is not expected to change noticeable levels of vibration. Therefore, this impact would be **Less than Significant**.

MITIGATION: None Required.

DISCUSSION: L.6., L.7. The site is not located within the Airport Influence Area of the Chico Municipal Airport. The Chico Municipal Airport is approximately 3 miles north of the project site. The private Ranchoero airstrip is located outside the city limits approximately 1.75 miles southwest of the project limit. The project is approximately a half-mile outside the Ranchoero Airport Influence Area. The project would not change exposure to airport-related noise for people in the project area and would not create a conflict with airport land use compatibility. Therefore, there would be **No Impact**.

MITIGATION: None Required.

M. Open Space/Recreation

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Affect lands preserved under an open space contract or easement?				X
2. Affect an existing or potential community recreation area?				X
3. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
4. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

DISCUSSION: M.1. The proposed roadway improvements would primarily be constructed within existing road rights-of-way adjacent to parcels zoned for residential, commercial, office and public facility uses. There are no existing open space contracts or easements that would be affected by the project; therefore, there would be **No Impact** to open space or easement lands.

MITIGATION: None Required.

DISCUSSION: M.2.–M.4. Construction of the proposed project would not result in any temporary or permanent impacts to existing or future recreational facilities or areas as project related work would primarily be within road right-of-way. Roadways would remain open to traffic during construction and access to adjacent properties and facilities would be maintained. No project activities would take place in recreational areas or affect recreational facilities. Additionally, the project would not result in an increase in population or increase in traffic on area roadways that would affect the use or maintenance of recreational facilities. The project would construct a two-way Class I bike trail on abandoned rail right-of-way on the east side of the Esplanade and a marked bicycle route on Oleander Avenue which favors minimal stopping except at 1st Avenue and 5th Avenue with appropriate safety crossing measures. The project does not increase the use of, or require the construction or expansion of, existing neighborhood and regional parks or other recreational facilities. Therefore, the proposed project would have **No Impact** on these resources.

MITIGATION: None Required.

N. Population/Housing

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
2. Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
3. Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

DISCUSSION: N.1. The project does not involve the construction of residential dwellings or new commercial/industrial areas or add infrastructure that would induce a change in population. The project is in an already developed portion of Chico and would not result in population growth. The project would not increase capacity on project area roadways, rather the project would make it safer for bicyclists and pedestrians by incorporating pedestrian, bicycle and automobile improvements (see Section 1 Project Description). **No Impact** would occur.

MITIGATION: None Required.

DISCUSSION: N.2.–N.3. The project would displace any housing or people and would not necessitate the construction of replacement housing; therefore, **No Impact** would occur.

MITIGATION: None Required.

O. Public Services

Will the project or its related activities have an effect upon or result in a need for altered governmental services in any of the following areas:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Fire protection?				X
2. Police protection?				X
3. Schools?				X
4. Parks and recreation facilities? (See Section J Open Space/Recreation)				X
5. Other government services?				X

DISCUSSION: O.1.–O.5. The project would not result in a direct increase in population, changes in land use, or increase traffic capacity or volumes that would affect or require alteration to fire, police, schools, parks and recreation facilities, or other government services. Once the project is completed, the transportation facilities in the project area would function in a similar manner as prior to the project; however, the improvements would make conditions much safer for bicyclists, pedestrians and

motorists. Since the proposed project would not result in a direct population increase or increase in traffic, the expansion of existing public services would not be required. The project would have **No Impact** on these resources.

MITIGATION: None Required.

P. Transportation/Circulation

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
2. Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?			X	
3. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
4. Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
5. Result in inadequate emergency access?			X	
6. Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				X

DISCUSSION: P.1.–P.2. A traffic analysis and assessment of the proposed project was conducted to determine the project's effects on the performance of the circulation system (KD Anderson & Associates, Inc. 2020) (**Appendix H**). The posted speed limit on the Esplanade is 30 miles per hour (mph) and on Oleander Avenue is 25 mph. Other side and cross streets have speed limits varying from 25 mph (most east-west streets) to 35 mph (1st Avenue). Traffic signals are timed so that most traffic travels the corridor at 28 mph without having to stop, although there are exceptions during peak periods. Every other intersection on the Esplanade corridor is signalized without north-south left-turn access. These signalized intersections also have northbound right-turn pockets. The uncontrolled, or unsignalized, intersections have north-south left-turn access. The corridor also includes a wider median on the east

side which was once the right-of-way for a streetcar which ran to the airport. Currently, no facilities, signage, or pavement markings are provided for bicycle riders on the complex Esplanade boulevard or frontage roads.

Nearly all the intersections within the project limits have calculated injury rates higher than statewide averages, with the exception of the intersections of Esplanade and 6th Avenue and Esplanade and 10th Avenue. Both pedestrian and bicycle collision rates at several locations in the Esplanade corridor are also higher than the statewide average collision rate (KD Anderson & Associates, Inc. 2020).

The effects of the proposed project on traffic operations were assessed by analyzing the effects on level of service (LOS) under opening year 2022 conditions, and under long-term future 2030 conditions. A LOS analysis provides a basis for describing existing traffic conditions and for evaluating future and project-related traffic operations. Level of service measures the quality of traffic flow and is represented by letter designations from A to F, with a grade of A referring to the best conditions, and F representing the worst conditions.

The acceptability of traffic operations under 2022 and 2030 future scenarios was determined by applying LOS standards presented in the Chico 2030 General Plan Policy CIRC-1.4 (Level of Service Standards) (City of Chico 2017). Consistent with this policy, LOS E is considered acceptable in the Esplanade corridor. Table 3 presents LOS during the a.m. peak hour and p.m. peak hour under the 2022 Plus Project scenario and the 2030 Plus Project scenario. All study intersections would operate acceptably under both opening year (2022) and long-term 2030 conditions.

Table 3. Intersection Level of Service

Intersection	Existing Conditions				2022 Plus Project Scenario				2030 Plus Project Scenario			
	AM Peak		PM Peak		AM Peak		PM Peak		AM Peak		PM Peak	
	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
Esplanade & Memorial Avenue	B	12.5	B	12.4	B	14.6	B	12.2	B	18.5	B	12.6
Esplanade & Lincoln Avenue	B	17.5	C	27.4	B	18.3	C	20.9	B	18.2	C	26.5
Esplanade & 1st Avenue	D	37.3	B	15.5	D	46.7	D	35.9	E	63.7	D	38.4
Esplanade & 3rd Avenue	C	21.0	B	19.0	C	27.9	C	20.1	C	31.4	C	20.6
Esplanade & 5th Avenue	B	10.7	B	16.3	B	18.6	B	16.6	C	20.9	B	17.5
Esplanade & 7th Avenue	C	23.3	B	11.7	C	31.0	B	18.5	D	43.3	C	24.9
Esplanade & 9th Avenue	B	15.3	B	11.9	B	11.5	A	9.9	B	12.5	B	11.2
Esplanade & 11th Avenue	D	39.8	B	17.4	D	39.4	B	15.1	D	52.9	B	15.9

Source: Alta Planning + Design 2019.

LOS = Level of Service. Delay is measured in seconds per vehicle.

Senate Bill (SB) 743 (Steinberg, 2013), which was codified in Public Resources Code section 21099, required changes to the guidelines implementing CEQA (CEQA Guidelines) regarding the analysis of transportation impacts. SB 743 required changes to the CEQA Guidelines that identify vehicle miles traveled (VMT) as the most appropriate metric to evaluate a project's transportation impacts. The State of California Governor's Office of Planning and Research (OPR) document *Technical Advisory on Evaluating Transportation Impacts in CEQA* presents recommendations on the implementation of SB 743 (State of California Governor's Office of Planning and Research 2018). The *Transit and Active Transportation Projects* section of the Technical Advisory states:

"Transit and active transportation projects generally reduce VMT and therefore are presumed to cause a less-than-significant impact on transportation. This presumption may apply to all passenger rail projects, bus and bus rapid transit projects, and bicycle and pedestrian infrastructure projects. Streamlining transit and active transportation projects aligns with each of the three statutory goals contained in SB 743 by reducing GHG emissions, increasing multimodal transportation networks, and facilitating mixed use development."

As a "bicycle and pedestrian infrastructure project," the project is "presumed to cause a less-than-significant impact on transportation" related to VMT.

The project would not conflict with an applicable plan, ordinance or policy regarding the circulation system, nor would it conflict with a congestion management program. The project is considered to have a **Less-Than-Significant** impact on traffic operations and the transportation circulation system.

MITIGATION: None Required.

DISCUSSION: P.3. No aspect of the project would affect air traffic patterns, increase air traffic levels or result in substantial safety risks at an airport. **No Impact** would occur.

MITIGATION: None Required.

DISCUSSION: P.4. The City's primary goal for the proposed project is to incorporate "complete streets" features and provide safer connectivity for all users between the downtown and destinations along the corridor. The objective of the project is to enhance mobility, connectivity, safety, and accessibility for roadway users of all ages and abilities on the Esplanade from Memorial Way to 11th Avenue and improve facilities for pedestrians and bicyclists on the parallel roadway, Oleander Avenue. The project would not create incompatible uses or hazardous features. The proposed project would improve safety conditions in the Esplanade corridor, in particular for pedestrians and bicycles. The effects of the project would be beneficial. **No Impact** would occur.

MITIGATION: None Required.

DISCUSSION: P.5. Construction activities would have temporary impacts on the Esplanade and Oleander Avenue for approximately nine months commencing in the spring of 2022. A traffic management plan would be developed and implemented in accordance with Caltrans Standard Specifications and would comply with the California MUTCD, Part 6, "Temporary Traffic Control." Emergency access would be maintained during construction and the Esplanade and Oleander Avenue roadways would remain open to all transportation modes; however, the project would temporarily impact traffic patterns with on-site traffic controls (flagging, pilot car, etc.) and episodic, temporary single-lane traffic closures. The proposed project would not cause any permanent closures to the roadways, nor block access to private or commercial properties. The impact would be **Less than Significant**.

MITIGATION: None Required.

DISCUSSION: P.6. The *Chico Bicycle Plan 2019 Update* (City of Chico 2019) lists the Esplanade Protected Bikeway as a Class IV facility fully funded in 2019 by Caltrans' Active Transportation Program (ATP). After conducting additional in-depth traffic analysis, the City's Public Works – Engineering Department, with the approval of the California Transportation Commission, determined that a separated Class I multi-use facility along the abandoned rail right-of-way of the Esplanade would be a safer and more appropriate alternative for both bicyclists and pedestrians. The bicycle plan provides built-in flexibility to adapt/modify proposed projects in response to new information. The plan's goals include designing and implementing a complete bikeway network, improving the safety, efficiency and comfort for bicyclists on the network, and promoting bicycling as part of a multimodal system. Though now proposed as a Class I facility, the project supports and is consistent with these goals.

The 2030 General Plan Circulation Element includes policies requiring new streets to be designed as complete streets, and it outlines objectives for retrofitting existing streets to better accommodate all modes of travel. The proposed project is consistent with the 2030 General Plan and helps implement it with the incorporation of complete streets features.

The Caltrans *Active Transportation Program* funds "infrastructure projects, non-infrastructure projects and plans that encourage increased use of active modes of transportation, such as biking and walking and projects that meet at least one of the program goals" (Caltrans 2019b). The goals of the ATP include increasing the proportion of trips accomplished by biking and walking; increasing safety and mobility for non-motorized users; advancing the ability of regional agencies to achieve greenhouse gas reduction goals; enhancing public health, and ensuring that the ATP benefits disadvantaged communities and provides a range of projects to benefit many types of active transportation users (City of Chico 2019). The project supports and is consistent with these goals. **No Impact** would occur.

MITIGATION: None Required

Q. Tribal Cultural Resources

Will the project or its related activities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Cause a substantial adverse change in the significance of a tribal cultural resource, 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).				X
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), the lead agency shall consider the significance of the resource to a California Native American tribe.				X

DISCUSSION: Q.1. Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to mandate consultation with California Native American tribes during the CEQA process to determine whether or not the proposed project may have a significant impact on a Tribal Cultural Resource. Section 21073 of the Public Resources Code defines California Native American tribes as “a Native American tribe located in California that is on the contact list maintained by the Native American Heritage Commission for the purposes of Chapter 905 of the Statutes of 2004.” This includes both federally and non-federally recognized tribes. Tribes with traditionally and culturally affiliated areas in the geographic area governed by the City of Chico that wish to be notified of City projects for the purposes of consultation under AB 52 must submit a written request to the City of Chico to be added to the City’s AB 52 consultation list. As of the writing of this document, no tribes have submitted such a request. Consultation with tribes consistent with Senate Bill 18 occurred as described under the Cultural Resources section in this document.

The City determined that the project would not cause a substantial adverse change in the significance of a tribal cultural resource either listed in the California Register of Historical Resources, local listing, or one determined by the lead agency, at its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of PRC Section 5024.1. There would be **No Impact**.

MITIGATION: None Required.

R. Utilities

Will the project or its related activities have an effect upon or result in a need for new systems or substantial alterations to the following utilities:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
1. Water for domestic use and fire protection?				X
2. Natural gas, electricity, telephone, or other communications?				X
3. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
4. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
5. Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
6. Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
7. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
8. Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
9. Comply with federal, state, and local statutes and regulations related to solid waste?				X

DISCUSSION: Q.1.-Q.4., Q.6, Q.7. The project would not result in a need for new systems or substantial alterations to the following utilities: water and water supplies, natural gas, telephone or other communications; nor would the project require the construction or expansion of water delivery or treatment facilities. The project would not require an increase in capacity at the Water Pollution Control Plant. The project would not generate wastewater or affect the need for wastewater treatment systems. If encountering a utility line during construction is anticipated, the line would be replaced in the same general location and delivery of services would not be impacted by the project. There would be **No Impact**.

MITIGATION: None Required.

DISCUSSION: Q.5. Construction and operation of the project is not anticipated to result in violations of any water quality standards or waste discharge requirements. All work would be completed by licensed contractors utilizing industry standard practices to properly manage construction of the project. Development of an erosion control plan including incorporation of BMPs are standard requirements of

projects of this size. Additionally, the City has developed a Storm Water Management Program (SWMP) per Phase II of the National Pollutant Discharge Elimination System (NPDES) Program. The project would be constructed in full compliance with applicable standards of the SWMP, which includes both construction activity and post-construction storm water discharge BMPs. Further, all projects disturbing greater than one acre, including the proposed project, must comply with and obtain coverage under the NPDES Construction General Permit (Water Quality Order 2009-0009-DWQ) to minimize water quality impacts. Therefore, the project would not violate any water quality or waste discharge requirements. Compliance with the SWMP and existing regulations would reduce potential impacts relating to water quality and waste discharge requirements to a **Less-Than-Significant** impact.

DISCUSSION: Q.8. During construction of the project, a small amount of construction waste would be generated. Waste would only be sent to permitted landfill facilities with adequate capacity to accept construction waste. The project would not create a long-term source of solid waste needing disposal. This impact is considered **Less Than Significant**.

MITIGATION: None Required.

DISCUSSION: Q.9. The project would comply with federal, state, and local statutes related to solid waste. There would be **No Impact**.

MITIGATION: None Required.

V. MANDATORY FINDINGS OF SIGNIFICANCE

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
A. The project has 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, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory.		X		
B. The project has possible environmental effects which are individually limited but cumulatively considerable. (Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past, current and probable future projects).		X		
C. The environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly.			X	

DISCUSSION: A. As discussed above, the proposed project would not restrict the range or population levels of a plant or animal community, substantially reduce biological habitats, affect rare or endangered

species or eliminate important historic or prehistoric resources. Although the potential for nesting bird and roosting bat species to be present in the project area are low, disturbances during construction could result in significant impacts. The potential for impacts to previously unknown buried archaeological or paleontological resources is low; however, impacts to such resources, if they are unearthed during construction, could be significant. With implementation of mitigation measures identified in this document, the project's potential impacts would be **Less-Than-Significant with Mitigation Incorporated**.

MITIGATION: See text in Section D, Biological Resources, and Section E, Cultural Resources.

DISCUSSION: B. The effects of other past, current and reasonably foreseeable future projects in Chico have contributed, or will contribute, to cumulative impacts including net increases in criteria pollutant emissions from both mobile and stationary sources; cumulative loss of biological habitats, effects on species, and damage to cultural resources through implementation of planned development and infrastructure projects.

The proposed project would not result in direct or indirect adverse effects on human beings that would result in cumulatively considerable contributions to cumulative impacts. Long term effects of the project are expected to be beneficial.

Temporary changes in air quality emissions would be within acceptable thresholds and would not result in a considerable contribution to cumulative impacts. The project includes installation of replacement landscaping within the project footprint and would not result in a considerable contribution to loss of trees and other vegetation. Effects of temporary construction noise on nesting birds and roosting bat species could result in a considerable contribution to significant effects on the reproduction of these species. Mitigation identified in Section D, Biological Resources, would reduce the project's cumulative contribution. While there are no known archaeological resources within the project limits, damage to previously unknown cultural resources during construction could result in a considerable contribution to cumulative impacts. Mitigation identified in Section E, Cultural Resources to implement appropriate procedures in the event that a cultural resource is encountered ground disturbing activities would minimize the potential for impacts and reduce the project's cumulative contribution. The effects of the project are considered **Less Than Cumulatively Considerable with Mitigation**.

MITIGATION: See text in Section D, Biological Resources, and Section E, Cultural Resources.

DISCUSSION: C. The proposed project would not result in substantial adverse effects on human beings. The analysis of the project shows that temporary impacts during construction, such as air quality emissions and temporary noise increases, would be within acceptable thresholds and ordinance standards and temporary changes in transportation patterns during construction would be minimized through implementation of a transportation management plan. Potential impacts to human health are considered **Less Than Significant**.

MITIGATION: None required.

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