1. ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

1.	Project Title:	Citrus Heights Electric Greenway Trail Project
2.	Lead Agency Name and Address:	City of Citrus Heights 6360 Fountain Square Drive Citrus Heights, CA 95621
3.	Contact Person and Phone Number:	Casey Kempenaar, Senior Planner (916) 727-4740
4.	Project Location:	City of Citrus Heights
5.	Project Sponsor's Name and Address:	City of Citrus Heights 6360 Fountain Square Drive Citrus Heights, CA 95621
6.	General Plan Designation:	Varies
7.	Zoning:	Varies

8. Description of Project:

In 2015, the City of Citrus Heights adopted a Mitigated Negative Declaration for the Bikeway Master Plan and General Plan Bikeway Map Update (Citrus Heights, 2105a). That document described the potential environmental impacts of adopting the Bikeway Map Update and identified several mitigation measures to reduce potential impacts to a less-than-significant level. The Citrus Heights Electric Greenway Trail Project is a relatively small segment of the overall Bikeway Master Plan and this IS/MND incorporates by reference the environmental analysis and mitigation measures adopted as part of the Bikeway Map Update, where applicable.

Project Location: The 2.9-mile-long trail would be aligned along a Sacramento Municipal Utility District (SMUD) transmission line right-of-way (ROW) in the City of Citrus Heights and unincorporated Sacramento County, California (see Figure 1, Project Site and Vicinity, and Figure 2, Regional Map). The trail would begin at Oakwood Estates near Wachtel Way and head west through Woodside Oaks / Olivine Avenue Open Space, then south across Villa Oak Drive, through C-Bar-C Park, and across Oak Avenue into Streng Avenue Open Space and Northwoods Park. The trail would continue south along Woodmore Oaks Drive and Highwood Way, through the Sundance Natural Area, and across Fair Oaks Boulevard to the western edge of Tempo Community Park where it would pass by the entrance of the SMUD utility substation before terminating at the west side of Sunrise Boulevard at the Arcade Creek Park Preserve.

Project Description: The Citrus Heights Electric Greenway Trail Project is a proposed 2.9 mile (Class I) multi-use path that largely follows an existing SMUD electric transmission corridor.

The project would provide critical connectivity, increase safety and accessibility, and complete a major milestone (priority 1 project) identified in the City's General Plan, Pedestrian Master Plan (Citrus Heights, 2016), and Bicycle Master Plan (Citrus Heights, 2015b).

The project would provide connections to residences, schools, commercial centers, and the following community parks and open space areas along the corridor: Arcade Creek Park Preserve, Tempo Community Park, Sundance Natural Area, Northwoods Park, Streng Avenue Open Space, C-Bar-C Park, and Woodside Oaks/Olivine Avenue Open Space.

As currently proposed, the trail would connect to a future Class I trail that is being built as part of a private development project. If the private development project is stalled or does not get constructed, the trail would be constructed along the southern limits of the access road that extends between Sunrise Boulevard and the entrance to the SMUD power substation. Under this alternative alignment, the trail would maintain the existing grades of the access road and would not create permanent cut or fill within the floodway.

The City anticipates a significant increase in walking and biking attributed to the Electric Greenway Trail Project.

The project is a partnership between six local agencies including:

- City of Citrus Heights (Lead Agency)
- Sacramento County
- Sunrise Recreation and Park District
- San Juan Unified School District
- Orangevale Recreation and Park District
- Sacramento Municipal Utility District (SMUD)

Pathway Characteristics: The proposed Class I pathway would be asphalt-paved and compliant with Americans with Disabilities Act (ADA) design criteria. The pathway would be a minimum of 10 feet wide with 2-foot shoulders on either side (Figure 3, Typical Cross Sections). The shoulder material would be a stable pervious surface to promote stormwater infiltration and groundwater recharge.

The project would install new mid-block pedestrian crosswalks across Fair Oaks Boulevard, Woodmore Oaks Drive, Streng Avenue, and Villa Oak Drive to facilitate pathway access. A pedestrian activated traffic signal would be installed for the proposed crosswalk on Fair Oaks Boulevard. Rectangular rapid flashing beacons may be installed at the mid-block crossings along Woodmore Oaks Drive, Streng Avenue, and Villa Oak Drive (Figure 4, Road Crossing Layouts and Treatments). The project would also close an approximately 400-foot-long gap in sidewalk along Oak Avenue between C-Bar-C Park and Olivine Avenue. The new sidewalk and pedestrian crosswalks would meet ADA-compliant design criteria. The existing crosswalk at the signalized intersection of Sunrise Boulevard and Sayonara Drive would be used to get trail users to the

existing trail on Arcade Creek Park Preserve and the existing traffic signal would be used for trail users to travel between C-Bar-C Park and Northwoods Park.

Low-level lighting would be incorporated along portions of the pathway. New lighting would include post-mounted custom light fixtures, recessed bollard fixtures, or other similar fixture types. Lighting would be required to meet current nighttime sky Title 24 outdoor lighting standards. Post-mounted lighting would be shielded and directed downward and away from adjoining properties to reduce light spillage. Trailhead markers, information signage, and wayfinding signage would also be incorporated along portions of the pathway.

Fencing would be constructed along portions of the proposed pathway adjacent to existing residential properties. Fence height and materials may vary depending on the adjacent property use and input from the property owners and stakeholders. Low-level pathway railings and retaining walls would be constructed to minimize right-of-way acquisition and to maintain grades for an ADA-compliant design. Retaining wall materials could include stained concrete, textured concrete, concrete masonry, wooden, or other decorative styles.

The project would provide six (6) to eight (8) parking spaces within the City right-of-way adjacent to the proposed Wachtel Way trailhead. The project would also eliminate 10 existing parking spaces at the northeast parking lot of Woodside Elementary School on Villa Oak Drive to accommodate the pathway.

The trail profile would maintain existing ground elevations to the maximum extent possible while meeting ADA-complaint design criteria. With this approach, the project would maintain existing drainage patterns to the maximum extent practical. The 2-foot-wide shoulders made of stable pervious surfaces (described above) would promote surface water infiltration adjacent to the trail and minimize surface water runoff. Additional drainage improvements could include bioretention swales, ditches, water quality basins, and other drainage features that comply with storm water low impact development guidelines.

Property Acquisition and Easements: It is anticipated that the project would require a permanent easement or memorandum of understanding from SMUD amounting to approximately 1.03 acres of land. The project would also require a permanent easement from San Juan Unified School District amounting to approximately 0.36 acres of land at Woodside Elementary School. Permanent easements or fee-title acquisition of right-of-way would also be required at three additional privately-owned parcels amounting to approximately 0.11 acres. Therefore, the overall permanent easements or property acquisition required for the project amounts to approximately 1.5 acres. Additional temporary construction easements may also be needed in order to construct the trail and conform to existing features.

Construction Details: The majority of the trail alignment is defined and is in use today as an informal trail. The proposed project would largely follow the existing worn path alignment or utilize on-street bicycle lanes and sidewalks. The project would require minor ground disturbances during construction in order to place the trail surfacing and more moderate disturbances at isolated locations in order to conform to Class I Trail standards, including cuts/fills, bridge structures and retaining walls. It is anticipated the average excavation depth along the trail alignment would be 1.5 feet, however in areas where lighting would be placed the depth of excavation will be

approximately 7 feet. Where the traffic signal is to be installed at the proposed Fair Oaks Boulevard crossing, the maximum depth of excavation will be approximately 15 feet. There are also some segments which would require retaining walls to minimize impacts to the surrounding environment. The excavation in those areas is anticipated to be 10 feet maximum. Where a new creek crossing would be constructed, the maximum depth of excavation is anticipated to 20 feet, for a total construction disturbance area of roughly 9 acres.

Typical construction equipment, such as trucks, excavators, and grading equipment would be deployed. At trailheads and connections to existing roadways collapsible bollards, gates, or other access controls would be employed as a safety feature. The construction is not anticipated to require full closures to any roadways, however, lane closures are anticipated during striping efforts.

Project construction is anticipated to start in spring of 2021 and occur over 21 months. Construction would comply with the City of Citrus Heights Noise Ordinance, which limits construction to the hours of 6:00 a.m. to 8:00 p.m. on weekdays and 7:00 a.m. to 8:00 p.m. on weekends.

Tree Removal and Trimming: A total of 302 trees that qualify for protection under the City's Tree Preservation and Protection Ordinance, and 13 trees that are not protected, are anticipated to be removed either due to safety concerns (hazard trees), poor condition, or because of their location within or along the border of the anticipated impact area. Additionally, a total of 304 trees that qualify for protection, and 10 that do not, are recommended to be pruned to remove dead wood and leaders, limbs, or branches containing rot. The project would include tree replacement in accordance with the local tree preservation and protection ordinances.

Creek and Floodway Encroachments: The trail alignment runs along Arcade Creek and Cripple Creek. As a result, at three locations along the alignment, the trail would encroach on the Federal Emergency Management Agency (FEMA) 100-year flood hazard zone, and it would cross the 100-year flood hazard zone at two locations. The linear encroachments would result in earthwork within the 100-year flood hazard zone. The project would require three separate linear encroachments into the creeks floodways and two perpendicular encroaches crossing the creeks, which require two new culverts/bridges along the 2.9 mile trail alignment. The bridges would need to be constructed with adequate concrete footing depth for support of these structures. To assess the project's potential effects on the 100-year floodplain, the City prepared the Hydraulic Study Report for the Citrus Heights Electric Greenway Trail Project (Wreco, 2019a). Information regarding the floodplain encroachments and creek crossings is provided below. See Section 1.10, Hydrology and Water Quality, for additional discussion.

The first linear encroachment along the creek and floodway would be at the project's southern limits near Sunrise Boulevard and Sayonara Drive where the trail would connect to the existing trail system at Arcade Creek. This project is not proposing modifications to the Sunrise Bridge over Arcade Creek, but rather would utilize the existing structure to accommodate the trail. The second encroachment would occur along the access road to the SMUD Power Substation, where the trail would run parallel to the south side of the access road and turn north at the entrance to the substation. This access road currently encroaches into the Arcade Creek floodway and,

therefore, the trail would as well. The trail would maintain the existing grades of the access road and would not create permanent cut or fill within the floodway.

The second and third linear encroachments are located at the southern limits of Tempo Community Park and at the northern limits of Tempo Community Park near Fair Oaks Boulevard. The trail meanders in and out of the floodway through the alignment at the western limits of the park. The trail follows this alignment to minimize impacts to the park facilities but also minimizes impacts to the natural creek environment and limits tree removal. The trail would maintain the existing grades of the access road and would not create permanent cut or fill within the floodway at these locations.

The first perpendicular crossing would be of Arcade Creek located just east of Fair Oaks Boulevard. At this location, an existing steel bridge was constructed circa 1997. The existing structure would need to be removed as a part of this project due to its encroachment into the 100-year water surface elevation (WSE). The required ADA upgrades to the existing decking and additional railing would negatively impact the Arcade Creek 100-year floodplain impacts. The project is proposing to place a new structure that would be 4 feet higher than the existing bridge and increase the span from 35 feet to 40 feet wide. This structure is not proposing to span the entire floodway, as it is approximately 100 feet wide. Therefore, the project would provide a structure that spans only the creek and as a result there would be embankment placed within the floodway in order to meet the adjusted trail profile. The design would minimize affecting the floodway by balancing the cut and fill and/or providing a pipe culvert bypass system.

The second perpendicular crossing would be of Cripple Creek located just north of Olivine Avenue. There is currently no structure at this location. The project is proposing to place a similar structure to that which would be located at Arcade Creek. The structure is not proposing to span the entire floodway, as it is approximately 55 feet wide. Therefore, the project would provide a structure that spans only the creek and as a result there would be embankment placed within the floodway. The design would minimize affecting the floodway by balancing the cut and fill and/or providing a pipe culvert bypass.

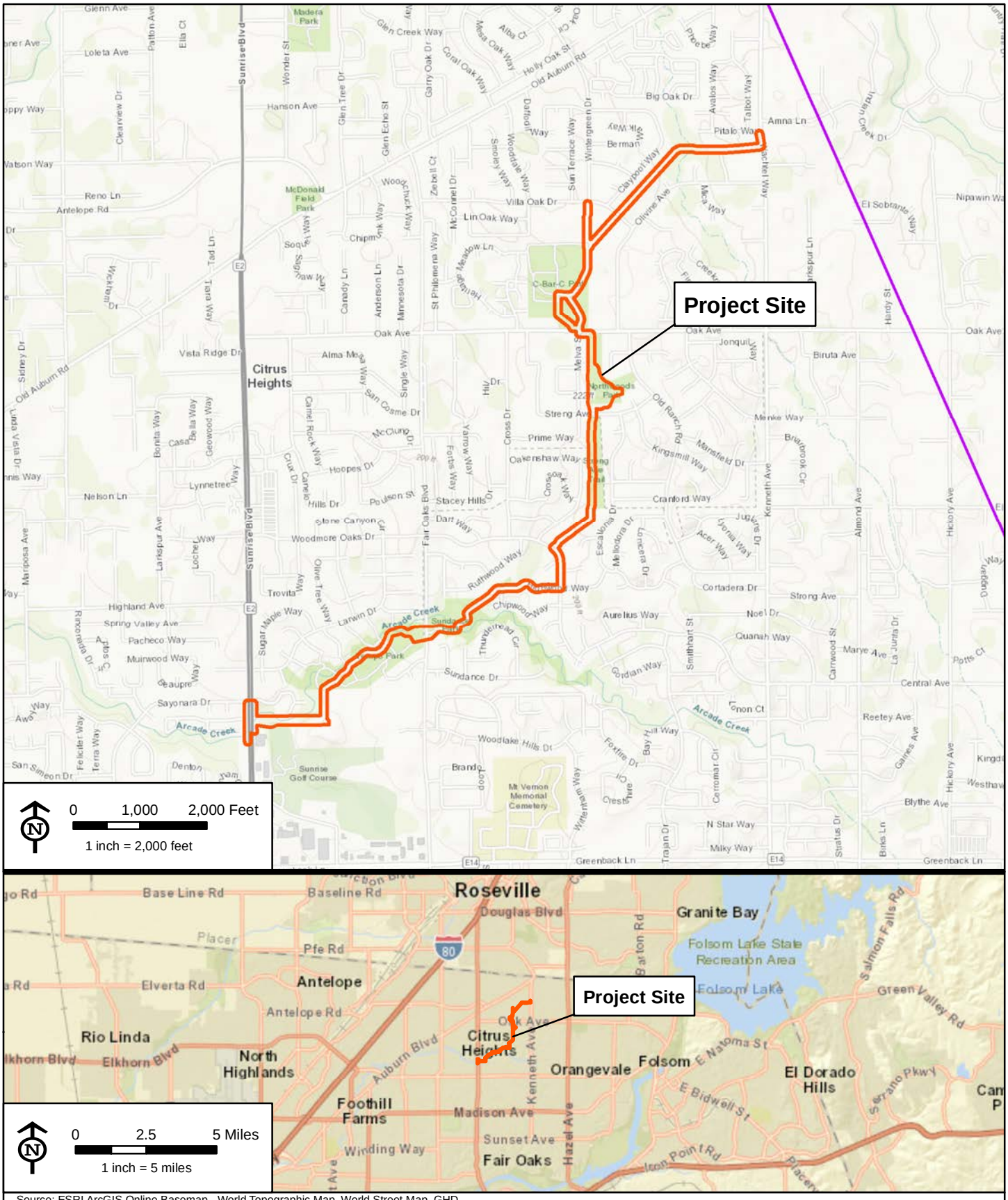
9. Surrounding Land Uses and Setting: (Briefly describe the project's surroundings)

   The project alignment traverses urban parks, open spaces, City streets and sidewalks in residential neighborhoods, and electric transmission rights-of-way within the City of Citrus Heights and County of Sacramento.

10. Other public agencies whose approval is required: (e.g., permits, financing approval, or participation agreement)

    Other public agencies with required approvals include Sunrise Recreation and Park District, Orangevale Recreation and Park District, SMUD, San Juan Unified School District, Caltrans, County of Sacramento, the California Department of Fish and Wildlife, Regional Water Quality Control Board, and the United States Army Corps of Engineers.

11. 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, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?	Appendix B of the Archaeological Survey Report for the Citrus Heights Electric Greenway Trail Project documents the outreach to Native American tribes that has been conducted by the City (InContext, 2019). One tribe—the United Auburn Indian Community (UAIC)—requested consultation. Between November 2018 and January 2019, the City coordinated with the UAIC to share information about the project and develop mitigation measures to the satisfaction of UAIC. Consultation was completed in January 2019.



Source: ESRI ArcGIS Online Basemap - World Topographic Map, World Street Map, GHD

BARGAS Environmental Consulting

Public Land Survey System (PLSS):
Mount Diablo Meridian
Township 10N, Range 6E and 7E, Section 19, 25, 30, 36

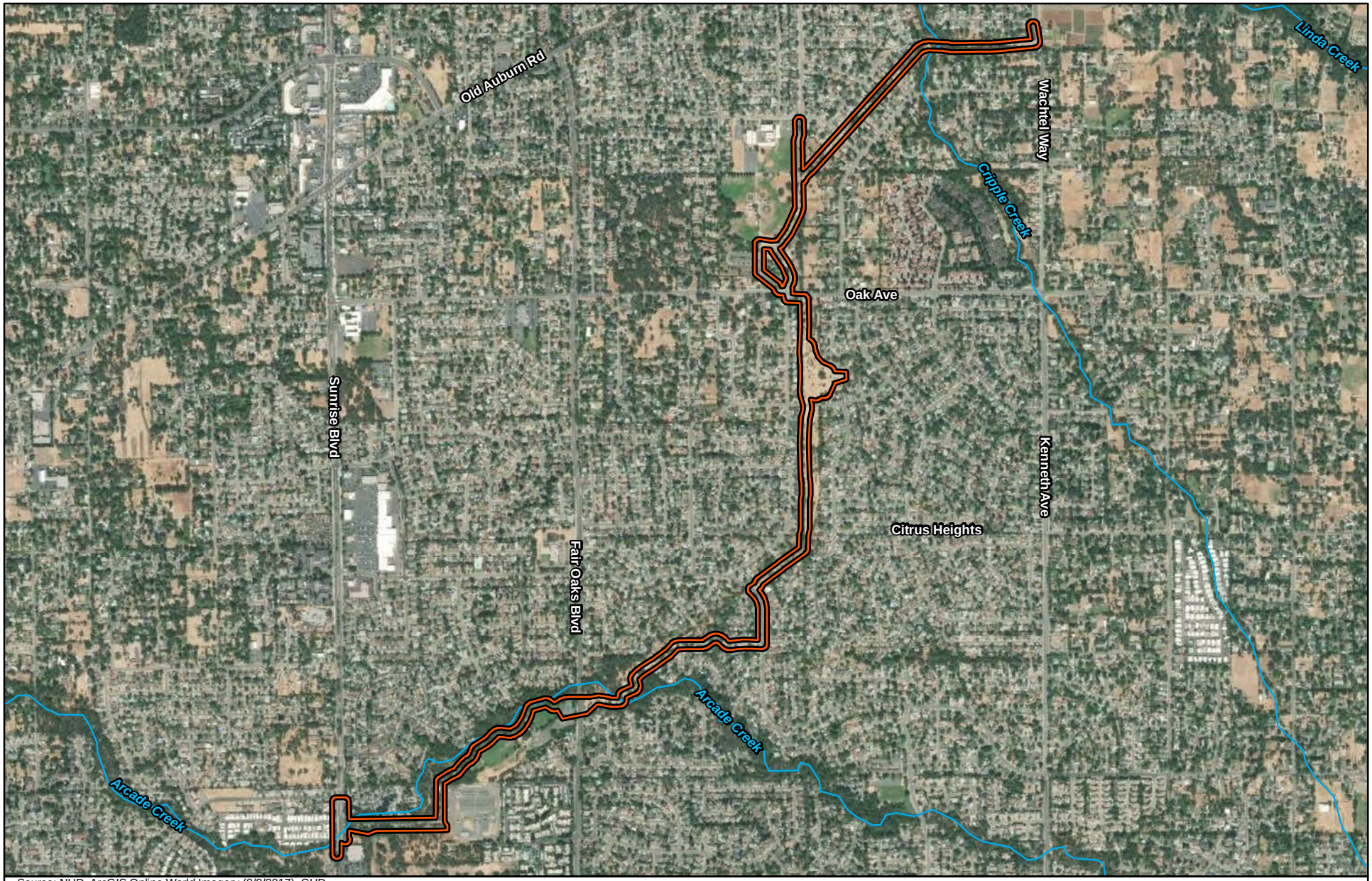
Watershed: Lower American (18020111)

Project Site Coordinates: -121.255° N, 38.962° W

Figure 1
Project Site and Vicinity

Citrus Heights Electric Greenway

Map Created:2/11/2019, Map Revised: 3/8/2019, Bargas Project Number: 2018-1008



Source: NHD, ArcGIS Online World Imagery (8/8/2017), GHD

0 1,000 2,000 Feet

1 inch = 1,500 feet

BARGAS Environmental Consulting

Study Area

Streams

Figure 2
Regional Map

Citrus Heights Electric Greenway

Map Created:2/11/2019, Map Revised: 3/8/2019 Bargas Project Number: 2018-1100

INTERSECTIONS

Sunrise Blvd

Fair Oaks Blvd

Woodmore Oaks Dr at Highwood Way

Woodmore Oaks Dr near 7-Eleven

Streng Ave

Oak Ave

Villa Oak Dr

Wachtel Way

CROSSING SOLUTIONS

STRIPING OPTIONS


Stamped Asphalt


High Visibility Crossing with Stenciling


Raised High Visibilty Crossing

SIGNAL OPTIONS


Rectangular Rapid Flashing Beacon (RRFB)


Flashing Pedestrian Crossing


High-Intensity Activated crossWalK Beacon (HAWK)

Source: Alta Planning + Design, Inc.

City of Citrus Heights
Electric Greenway Trail Project

Road Crossing Layouts and Treatments

Project No. 11176988
Revision No.
Date 04/25/2019

FIGURE 3

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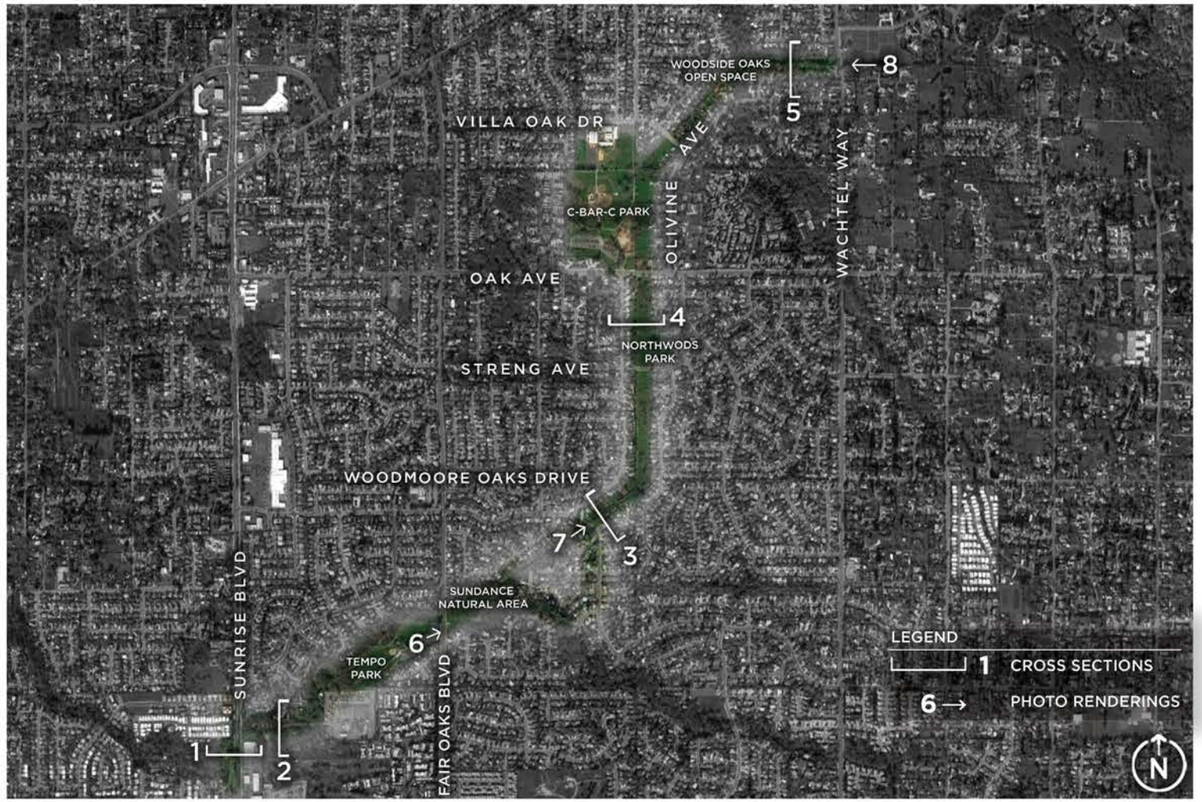
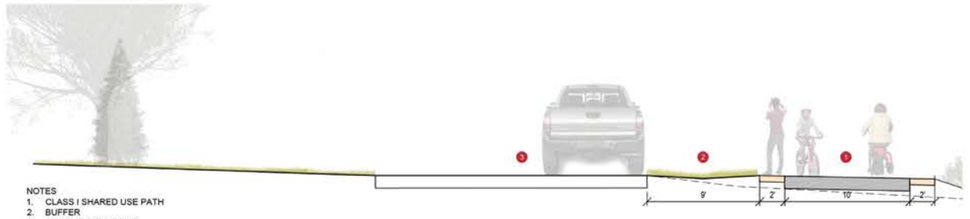
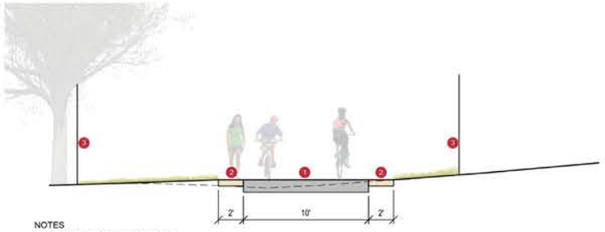
SECTION AND RENDERING KEY MAP



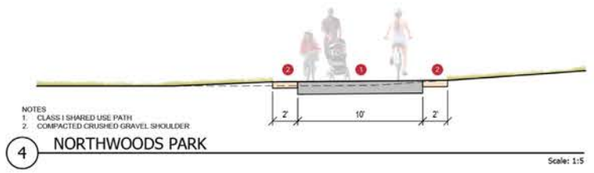


2 ACCESS DRIVE SECTION



3 CORRIDOR SECTION

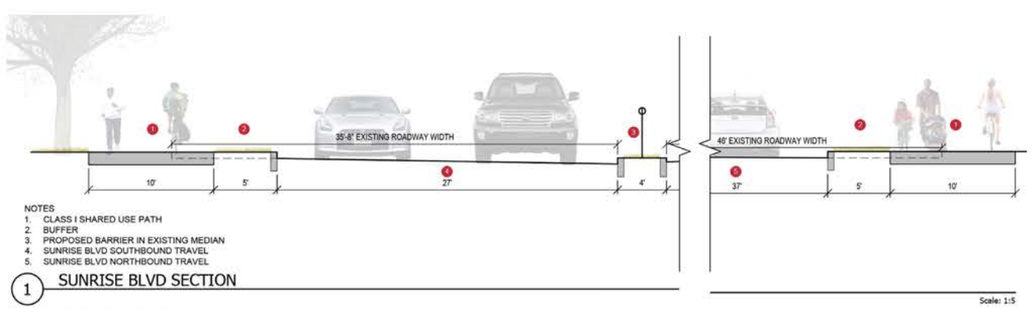
Scale: 1:5



4 NORTHWOODS PARK

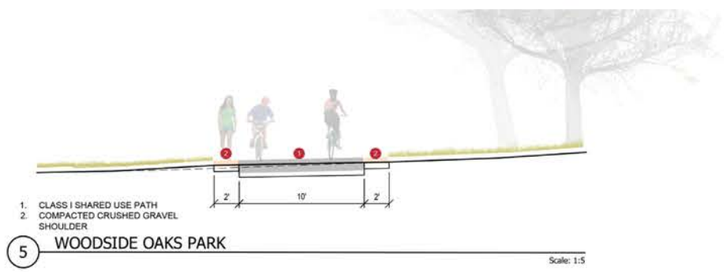
Scale: 1:5

TYPICAL SECTION CONCEPTS



1 SUNRISE BLVD SECTION

Scale: 1:5



5 WOODSIDE OAKS PARK

Scale: 1:5

Source: Alta Planning + Design, Inc.

City of Citrus Heights
Electric Greenway Trail Project

Typical Cross Sections

Project No. 11176988
Revision No.
Date 04/25/2019

FIGURE 4

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ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

☐ Aesthetics	☐ Agriculture and Forest Resources	☐ Air Quality
☐ Biological Resources	☐ Cultural Resources	☐ Energy
☐ Geology / Soils	☐ Greenhouse Gas Emissions	☐ Hazards / Hazardous Materials
☐ Hydrology / Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☐ Transportation	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance
	☐ None	☒ None with Mitigation Incorporated

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 "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) 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, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) 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, nothing further is required.

Signature:	**Date:**
Printed Name:	**For:**

1.1 AESTHETICS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

I. Aesthetics.

Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project:

a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) Would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	☒	☐
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

1.1.1 IMPACT ANALYSIS

a) Have a substantial adverse effect on a scenic vista?

No Impact. The project is not visible from a designated scenic vista. No impact would occur.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

No Impact. The project is not located within or adjacent to a designated state scenic highway. No impact would occur.

c) Would the project conflict with applicable zoning and other regulations governing scenic quality?

Less than Significant. Applicable regulations governing scenic quality include zoning, General Plan goals, and the City's tree ordinance.

A Class I multi-use trail along creeks, open space areas, parks, and the SMUD utility corridor was included in the 2015 Bikeway Master Plan and General Plan Update. Since zoning and land use designations are required to be consistent with the adopted General Plan, the project would not conflict with zoning.

The City of Citrus Heights General Plan places a high priority on protecting natural features—oak trees, wildlife habitat, creeks and riparian areas—which also serve as visual resources and contribute to the quality of life. Although the proposed trail improvements would result in disturbance along creeks and riparian areas and require tree removal, the trail would be designed and constructed so as to minimize the disturbance to the maximum extent practicable. The project would be fully consistent with the City's General Plan goals governing scenic quality, which include:

Goal 10: Achieve attractive, inviting, and functional corridors

Goal 30: Promote attractive and well-maintained roadways and sidewalks

Goal 29: Plan, design, construct, and manage a Complete Streets transportation network that accommodates the needs of all mobility types, users, and ability levels.

Goal 34: Preserve, protect, and enhance natural habitat areas, including creek and riparian corridors, oak woodlands, and wetlands

Goal 38: Establish a system of creekside trails, passive open space, and parks for public use.

Goal 39: Create open spaces in future urban development with natural features for public use and enjoyment.

Goal 59: Ensure that ample and appropriate parks and recreation facilities and programs are available to all residents.

Construction of the Class I multi-use pathway would require the removal of approximately 387 trees that are protected under the City's Tree Preservation and Protection Ordinance, and 29 trees that are not protected. Additionally, 280 protected trees would be pruned. Consistent with Mitigation Measures BIO-6 and BIO-7 from the *Bikeway Master Plan and General Plan Bikeway Map Update IS/MND* (City of Citrus Heights, 2015a), the City conducted a tree survey along the project alignment— the *Electric Greenway Trail Project Arborist Report of Findings* (Bargas Environmental Consulting, 2019c) —and would obtain tree permits for all protected trees requiring removal and pruning. To mitigate impacts to the riparian corridor, the City would coordinate with the California Department of Fish and Wildlife (CDFW) to obtain a Streambed Alteration Agreement. As a result, this impact would be less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

Less than Significant. Low-level pedestrian lighting would be installed along portions of the pathway to improve safety. Lighting would be provided consistent with the Zoning Code, which requires that lights be shielded to avoid excessive off-site glare. The potential impact would be less than significant.

Mitigation Measures: No mitigation is required.

1.2 AGRICULTURE AND FOREST RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

II. Agriculture and Forest Resources.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒
b) Conflict with existing zoning for agricultural use or a Williamson Act contract?	☐	☐	☐	☒
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

1.2.1 IMPACT ANALYSIS

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

No Impact. The Sacramento County Important Farmland Map designates the project area as "urban and built-up land" (California Department of Conservation, 2017). The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use. No impact would occur.

b) Conflict with existing zoning for agricultural use or a Williamson Act contract?

No Impact. The project would not be located on land enrolled in a Williamson Act Contract or on land zoned and used for agricultural use. No impact would occur.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The project would not be located on land zoned for forest land, timberland, or timberland production. No impact would occur.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project would not be located on land utilized or zoned for forest land. No impact would occur.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

No Impact. There are no areas within the City of Citrus Heights which are designated as Prime Farmland, Unique Farmland, Farmland of Statewide Importance, or forest land. The project would not involve changes in the existing environment which could result in conversion of farmland or timberland in the project area. No impact would occur.

Mitigation Measures: No mitigation is required.

1.3 AIR QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

III. Air Quality.

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations.

Are significance criteria established by the applicable air district available to rely on for significance determinations?	☒ Yes		☐ No	
Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☒	☐	☐
b) 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?	☐	☒	☐	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

1.3.1 IMPACT ANALYSIS

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less than Significant with Mitigation Incorporated. A project would not conflict with or obstruct implementation of the applicable air quality plan if it is consistent with the growth assumptions contained within the plan, would comply with all applicable air quality rules and regulations, and would not exceed the air district's recommended thresholds of significance. The applicable air quality plan is the Sacramento Metropolitan Air Quality Management District's (SMAQMD) Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan, adopted in July 2017.

By design, the proposed improvements would be consistent with the goals and policies identified by the City's General Plan pertaining to sustainability and an overall strategy for reduction of greenhouse gas emissions and air quality improvement. As described in Section 1.14.1, Population

and Housing, the project would not directly or indirectly induce population growth; therefore, the project would not exceed the growth assumptions contained in the air quality plan. However, without implementation of SMAQMD's required construction best management practices, the project would conflict with the Sacramento Regional 2008 NAAQS 8-Hour Ozone Attainment and Reasonable Further Progress Plan, a significant impact. With implementation of Mitigation Measure AIR-1 (SMAQMD Basic Construction Emission Control Practices), the impact would be reduced to a less-than-significant level. The emissions control measures specified in the mitigation measure would ensure construction of the project would not exceed the SMAQMD's recommended thresholds of significance, as demonstrated in items b through d, below. Therefore, with implementation of mitigation, the proposed project would not conflict with or obstruct implementation of any applicable air quality plan.

The impact would be less than significant with mitigation incorporated.

b) 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?

Less than Significant with Mitigation Incorporated. Sacramento County is currently designated as "attainment" for all state and federal ambient air quality standards, except ozone, particulate matter 10 microns in diameter (PM_{10}) and 2.5 microns in diameter ($PM_{2.5}$). The current "non-attainment" status for ozone, PM_{10} and $PM_{2.5}$ signifies that these pollutant concentrations have exceeded the established standards.

In order to evaluate ozone and other criteria air pollutant emissions and support the attainment goals for those pollutants, the SMAQMD has established significance thresholds for emissions of $PM_{2.5}$ and PM_{10}, and ozone precursors – reactive organic gases (ROG) and nitrous oxides (NO_X). The significance thresholds, expressed in pounds per day (lbs/day), are listed in Table 1.3-1, below, and are the SMAQMD's current established thresholds of significance for use in the evaluation of air quality impacts associated with proposed development projects. The City of Citrus Heights, as Lead Agency, utilizes the SMAQMD's recommended project-level criteria air pollutant thresholds of significance for CEQA evaluation purposes. Thus, if the project's emissions were to exceed the pollutant thresholds recommended by the SMAQMD, the project would have the potential to result in significant effects to air quality, and affect the attainment of federal and state Ambient Air Quality Standards.

Table 1.3-1 — Current SMAQMD Mass Emissions Thresholds of Significance

Pollutant	Construction Threshold (lbs/day)	Operational Threshold (lbs/day)
ROG	None	65
NO_X	85	65
PM_{10}	80	80
$PM_{2.5}$	82	82

Note: PM10 and PM2.5 thresholds assume all feasible best available control technologies (BACT) and BMPs are applied.
Source: SMAQMD 2018

Construction

The SMAQMD has developed a screening level to assist lead agencies in determining if air pollutant emissions from constructing a project in Sacramento County will exceed the SMAQMD's construction significance thresholds. Construction of a project that does not exceed the screening level and meets all the screening parameters is considered to have a less-than-significant impact on air quality. The project would not exceed the screening level and meets all the screening parameters; as such, emissions quantification is not required.

Although the project does not exceed the SMAQMD's screening level, the project's potential construction-generated emissions were quantified using SMAQMD's Roadway Construction Emissions Model (version 9.0).

The project's construction footprint is estimated to be approximately 9 acres. The project would not include vertical construction, demolition activities, or major trenching activities. Construction is anticipated to occur over 21 months. It is estimated that the project would generate less than 3,000 cubic yards of export over the duration of construction, which equates to less than 1 haul truck trip per day.

The project's estimated construction emissions and applicable SMAQMD thresholds of significance are provided in Table 1.3-2. As shown in the table, the project's construction activity would not exceed the SMAQMD's recommended thresholds of significance. However, SMAQMD's construction thresholds of significance are applied assuming all feasible best available control technologies and best management practices are applied (see Table 1.3-1). Currently, the project does not implement the SMAQMD's Basic Construction Emission Control Practices (also known as Best Management Practices [BMPs]). Therefore, the impact associated with construction-related criteria pollutant emissions is considered a significant impact. Implementation of Mitigation Measure AIR-1 (SMAQMD Basic Construction Emission Control Practices) is required to reduce the project's potential construction-generated impact to less than significant.

Table 1.3-2 — Project Construction-generated Air Pollutant Emissions

Parameter	Pollutant Emissions (lbs/day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Project Construction Emissions	6	65	23	7
SMAQMD Thresholds of Significance	None	85	80	82
Significant Impact?	No	No	No	No

Notes: PM10 and PM2.5 thresholds assume all feasible BACT/BMPs are applied.
Source: SMAQMD 2018

Operation

Operational emissions of ROG, NO_X, $PM_{2.5}$, and PM_{10} from typical development projects are generated by mobile and stationary sources, including day-to-day activities such as vehicle trips to and from a given site, heavy equipment operation, natural gas combustion from heating

mechanisms, landscape maintenance equipment exhaust, and consumer products (e.g., deodorants, cleaning products, spray paint, etc.). Following construction, the project would not include any stationary sources of air emissions. Vehicle trips associated with operation and maintenance of the trail would include annual inspections, repaving, painting, and repairs as needed. Operation and maintenance of the project would generate less than one traffic trip per week on average. The proposed project would not involve daily on-site operations other than recreational use by trail users. Implementation of the project would not involve substantial mobile, stationary, or area activity that generate criteria emissions. Therefore, the project would not result in substantial long-term operational emissions of criteria air pollutants and project-generated operational emissions would not violate or contribute substantially to an existing or projected air quality violation. The project's impact would be less than significant. No mitigation is required.

c) Expose sensitive receptors to substantial pollutant concentrations?

Less than Significant. The proposed project would not involve on-site operations other than recreational use by pedestrians and bicyclists. Emissions of diesel particulate matter (DPM) resulting from construction-related equipment and vehicles would be temporary and, due to the linear design of the project, would not occur in one location for a substantial duration of time. Sensitive receptors (surrounding neighborhood residents) would not be exposed to substantial long-term concentrations of DPM emissions associated with construction of proposed improvements.

Implementation of the project would not introduce any sensitive receptors to the area, and, thus, would not expose new sources of sensitive receptors to any existing sources of substantial pollutant concentrations.

In conclusion, the proposed project would not introduce sensitive receptors to the area and would not generate substantial levels of pollutant concentrations that would affect existing sensitive receptors in the area. The impact would be less than significant. No mitigation is required.

d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Less than Significant. While offensive odors rarely cause any physical harm, they can be unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and air districts. Project-related odor emissions would be limited to the construction period, when emissions from equipment may be evident in the immediately surrounding area. Construction activities and odors would be short-term and would disperse rapidly, and would not result in the creation of long-term objectionable odors affecting a substantial number of people. Following construction, the project would not create a new source of objectionable odors. The majority of the trail users would be non-motorized and would not impact emissions levels; however, there would be an occasional maintenance vehicle accessing the area for park maintenance and utility (SMUD) maintenance activities. The vehicular traffic would occur in the area regardless of the project's construction. This impact would be less than significant. No mitigation is required.

Mitigation Measures:

Mitigation Measure AIR–1: SMAQMD Basic Construction Emission Control Practices.

Prior to issuance of demolition permits, grading permits, or building permits for the proposed project, the City of Citrus Heights shall ensure that site plan notes include requirements for the contractor to implement the following Basic Construction Emission Control Measures. Visual site inspections shall be conducted throughout construction to ensure these measures are implemented appropriately:

A. All exposed surfaces shall be watered two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

B. Haul trucks transporting soil, sand, or other loose material on the site shall be covered and/or shall maintain at least two feet of free board space. Any haul trucks that would be traveling along freeways or major roadways shall be covered.

C. Wet power vacuum street sweepers shall be used to remove any visible trackout of mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

D. Vehicle speeds on unpaved roads to shall be limited to a maximum of 15 miles per hour.

E. All roadways, driveways, sidewalks, and parking lots to be paved shall be completed as soon as possible. In addition, building pads shall be laid as soon as possible after grading unless seeding or soil binders are used.

1.4 BIOLOGICAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IV. Biological Resources.				
Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☒	☐	☐
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

1.4.1 IMPACT ANALYSIS

The City is proposing the development of 2.9 miles of Class I bikeway intended to serve the community of Citrus Heights. The Class I bikeway is a subset of the overall 2015 Citrus Heights Bikeway Master Plan (Citrus Heights, 2015b). The overall impacts of the 2015 Citrus Heights BMP, which contemplated the construction of 72.7 miles of Class I, II, and III bikeways, were analyzed at a programmatic level in the 2015 Citrus Heights BMP IS/MND (Citrus Heights, 2015a). This project-level impact analysis incorporates by reference the 2015 analysis, where appropriate, and supplements it with additional project-specific analysis, where necessary.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated. In order to identify the biological resources that could be adversely affected by the Class I trail and develop appropriate avoidance and minimization measures to address potential impacts, the City prepared the *Biological Resources Assessment for the Citrus Heights Electric Greenway Project* (Bargas Environmental Consulting, 2019a) (herein referred to as the BRA).

Figure 1 shows the project's Site and Vicinity, and Figure 2 shows the project's Study Area, which comprises a 50-foot buffer around the proposed trail alignment. A table identifying regionally occurring special-status species was compiled in the review for the overall Bikeway Master Plan based on the California Natural Diversity Database (CNDDB), the U.S. Fish and Wildlife Service (USFWS) Information and Planning Conservation (IPaC), and the California Native Plant Society (CNPS) lists. This list of species was updated and used to focus the biological evaluation of the project's specific impacts on species.

Biological surveys were subsequently conducted for the project to determine whether regionally occurring special-status species occur or have the potential to occur within the Study Area based on the presence of the species or presence of habitat required by the species. The additional biological studies recently conducted for the proposed project included botanical surveys focused on dwarf downingia (*Downingia pusilla*), stinkbells (*Fritillaria agrestis*), Ahart's dwarf rush (*Juncus leiospermus* var. *ahartii*), and Sanford's arrowhead (*Sagittaria sanfordii*), an arborist survey, an aquatic resources delineation, and species-specific surveys for western burrowing owl (*Athene cunicularia*) and elderberry plants (*Sambucus* spp.) that could support valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*). The following set of criteria has been used to determine each species potential for occurrence within the Study Area:

- *Present:* Species known to occur within the Study Area based on CNDDB records and/or observed within the Study Area during the biological surveys.
- *High:* Species known to occur on or near the Study Area (based on CNDDB records within 5 miles and/or based on professional expertise specific to the Study Area or species) and there is suitable habitat within the Study Area.
- *Low:* Species known to occur in the vicinity of the Study Area and there is marginal habitat within the Study Area -OR- Species is not known to occur in the vicinity of the site, however, there is suitable habitat within the Study Area.

- *None:* Species is not known to occur on or in the vicinity of the Study Area and there is no suitable habitat within the Study Area -OR- Species was surveyed for during the appropriate season with negative results -OR- Species is not known in Study Area.

Special-Status Plants

One special-status plant species, Sanford's arrowhead, was observed to be present during the recent botanical surveys conducted within the Study Area for the proposed project. Three special-status plant species, dwarf downingia, Ahart's dwarf rush, and stinkbells are not known to occur within the proposed project's Study Area as they were not observed during the botanical surveys conducted during their blooming periods and suitable habitat is not present (Bargas Environmental Consulting, 2019d).

Plant Species Present in the Study Area

- Sanford's Arrowhead

  Sanford's arrowhead is a perennial herb found in marshes, swamps, and shallow freshwater areas below 650 meters in elevation. The blooming period is from May through November (Turner, Haynes, & Hellquist, 2012). There are five locations where Sanford's arrowhead was observed along Arcade Creek, two within Tempo Community Park and three within Sundance Natural Area. Two of the occurrences are within the Study Area, and three of the occurrences are immediately adjacent to the Study Area. One of the two occurrences within the Study Area is outside of the project's anticipated impact area, with the other being in close proximity to anticipated project impacts. Although that occurrence is in an area that will be impacted by the project, this species is present within the bed and banks of Arcade Creek and the nearby project work would occur outside of the banks of Arcade Creek. Consequently, this occurrence would be avoided during construction. Due to the recorded occurrences in the immediate vicinity and within the Study Area, this species is known to be *present* within the Study Area. Although construction would occur outside of the Arcade Creek channel, the potential for project construction to impact to Sanford's Arrowhead is conservatively assumed to be significant.

Special-Status Wildlife

A March 2019 query of the California Natural Diversity Database (CNDDB) identified 14 wildlife species occurrences within five miles of the Study Area (CDFW, 2019).

Table 1.4-1 below, summarizes the 14 wildlife occurrences. Where applicable, negative results from recent field surveys are included within the potential for occurrence shown below. Species that are not considered to be special-status animals by CEQA regulations (14 CCR § 15380) are not further addressed in this document. This includes an andrenid bee (*Andrena subapasta*), California linderiella (*Linderiella occidentalis*), Cooper's hawk (*Accipiter cooperii*), and great blue heron (*Ardea herodias*).

Table 1.4-1 — Wildlife Occurrences

Common Name *(Scientific Name)*	Status (Federal/State/Other)	Community/Habitat Requirements	Potential for Occurrence
Valley Elderberry Longhorn Beetle (*Desmocerus californicus dimorphus*)	Federally Threatened	Obligate with elderberry shrubs occurring within riparian woodlands and oak woodlands.	Low
Western Pond Turtle (*Emys marmorata*)	California Species of Special Concern	Requires perennial aquatic habitats, including riparian woodlands with perennial streams.	High
Burrowing Owl (*Athene cunicularia*)	California Species of Special Concern	Ruderal and annual grasslands	None
White-Tailed Kite (*Elanus leucurus*)	California Fully Protected	California coastal and valley lowlands, including riparian woodlands, oak woodlands, and annual grasslands.	High
Migratory Birds and Other Birds of Prey	Projected under the MBTA and Eagle Acts	Various. Likely to be present throughout the riparian woodlands and oak woodlands throughout the Project Study Area.	High
Special-Status Bat Species (*Antrozous pallidus* and *Lasionycteris noctivagans*)	California Species of Special Concern	Hollow trees within riparian woodlands in the Project Study Area may provide roosting habitat for certain special-status bat species.	Low
Central Valley steelhead (*Oncorhynchus mykiss*)	Federally Threatened	Streams, rivers, estuaries and marine habitat.	None
Western Spadefoot (*Spea hammondi*)	California Species of Special Concern	Uses open areas with sandy or gravelly soils, in a variety of habitats including: mixed woodlands, grasslands, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains from 0 to 1,200 meters in elevation.	None
Peregrine Falcon (*Falco peregrinus*)	California Fully Protected	Peregrine falcons nest on high ledges on cliffs, electrical transmission towers, buildings, and other structures.	High
Swainson's Hawk (*Buteo swansoni*)	California Threatened	In the Central Valley, Swainson's hawks nest in isolated trees, small groves, or large woodlands next to open grasslands or California agricultural fields.	High
Bank swallow (*Riparia riparia*)	California Threatened	Found primarily in riparian and other lowland habitats in California west of the deserts during the spring-fall period. Uses holes dug in cliffs and river banks for cover. Will also roost on logs, shoreline vegetation, and telephone wires.	High

Common Name *(Scientific Name)*	Status (Federal/State/Other)	Community/Habitat Requirements	Potential for Occurrence
Merlin (*Falco columbarius*)	California Department of Fish and Wildlife Watch List	Uncommon winter migrant from September to May. Seldom found in heavily wooded areas, or open deserts. Frequents coastlines, open grasslands, savannahs, woodlands, lakes, wetlands, edges, and early successional stages. Ranges from annual grasslands to ponderosa pine and montane hardwood-conifer habitats. Occurs in most of the western half of the state below 1500 m	High
Purple Martin (*Progne subis*)	California Species of Special Concern	An uncommon to rare, local summer resident in a variety of wooded, low-elevation habitats throughout the state; a rare migrant in spring and fall, absent in winter. Uses valley foothill and montane hardwood, valley foothill and montane hardwood-conifer, and riparian habitats.	High
Vernal Pool Fairy Shrimp (*Branchinecta lynchi*)	Federally Threatened	The vernal pool fairy shrimp has an ephemeral life cycle and exists only in vernal pools or vernal pool-like habitats; the species does not occur in riverine, marine, or other permanent bodies of water.	None

Recent focused surveys have concluded that burrowing owl (*Athene cunicularia*) does not occur within the project's Study Area (Bargas Environmental Consulting, 2019e). The project's Study Area does not contain habitat that could support the following species: western spadefoot (suitable habitat is not present within the project Study Area); vernal pool fairy shrimp (no vernal pools are present within the project Study Area); and Central Valley steelhead (Arcade and Cripple Creeks are not salmonid streams).

Wildlife Species with a High Potential to Occur in the Study Area

- Western Pond Turtle

  Western pond turtles require slow moving perennial aquatic habitats with suitable basking sites. Suitable aquatic habitat typically has a muddy or rocky bottom with emergent aquatic vegetation for cover (Stebbins 2003). Western pond turtles, however, occasionally inhabit irrigation ditches. Western pond turtles typically overwinter within 300 feet of aquatic habitat in areas with moderate woody vegetation. Nests are generally located in annual grasslands within 100 feet of aquatic habitat. Eggs are laid between May and August and hatch in approximately 80 days (Rathburn, Scott, & Murphey, 2002). There are four CNDDB records for this species within five miles of the Study Area (CDFW, 2019). The creek corridors and riparian habitat in the Study Area provide habitat for this species. No western pond turtles were observed within the Study Area during the biological surveys conducted for the overall BMP. Additionally, no western pond turtles were incidentally observed during any of the recent surveys conducted for the proposed project. Regardless, this species has a *high* potential to occur within the Study Area due to its proximity to streams with suitable habitat. Although the majority of project construction activities at

bridge crossings would occur outside of the creek banks, due to the high potential to occur and the extent of construction activities that would occur alongside suitable habitat, the project's potential to impact western pond turtle is considered potentially significant.

- Migratory Birds and Other Birds of Prey

  Many migratory bird species and other birds of prey are protected under 50 CFR 10 of the MBTA and/or Section 3503 of the California Fish and Game Code and have the potential to nest throughout the Study Area. Included within this analysis are the special-status bird species with previously-recorded CNDDB occurrences known within five miles of the Project Study Area (CDFW, 2019). These include: Peregrine falcon, bank swallow, merlin, and purple martin. Swainson's hawk fall within the category, but are discussed in additional detail below. Migratory birds and other birds of prey have a *high* potential to nest within the Study Area during the nesting season. The generally accepted nesting season is from February 1 through August 31. Project construction activities could result in impacts to nesting migratory birds and other birds of prey. This impact is considered potentially significant.

- Swainson's Hawk

  Swainson's hawk is a long-distance migrant with nesting grounds in western North America. The Swainson's hawk population that nests in the Central Valley winters primarily in Mexico, while the population that nests in the interior portions of North America winters in South America (Bradbury, Estep, & Anderson, n.d.). Swainson's hawks arrive in the Central Valley between March and early April to establish breeding territories. Breeding occurs from late March to late August, peaking in late May through July (Zeiner, 1988). In the Central Valley, Swainson's hawks nest in isolated trees, small groves, or large woodlands next to open grasslands or agricultural fields. This species typically nests near riparian areas; however, they have been known to nest in urban areas. Nest locations are usually in close proximity to suitable foraging habitats, which include fallow fields, annual grasslands, irrigated pastures, alfalfa and other hay crops, and low-growing row crops. Swainson's hawks leave their breeding grounds to return to their wintering grounds in late August or early September (Bloom & Van De Water, 1994).

  There is marginal nesting habitat for Swainson's hawk within the Study Area. While Swainson's hawk may forage occasionally in the annual grassland within the Study Area, higher quality foraging habitat occurs in the large agricultural fields and open grassland in surrounding communities. There is one CNDDB record for this species within five miles of the Study Area (CDFW, 2019). No Swainson's hawks were observed in the vicinity of the Study Area during the biological surveys conducted for the overall BMP, and none were incidentally observed during recent surveys of the proposed project area. Due to the presence of suitable nesting and foraging habitat in the Study Area, this species has a *high* potential to occur within the Study Area and the potential for project construction activities to impact nesting and foraging Swainson's hawk is considered a significant impact.

Wildlife Species with a Low Potential to Occur in the Study Area

- Special-Status Bat Species

  Several special-status bat species, which are State Species of Concern, have low potential to occur in the Study Area as identified in the BRA for the BMP, including pallid bat and silver-haired bat. Pallid bats roost in rock crevices, caves, and occasionally hollow trees, buildings and bridges. Silver-haired bats roost in hollow trees, crevices, buildings, and

under loose bark, generally near water. The riparian and oak woodlands provide suitable habitat in the Study Area for these special-status bat species (Western Bat Working Group, 2019). There are no CNDDB records for these species within five miles of the Study Area (CDFW 2019). Although special-status bats have a *low* potential to occur within the Study Area, the potential for construction activities to adversely affect bats is considered significant.

- Valley Elderberry Longhorn Beetle (VELB)

  The USFWS considers the range of VELB to include the watersheds of the American, San Joaquin, and Sacramento rivers and their tributaries up to approximately 3,000 feet above MSL (USFWS 1980). VELB are completely dependent on elderberry (*Sambucus* sp.) shrubs as their host plants during their entire life cycle. VELB typically utilize stems that are greater than one inch in diameter at ground level (DGL) (USFWS 1994). There are ten CNDDB occurrences for this species within five miles of the project (CDFW, 2019). Elderberry shrubs were not observed during project field surveys; thus, this species is not currently present within the Study Area. However, because suitable habitat for elderberry shrubs is present within the Study Area, VELB could potentially occur in the Study Area too. If individual VELB are present within the construction disturbance area during construction activities, a significant impact could result.

Wildlife Species with No Potential to Occur in the Study Area

- Central Valley Steelhead

  Central Valley steelhead rely on streams, rivers, estuaries and marine habitat during their lifecycle. In freshwater and estuarine habitats, steelhead feed on small crustaceans, insects, and small fishes. Eggs are laid in small and medium gravel and require adequate water flow for oxygen to survive. After emerging from the redd steelhead remain in streams and rivers for 1 to 4 years before migrating through estuaries to the ocean. Unlike salmon, steelhead migrate individually rather than in schools. Steelheads spend 1 to 5 years at sea before returning to natal streams or rivers. At least two specific storages of steelhead have developed: those that migrate to freshwater during fall, winter, and early spring (winter run) and those that migrate to freshwater in spring, summer, and early fall (summer run). Steelhead can spawn multiple times and will migrate back downstream through estuaries to the ocean (McEwan, 2001). None of the creeks within the Study Area support runs of Central Valley Steelhead, and there is *no* potential for the species to be found within the Study Area. Thus, no direct impact to Central Valley steelhead would result. However, because the creeks within the Study Area drain to anadromous streams, the potential for construction-related increases in soil erosion and sedimentation of downstream receiving waterbodies is considered a significant indirect impact.

- Burrowing Owl

  The burrowing owl is a small ground-dwelling owl that occurs in western North America from Canada to Mexico, and east to Texas and Louisiana. Although in certain areas of its range burrowing owls are migratory, these owls are predominantly non-migratory in California. The breeding season for burrowing owls occurs from March to August, peaking in April and May (Zeiner, 1988). Burrowing owls nest in burrows in the ground, often in old ground squirrel burrows. Burrowing owls are also known to use artificial burrows, including pipes, culverts, and nest boxes and will nest in close proximity to residences. In California, the breeding season for burrowing owl is from February 1 to August 31 (Haug,

Millsap, & Martell, 1993). There are six CNDDB records for this species within five miles of the overall BMP trail alignment, however, the nearest occurrence to the proposed project is approximately 8 miles away (CDFW, 2019). Additionally, recent focused surveys concluded that habitat present within the proposed project's Study Area was not suitable to support burrowing owl as it lacked suitable refugia (i.e. ground squirrel burrows, debris piles). This species has *no* potential to occur within the Study Area. Thus, no impact to burrowing owl would result.

- Western Spadefoot

  Western spadefoot prefer open areas with sandy or gravelly soils, in a variety of habitats including: mixed woodlands, grasslands, chaparral, sandy washes, lowlands, river floodplains, alluvial fans, playas, alkali flats, foothills, and mountains from 0 to 1,200 meters in elevation. They lay eggs in pools, ponds, or slow-moving streams and larvae require a minimum of 30 days of continuous inundation to mature. Large populations of bullfrogs, fish, or crayfish in breeding ponds impair the success of the species (Morey, 2000). There is one CNDDB record of this species within five miles of the Project (CDFW, 2019). No western spadefoot were observed during biological surveys of the Study Area. Habitat that could support western spadefoot was not identified to be present within the proposed project's Study Area during recent surveys and no western spadefoot were incidentally observed. This species has *no* potential to occur within the Study Area and no impact would result from project implementation.

As described in detail above, implementation of the proposed project could result in direct significant impacts to Sanford's Arrowhead, western pond turtle, migratory birds and other birds of prey, Swainson's hawk, special-status bat species, and VELB. In addition, project construction could result in indirect impacts to Central Valley steelhead. However, with implementation of the mitigation measures described below, these impacts would be reduced to a less-than-significant level.

In accordance with Mitigation Measure BIO–1, focused botanical surveys for Ahart's dwarf rush, dwarf downingia, Sanford's arrowhead, and stinkbells, have been completed for the proposed project. Implementation of Mitigation Measure BIO-1 would further reduce any potential impact of the project on special-status plants by requiring measures to avoid take of species and compensation for loss of habitat.

Mitigation Measure BIO–2 would ensure implementation of pre-construction surveys and mitigation, as applicable, to avoid impacts to nesting bird species in compliance with the Migratory Bird Treaty Act.

Mitigation Measure BIO–3 would also reduce the impact of the project in work areas located within undisturbed ground or within riparian areas to minimize impacts to western spadefoot, VELB, Swainson's hawk and other migratory birds and raptors, special-status bat species, western pond turtle, and downstream steelhead habitat through completing pre-construction surveys and utilizing Best Management Practices to reduce sediment loads in the streams.

Impacts to special-status species would be less than significant with mitigation incorporated.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service?

Less than Significant Impact with Mitigation Incorporated. The Study Area for the 2.9-mile Class I bikeway contains sensitive biological communities such as riparian woodland habitat, oak woodland, and potential wetlands and waters of the U.S and State.

Riparian Woodland Community and Wetlands and Waters of the U.S. and State

The project Study Area contains approximately 0.60 acres of other waters of the U.S. and State (see Appendix A, Observed Aquatic Resources). There are three separate linear encroachments and two perpendicular encroachments into stream floodways and riparian woodland habitat. The encroachments anticipated to create permanent cut and fill within the floodway are the proposed bridge crossings of Arcade Creek and Cripple Creek, as described below:

- Sunrise Boulevard south of Sayonara Drive, SMUD substation access road: The trail alignment would utilize the existing Sunrise Boulevard bridge crossing over Arcade Creek. The trail runs parallel to the south side of the substation access road, both being within the Arcade Creek floodway, however, the trail at this location would utilize the existing grades of the access road.
- Tempo Community Park, southern limits and northern limits near Fair Oaks Boulevard: The trail meanders in and out of the floodway but has been located such to minimize impacts to the natural stream environment and limit tree removal.
- Sundance Natural Area, bridge over Arcade Creek east of Fair Oaks Boulevard: The proposed bridge crossing design over Arcade Creek in Sundance Natural Area is still being developed with efforts to avoid any additional cut and fill activities within the ordinary high water mark, but may ultimately require work within USACE jurisdiction. Preferably, the existing bridge would be replaced in kind, within the same footprint as the existing bridge, resulting in no additional impacts to the floodway.
- Open space west of Wachtel Way and Olivine Avenue, bridge of Cripple Creek: The project is proposing to construct a new bridge over the stream, using a similar design as the bridge in Sundance Natural Area. The proposed bridge is approximately 54 feet long to span the creek, and ground disturbance would remain beyond the ordinary high water mark of Cripple Creek. An embankment would be constructed within the floodway. The bridge would be designed to balance the cut and fill and/or provide a pipe culvert bypass in order to create a less than significant impact to the floodway.

Oak Woodland Community

The majority of the proposed project would be located in developed areas, including park environments containing existing foot paths and segments under the SMUD electrical transmission ROW that are currently impacted by regular maintenance including tree pruning and mowing/tilling for fire abatement. Oak Woodland Community is present in small amounts along the proposed project alignment, including the substation access road, west border of the substation, southern extent of Tempo Community Park, outskirts of Sundance Natural Area, small patches of Streng Avenue Open Space, Northwoods Park, and C-Bar-C Park, and along the southern side of the Study Area and adjacent to the riparian woodland in the open space west of Wachtel Way (see

Appendix B, Vegetation Communities in Study Area). The trail alignment has been located to maximize use of previously disturbed areas along existing paved or dirt foot paths in order to minimize impacts to natural communities such as oak woodland and limit the number of tree removals necessary.

Impact Summary

An Aquatic Resources Delineation (Bargas Environmental Consulting, 2019a) has been prepared for the proposed project. Project implementation could result in significant impacts to the integrity of riparian woodland and oak woodland communities, as well as wetlands. However, with implementation of the mitigation measures described below, the impact would be reduced to a less-than-significant level.

Mitigation Measure BIO–4 (Clean Water Act Permitting) requires that the City obtain the mandatory Clean Water Act permits needed to implement the proposed project. These are a Clean Water Act Section 404 permit from USACE and Section 401 Water Quality Certification from the RWQCB. Similarly, Mitigation Measure BIO–5 (CDFW Streambed Alteration Agreement) would require that the City obtain coverage from CDFW pursuant to Fish and Game Code §1602. Implementation of Mitigation Measures BIO-4 and BIO-5 would reduce the potential impact of the project on wetlands and other waters and riparian woodland to a less-than-significant level by ensuring that no net loss in wetlands occurs, that disturbed areas be restored, and riparian areas reestablished. Implementation of Mitigation Measure BIO-6 (Tree Ordinance Compliance), which is needed to address impacts to the individual oak trees and the integrity of the oak woodland community, would reduce impacts on oak trees through compliance with City and County tree preservation and protection requirements. With implementation of these mitigation measures, impacts to sensitive habitats would be reduced to a less-than-significant level.

c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Less than Significant Impact with Mitigation Incorporated: An Aquatic Resources Delineation has been completed for the proposed project, indicating there are 0.60 acres of other waters of the U.S. and State located within the Study Area. The proposed bridge crossing over Cripple Creek, west of Wachtel Way, is currently designed to occur outside of the ordinary high water mark of the stream. The proposed bridge crossing design over Arcade Creek in Sundance Natural Area is still being developed with efforts to avoid any additional cut and fill activities within the ordinary high water mark, but may ultimately require work within USACE jurisdiction. It is possible that the project's bridge crossings over Arcade and Cripple Creeks could result in the discharge of fill into state or federally-protected wetlands, a potentially-significant impact. However, with implementation of Mitigation Measures BIO–4 (Clean Water Act Permitting) and BIO–5 (CDFW Streambed Alteration Agreement), impacts to state or federally protected wetlands would be reduced to a less-than-significant level.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Less than Significant Impact with Mitigation Incorporated. Wildlife movement and migratory corridors typically occur along riparian corridors with well-developed riparian vegetation and

surrounding undeveloped lands. During construction, vegetation removal, ground disturbance, increased noise and air pollutant emissions, and the presence of construction workers and equipment could temporarily impact wildlife movement along open spaces and creek corridors. This is considered a potentially significant impact. However, with implementation of Mitigation Measures BIO–1 through BIO-5, the impact would be reduced to a less-than-significant level.

Once construction has been completed, the project would improve local wildlife corridor access along portions of the trail alignment, primarily along Arcade Creek at the substation access road and Tempo Community Park and Sundance Natural Area, and along Cripple Creek in the open space west of Wachtel Way, because the project would remove fencing at these locations.

The project alignment has moderate level of ambient lighting, and the addition of the proposed shielded lighting for public safety along the proposed trail alignment would not significantly increase the ambient lighting and would not adversely affect the movement of wildlife.

Thus, after construction has been completed, the project's impacts on wildlife movement, corridors, and wildlife nursery sites would be less than significant and no mitigation is required.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Less than Significant With Mitigation Incorporated. Implementation of the proposed project would require removal of protected trees in the City of Citrus Heights and unincorporated Sacramento County. The City of Citrus Heights Tree Preservation and Protection Ordinance (Municipal Code Chapter 106.39.010) and Sacramento County Tree Preservation and Protection Ordinance (Municipal Code Chapter 19.12) regulate the removal of, and construction within, the dripline of protected trees. Protected trees include native oaks with a single trunk greater than 6 inches or aggregate of trunks greater than 10 inches in diameter, and mature trees with trunks greater than 19 inches in diameter. The City of Citrus Heights exempts willow, alder, fruit, eucalyptus, cottonwood, pine, catalpa, fruitless mulberry, and palm trees from the City's tree preservation and protection regulations.

An arborist survey and report have been completed for the proposed project and has identified a total of 315 trees recommended for removal due to safety concerns or poor condition, or due to their location within the anticipated impact area. Additionally, a total of 314 trees are recommended to be pruned, including the removal of dead wood and leaders, limbs, or branches containing rot. Of the total number of trees that may potentially be removed or pruned, 606 qualify for protection under the City and County tree protection ordinances. Table 1.4-2 below provides a summary of the total number of trees to be removed or pruned.

Table 1.4.2 – Summary of Tree Impacts

Removed or Pruned	Number of Protected Trees	Number of Non-Protected Trees	Total Number Trees
Remove due to safety concerns	4	0	4
Remove due to poor condition	105	7	112
Remove, within impact area	193	6	199
Prune (includes leader and limb removal	304	10	314
Total:	**606**	**23**	**629**

Prior to issuance of a Building or Grading Permit, the City shall submit a final Tree Impact Assessment. The Tree Impact Assessment report shall include all preservation measures, including details for modified construction or paving that the City and its contractor shall undertake during construction to ensure the long-term health and safety of the trees. The impact assessment report shall take into account improvement plans that show any encroachment into the drip-lines of any protected trees proposed to remain including utility trenching, retaining walls, etc. If avoiding construction within the dripline of protected trees is not feasible, other mitigation measures offered by a certified arborist and accepted by the Planning Division must be made.

Absent mitigation or compliance with the City of Citrus Heights Tree Preservation and Protection Ordinance and the Sacramento County Tree Preservation and Protection Ordinance, the tree impacts summarized in Table 1.4-2 above could significantly impact protected trees within the study area. This is considered a significant impact. However, with implementation of Mitigation Measure BIO–6 (Tree Ordinance Compliance), the impact would be reduced to a less-than-significant level. This mitigation measure requires the project proponent to abide by the Standard Policies and Procedures for Approved Work listed in Section 106.39.050 of the City's Tree Preservation and Protection Ordinance, and the County's required measures in Sections 19.12.130, 19.12.140, 19.12.150, and 19.12.160, collectively referred to as the Tree Permits. The City shall provide any replacement tree plantings or in-lieu mitigation fees that may be required by the City or County as a condition of approval for the Tree Permits. Payment of these in-lieu mitigation fees and/or replacement tree plantings prior to or in connection with project construction as required by the controlling City and/or County tree ordinances would reduce potential impacts to individual oak trees and the integrity of the oak woodlands present within the Study Area. Implementing Mitigation Measure BIO-6 would bring the project into compliance with local policies or ordinances protecting biological resources. The impact is considered to be less than significant with mitigation incorporated.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. There are no approved Habitat Conservation Plans, Natural Conservation Community Plans, or other adopted plans applicable to the trail alignments of the proposed project. Therefore, no impact would result and no mitigation is required.

Mitigation Measures:

Mitigation Measure BIO–1: Botanical Surveys and Avoidance and Minimization Measures

Prior to beginning construction on the project, a qualified botanist shall conduct two focused botanical surveys in accordance with 2018 CDFW and 1996 USFWS survey guidelines during the appropriate blooming period for special-status plants with the potential to occur within the Study Area. If no special-status plants are observed, a letter report documenting the survey methodology and findings shall be submitted to the City of Citrus Heights within two weeks of the final survey and no additional mitigation measures are required.

If any non-listed special-status plants occur within the trail alignments of the proposed project, they shall be avoided to the greatest extent feasible. If the plants cannot be avoided, a mitigation plan shall be prepared and implemented by a qualified biologist. At minimum, the mitigation plan shall include avoidance and preservation measures, seed or plant harvesting procedures, locations where the plants will be transplanted in suitable habitat adjacent to the project footprint, success criteria, and monitoring protocols.

Mitigation Measure BIO–2: Pre-Construction Nesting Avian Surveys and Mitigation

Prior to beginning construction on the project, the City will have a qualified biologist conduct pre-construction nesting avian surveys and will implement appropriate restrictions to ensure that protected species are not injured or disturbed by construction in the vicinity of nesting habitat. The following measures shall be implemented:

a) Any tree removals shall occur between August 30 and March 15 to avoid the breeding season of any raptor species that could be using the area, and to discourage hawks from nesting in the vicinity of a proposed future construction area. This period may be modified with the authorization of the CDFW. If a legally-protected species nest is located in a tree designated for removal, the removal shall be deferred until after August 30, or until the adults and young of the year are no longer dependent on the nest site as determined by a qualified biologist.

b) Prior to commencement of any construction activity during the period between March 15 to August 30, all trees within 350 feet of any grading or earthmoving activity shall be surveyed for active raptor nests by a qualified biologist no more than 14 days prior to the onset of construction activities. If active raptor nests are found, and the site is within 350 feet of potential construction activity, a fence shall be erected around the tree at a distance up to 350 feet, depending on the species, from the edge of the canopy to prevent construction disturbance and intrusions on the nest area. The appropriate buffer shall be determined by the City of Citrus Heights in consultation with CDFW.

c) No construction vehicles shall be permitted within restricted areas (i.e., raptor protection zone), unless directly related to the management or protection of the legally-protected species.

d) In the event that a nest is abandoned, despite efforts to minimize disturbance, and if the nestlings are still alive, the City shall contact CDFW and, subject to CDFW approval, fund the recovery and hacking (controlled release of captive reared young) of the nestling(s).

Mitigation Measure BIO–3: Wildlife Avoidance and Minimization Measures

The following mitigation measures for special-status species shall be followed for the project.

a) There is low potential for Swainson's hawks to nest near the trail alignments proposed by project. While the annual grassland in the proposed project area provides marginal foraging habitat, due to its small size and fragmented nature, mitigation for loss of foraging habitat shall not be required unless it is located within ¼-mile of an active nest (California Department of Fish and Game, 1994). If construction activities are anticipated to commence in annual grassland during the Swainson's hawk nesting season (March 1 to September 15), a qualified biologist shall conduct a minimum of two pre-construction surveys during the recommended survey periods, in accordance with the Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley (Swainson's Hawk Technical Advisory Committee, 2000). All potential nest trees within ¼-mile of the proposed project footprint shall be visually examined for potential Swainson's hawk nests, as accessible. If no active Swainson's hawk nests are identified on or within ¼-mile of the proposed project, a letter report documenting the survey methodology and findings shall be submitted to the City of Citrus Heights within two weeks of the final survey and no additional mitigation measures are required.

   If active Swainson's hawk nests are found within ¼-mile of construction activities, a survey report shall be submitted to the CDFW in addition to the City of Citrus Heights and an

avoidance and minimization plan shall be developed for approval by the CDFW prior to the start of construction. The avoidance plan shall identify measures to minimize impacts to Swainson's hawk including, but not limited to, worker awareness training, buffer zones, work scheduling, and biological monitoring. Should the project biologist determine that the construction activities are disturbing the nest; the biologist shall have the authority to halt construction activities until the CDFW is consulted.

b) Migratory birds and other birds of prey, protected under 50 CFR 10 of the MBTA and/or Section 3503 of the California Fish and Game Code, including white-tailed kite, peregrine falcon, Cooper's hawk, grasshopper sparrow, loggerhead shrike, Nuttall's woodpecker, oak titmouse, merlin, purple martin, bank swallow, song sparrow, and yellow-billed magpie have the potential to nest throughout the trail alignments proposed by the project. Vegetation clearing operations, including pruning or removal of trees and shrubs, shall be completed between September 15 and January 31, if feasible. If vegetation removal begins during the nesting season (February 1 to August 31), a qualified biologist shall conduct a pre-construction survey of the proposed project area and the surrounding 500 feet, as accessible, for active nests. The pre-construction survey shall be conducted within 14 days prior to commencement of ground-disturbing activities. If no active nests are observed, a letter report documenting the survey methodology and findings shall be submitted to the City of Citrus Heights within two weeks of the final survey and no additional mitigation measures are required. If construction does not commence within 14 days of the pre-construction survey or halts for more than 14 days a new survey shall be conducted.

   If any active nests are located within the network of the trail alignments proposed by the project, an appropriate buffer zone shall be established around the nests, as determined by the project biologist. The biologist shall mark the buffer zone with construction tape or pin flags and maintain the buffer zone until the young have successfully fledged and the nest is no longer occupied. Monitoring shall be conducted daily during the first week of construction and weekly thereafter until the young have fledged. The size of the buffer zone may be adjusted throughout construction based on observed reaction of the nesting birds to construction activities.

c) The trees and structures in the trail alignments proposed by the Project provide potential roosting habitat for special-status bats. Pre-construction surveys for special-status bat species are required to be conducted by a qualified biologist within 14 days prior to the start of ground disturbance or tree removal in potential special-status bat species habitat. If no bats are observed, a letter report documenting the survey methodology and findings shall be submitted to the City of Citrus Heights within two weeks of the final survey and no additional mitigation measures are required. If construction does not commence within 14 days of the pre-construction survey or halts for more than 14 days a new survey shall be conducted.

   If bats are found, an appropriate buffer zone shall be established around the nests, as determined by the project biologist and a worker avoidance training shall be conducted. If a roost tree or structure must be removed, CDFW shall be consulted to determine appropriate avoidance and mitigation measures.

d) Pre-construction surveys for western pond turtle shall take place within 14 days prior to the start of ground disturbance within 300 feet of aquatic habitat in creek corridors, riparian areas, oak woodlands, and annual grassland, where accessible. If no western pond turtle are observed, a letter report documenting the survey methodology and findings shall be submitted to the City of Citrus Heights within two weeks of the final survey and no additional

mitigation measures are required. If construction does not commence within 14 days of the pre-construction survey or halts for more than 14 days a new survey shall be conducted.

If western pond turtles are found, additional avoidance measures are required including having a qualified biologist conduct a pre-construction survey within 24 hours prior to commencement of construction activities, performing a worker awareness training to all construction workers, and being present on the project site during grading activities within 300 ft of aquatic habitat in creek corridors, riparian areas, oak woodlands, and annual grassland, where accessible.

e) None of the creek corridors in the network of trail alignments proposed by the project are spawning habitat for Central Valley steelhead, however they drain to Steelhead Creek and the American River watersheds, which are steelhead habitat. To avoid impacts to downstream steelhead habitat, erosion control Best Management Practices (BMPs) shall be implemented during and post construction to reduce sediment loads in the creeks. No additional species-specific mitigation measures are required.

f) Pre-construction surveys for blue elderberry shrubs with a ground diameter greater than or equal to 1" shall take place within 14 days prior to the start of ground disturbance in the project area. If shrubs meeting this criteria occur within the trail alignments of the proposed project, they shall be avoided to the greatest extent feasible. If the plants cannot be avoided, a mitigation plan shall be prepared and implemented by a qualified biologist. At minimum, the mitigation plan shall include avoidance and preservation measures, seed or plant harvesting procedures, locations where the plants will be transplanted in suitable habitat adjacent to the project footprint, success criteria, and monitoring protocols.

Mitigation Measure BIO–4: Clean Water Act Permitting

Placement of permanent or temporary fill in waters of the U.S. is regulated by the U.S. Army Corps of Engineers (Corps) under Section 404 of the Federal Clean Water Act. The City shall coordinate with the Corps in order to obtain the applicable permits for activities resulting in temporary and/or permanent impacts to waters of the U.S. The project shall comply with the Corps "no-net-loss" policy and the conditions of a Nationwide or Individual Permit authorization by the Corps.

Any discharge into waters of the U.S. is also subject to regulation by the Central Valley Regional Water Quality Control Board (RWQCB) pursuant to Clean Water Act Section 401. The City shall also coordinate with the RWQCB in order to obtain a Water Quality Certification.

Required permits shall be received prior to the start of any on-site construction activity. The City shall ensure any additional measures outlined in the permits are implemented.

Mitigation Measure BIO–5: CDFW Streambed Alteration Agreement

Pursuant to Fish and Game Code §1602, the City shall notify the California Department of Fish and Wildlife (CDFW) prior to any activity which may result in impacts to the streamzone. The City will coordinate with CDFW in order to obtain a 1600 Streambed Alteration Agreement, if applicable, for impacts to the bed, bank or channel of onsite drainages and/or any riparian areas or other areas subject to jurisdiction by CDFW. The City shall ensure any additional measures outlined in the permit are implemented.

Mitigation Measure BIO–6: Tree Ordinance Compliance

Prior to issuance of a Building or Grading Permit for the project, the City shall submit a final Tree Impact Assessment for impacts to trees along segments located within the City of Citrus Heights and County of Sacramento. The Tree Impact Assessment report shall include all preservation measures, including details for modified construction or paving that the applicant shall undertake during construction to ensure the long-term health and safety of the trees. The impact assessment report shall take into account improvement plans that show any encroachment into the drip-lines of any protected trees including utility trenching, retaining walls, etc. If avoiding construction within the dripline of protected trees is not feasible other mitigation measures offered by a certified arborist and accepted by the Planning Division must be made. The proposed project will abide by the Standard Policies and Procedures for Approved Work listed in Section 106.39.050 of the City's Tree Preservation and Protection Ordinance, and the County's required measures in Sections 19.12.130, 19.12.140, 19.12.150, and 19.12.160. If required by the City or County upon approval of the Tree Permits, replacement tree plantings or in-lieu mitigation fees will be completed or paid in accordance with City and County requirements.

1.5 CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
V. Cultural Resources.				
Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☒	☐	☐

Methodology

To determine the potential for the proposed trail to adversely affect cultural resources, the City prepared the *Archaeological Survey Report for the Citrus Heights Electric Greenway Bike Trail* (InContext, 2019). The report summarizes the results of a records search at the North Central Information Center, literature review, a sacred lands search through the Native American Heritage Commission, and an intensive pedestrian survey. The project limits were surveyed on November 5, 2018 using five-meter spacing from the centerline of the trail to either side of the trail alignment. Approximately 10% of the proposed trail is currently hardscaped, with another 5% inaccessible for survey due to private property fence encroachment on the City easement, or locked gates. Aerial photos depict that the inaccessible areas are disturbed by various residential improvements and would likely not be visible without future ground disturbance. The remaining 85% of the trail has good ground surface visibility.

The study did not identify any cultural resources within the APE. Portions of the trail are located on existing hardscape or within urban parks that have varying, and currently unknown, levels of vertical disturbance. The rest of the trail crosses areas where natural ground surface is visible and, with the exception of disturbances associated with the construction of SMUD towers (maximum 20') and Arcade Creek crossing, appears to be mostly undisturbed.

According to CEQA, a project that may cause a *substantial adverse change* in the significance of a *historical resource* or a *unique archaeological resource* may have a significant effect on the environment (CEQA Guidelines 15064.5, Pub. Res. Code Section 21083.2). CEQA defines a *substantial adverse change* as: physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a *historical resource* would be materially impaired or demolition or material alteration in an adverse manner of those physical characteristics of a *historical resource* which convey its significance and justify its inclusion in or eligibility for inclusion in the CRHR, inclusion in a local register pursuant to section 5020.1(k) of the Public Resources Code, its identification

in a *historical resources* survey meeting the requirements of Section 5024.1(g) of the Public Resources Code.

Although no cultural resources (historical resources or unique archaeological resources) were identified as a result of this study, the study findings indicate that the project area has a moderate sensitivity for the presence of buried archaeological deposits. Specifically, the two perennial water sources and associated habitat which would have been resources for prehistoric people. The depth and alkalinity of soil, and the lack of disturbance in some areas indicates there is potential for buried cultural deposits to exist in the area. Impacts to archaeological deposits—which could qualify as historical resources or unique archaeological sites under CEQA—could result in a significant impact under CEQA. To reduce these potential impacts to a less-than-significant level, the City developed mitigation measures in consultation with California Native American Tribes that are consistent with the City's General Plan goals and policies related to historical resources.

1.5.1 IMPACT ANALYSIS

a & b) Cause a substantial adverse change in the significance of a historical or archaeological resource pursuant to Section 15064.5?

Less than Significant with Mitigation Incorporated. No known historic resources or archaeological sites [as defined in CEQA Guidelines Sections 15064.5(a) and (c)] have been identified within the project area. However, the Archaeological Survey Report that was prepared for the project found that the project area has a moderate sensitivity for the presence of buried archaeological deposits, which could qualify as historical resources or unique archaeological sites under CEQA. The potential for previously undiscovered archaeological resources to be encountered during project construction is considered a significant impact. To reduce this potential impact to a less-than-significant level, the City would implement Mitigation Measures CUL-1a, CUL-1b, and CUL-1c.

c) Disturb any human remains, including those interred outside of formal cemeteries?

Less than Significant with Mitigation Incorporated. No human remains are known to occur within the project area. However, there is potential for earthwork and grading to result in the disturbance of previously unrecorded human remains, which is considered a significant impact. To reduce this impact to a less-than-significant level, the City would implement Mitigation Measures CUL-1d.

Mitigation Measures

Mitigation Measure CUL-1a: Ground Disturbance Site Visit

A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the City shall contact the UAIC. A tribal representative shall be invited to, at its discretion, voluntarily inspect the project location, including any soil piles, trenches, or other disturbed areas, within the first five days of ground-breaking activity. Construction activity may be ongoing during this time. Should the tribe choose not to perform a field visit within the first five days, construction activities may continue as scheduled, as long as notification was made.

Mitigation Measure CUL-1b: Contractor Awareness Training

The City shall ensure that a Contractor Awareness Training Program is developed and delivered to train equipment operators about cultural resources. The program shall be designed to inform construction personnel about federal and state regulations pertaining to cultural resources; the subsurface indicators of resources that shall require work stoppage; procedures for notifying the City of any occurrences; and project-specific requirements; and enforcement of penalties and repercussions for non-compliance with the program.

The training shall be prepared by a qualified professional archaeologist and reviewed by City for approval, and may be provided in an audio-visual format, such as a DVD. The contractor shall provide culturally-affiliated tribes that consulted on the project and UAIC the option of attending the initial training in person and/or providing additional materials germane to the unanticipated discovery of cultural resources for incorporation into the training.

The training shall be provided once to the Construction Contractor's superintendent, who shall then be responsible for ensuring that all future equipment operators and personnel view the video and review training materials prior to their first excavation on the property. All trained personnel shall be required to sign a form that acknowledges receipt of the training. A copy of the form shall be provided to the City of Citrus Heights as proof of compliance.

Mitigation Measure CUL-1c: Inadvertent Discoveries of Cultural Resources

If subsurface deposits believed to be cultural in origin are discovered during construction, all work shall halt within a 50-foot radius of the discovery, and the developer shall immediately notify the City of Citrus Heights Planning Manager. The contractor shall retain a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and subject to approval by the City, to evaluate the significance of the find and develop appropriate management recommendations in consultation with the UAIC. All management recommendations shall be provided to the City in writing for the City's review and approval. If recommended by the qualified professional and approved by the City, this may include modification of the no-work radius. The following notifications shall apply, depending on the nature of the find, subject to the review and approval of the City:

1. Work may resume immediately, and no agency notifications are required if: 1) the professional archaeologist determines, in consultation with the UAIC, that the find does not represent a cultural resource.

2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the City shall be notified immediately, to consult on a finding of eligibility and implementation of appropriate treatment measures, if the find is determined to be a historical resource or archaeological resource under CEQA, as defined in Section 15064.5(a) and 15064.5(c) of the CEQA Guidelines. Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a historical resource or archaeological resource under CEQA, as defined in Section 15064.5(a) and 15074.5(c) of the CEQA Guidelines; or 2) that the treatment measures have been completed to its satisfaction.

Mitigation Measure CUL-1d: Inadvertent Discoveries of Human Remains

If human remains, or remains that are potentially human, are discovered during construction, the construction supervisor or on-site archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641) and shall notify the Sacramento County Coroner (per §7050.5 of the Health and Safety Code) and the City. The provisions of §7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code, and Assembly Bill 2641 shall be implemented. If the Coroner determines the remains are Native American and not the result of a crime scene, the Coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the Landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate information center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the County in which the property is located (AB 2641). Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.

1.6 ENERGY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VI. Energy.				
Would the project:				
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

1.6.1 IMPACT ANALYSIS

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Less than Significant. The proposed project would not result in any substantial energy consumption or conflict with any plan for renewable energy or energy efficiency.

Implementation of the proposed project is consistent with the approved Bikeway Master Plan (BMP). By design, proposed improvements include consistency with the goals and policies identified by the City's General Plan pertaining to sustainability and an overall strategy for reduction of greenhouse gas emissions and air quality improvement. Reductions in greenhouse gas emissions and air quality emissions integrally reduce energy consumption and improve energy efficiency.

This analysis evaluates the use of energy resources (e.g., fuel and electricity) associated with the construction and operation of the project. For construction, the analysis considers whether construction activities would use large amounts of fuels or energy, and whether they would be used in a wasteful manner. For energy used during operation and maintenance, the analysis identifies energy use that would occur with implementation of the project to determine whether large amounts would be used and whether they would be used in a wasteful manner.

Construction of the project would require the use of fossil fuels (primarily gas, diesel, and motor oil) for a variety of activities, such as excavation, grading, demolition, and vehicle travel. The precise amount of construction-related energy consumption is uncertain. However, construction would not require a large amount of fuel or energy usage because of the moderate number of construction vehicles and equipment, worker trips, and truck trips that would be required for a project of this scale. In addition, equipment idling times would be minimized either by shutting equipment off when not in use or reducing the maximum idling time to five minutes or less (as

required by the California airborne toxics control measure Title 13, Section 2485 of the California Code of Regulations [CCR]). Therefore, project construction would not encourage activities that would result in the use of large amounts of fuel and energy in a wasteful manner; the impact would be less than significant and no mitigation is required.

Project operation would primarily consist of recreational use by pedestrians and bicyclists. The project would not generate daily car or truck trips, involve on-site combustion of fuels, or electricity consumption. Therefore, operation of the project would not use large amounts of energy and would not use it in a wasteful manner. The project's operational impact would be less than significant, and no mitigation is required.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

No Impact. The City of Citrus Heights General Plan identifies the following policies applicable to energy consumption and relevant to the proposed project:

Policy 53.3: Promote use of clean alternative fuel vehicles and construction equipment.

Action A. Incorporate alternative fuel vehicles into the City fleet to achieve the objective of using clean fuels in 70% of nonsafety City vehicles.

Action B. Adopt a "proactive contracting" policy that gives preference to contractors using reduced emission equipment for City construction projects as well as for City contracts for services (e.g., garbage collection).

Development of the project would provide infrastructure for alternative, clean transportation by pedestrians and bicyclists. The proposed project would not result in any substantial energy consumption or conflict with any plan for renewable energy or energy efficiency.

Mitigation Measures: No mitigation is required.

1.7 GEOLOGY AND SOILS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VII. Geology and Soils.				
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) 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 California Geological Survey Special Publication 42.)	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c) 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?	☐	☐	☒	☐
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?	☐	☐	☒	☐
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒

1.7.1 IMPACT ANALYSIS

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) 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 California Geological Survey Special Publication 42.)

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

No Impact. The project site is not located within an active Alquist-Priolo earthquake fault zone, and no California Geological Survey (CGS) identified Zones of Required Investigation related to seismic risk occur in the project area (Citrus Heights, 2011b). The project is not within an area mapped or otherwise identified as a seismic risk. No impact would occur.

b) Result in substantial soil erosion or the loss of topsoil?

Less than Significant. Construction and grading activities associated with the project would result in the removal of vegetative cover and exposure of soils to wind and rain, the common mechanisms by which soil erosion occurs. Implementation of the City's Construction Standards would be required for the project, which includes best management practices for sediment and erosion control. Required implementation of the City's Design/Construction Standards would minimize this potential impact to a less-than-significant level.

c,d) 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? Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property?

Less than Significant. Two soil types occur in the project area: Fiddyment-Orangevale complex and Urban land-Xerarents-Fiddyment complex. Neither soil type is known to be unstable or highly expansive. The topography of the project area is characterized as fairly flat land, and no landslides or landslide deposits have been mapped in the project area. The impact would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The project does not propose the use of septic tanks or alternative wastewater disposal systems. No impact would occur.

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

No Impact. The project would be located in developed areas that have been disturbed by previous earthmoving activities. No unique paleontological resources or sites are known to occur within the project footprint, and the chances of uncovering previously undiscovered paleontological

remains is remote given the minimal excavations required for the project. The impact would be less than significant.

Mitigation Measures: No mitigation is required.

1.8 GREENHOUSE GAS EMISSIONS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
VIII. Greenhouse Gas Emissions.				
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☐	☒

1.8.1 IMPACT ANALYSIS

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less than Significant. Greenhouse gas (GHG) emissions negatively affect the environment through contributing, on a cumulative basis, to global climate change. Atmospheric concentration of GHGs determines the intensity of climate change, with current levels already leading to increases in global temperatures, sea level rise, severe weather, and other environmental impacts. From a CEQA perspective, GHG impacts to global climate change are inherently cumulative (SMAQMD 2018).

The SMAQMD's adopted threshold of significance for construction and operational greenhouse gas emissions is 1,100 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year each. The SMAQMD provides screening levels for construction and operational greenhouse gas emissions; projects that meet the screening levels are considered less than significant and do not require emissions quantification. Per the SMAQMD's guidance, operational and construction emissions from projects that are smaller than the land use sizes in the Operational Screening Levels table, that also meet the screening parameters regarding construction-generated criteria pollutants may be considered less-than–cumulatively considerable (SMAQMD 2018).

Section 1.3.1 b) demonstrates that the project meets the SMAQMD's screening parameters regarding construction-generated criteria pollutants. Therefore, project construction would result in a less-than-significant greenhouse gas impact.

The SMAQMD's operational screening levels are for typical development projects. For reference, the greenhouse gas screening level for a single family development is 56 dwelling units, and for a general office building is 65,000 square feet. Development of that size would generate vehicle,

area-wide emissions, and stationary emissions at a level that may exceed 1,100 $MTCO_2e$ per year. Development of the project would not involve on-site operations other than recreational use by pedestrians and bicyclists. Therefore, the project would not generate operational greenhouse gases that exceed 1,100 $MTCO_2e$. The project's contribution to global climate change through GHG emissions would be considered Less than Significant. No mitigation is required.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

No Impact. In August 2011, the City of Citrus Heights released an updated General Plan, Environmental Impact Report and Greenhouse Gas Reduction Plan (GGRP). The GGRP recommends communitywide strategies and measures that can collectively reduce GHG emissions approximately 87,267 $MTCO_2e$ emissions per year (equivalent to a 13.7% reduction below 2005 levels) and achieve the City's adopted emission reduction target of 10% to 15% below 2005 baseline emission levels by 2020.

Implementation of the proposed project, would not conflict with or obstruct implementation of any applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. The City of Citrus Heights provides a greenhouse gas reduction compliance checklist for development projects to demonstrate compliance with the GGRP. However, the project is not a typical development project and the measures within the checklist are not applicable to the project.

Development of the project would not involve on-site operations other than recreational use by pedestrians and bicyclists. By design, proposed improvements include consistency with the goals and policies identified by the City's General Plan pertaining to sustainability and an overall strategy for reduction of greenhouse gas emissions. Therefore, the project would not conflict with the GGRP and would result in no impact. No mitigation is required.

Mitigation Measures: No mitigation is required.

1.9 HAZARDS AND HAZARDOUS MATERIALS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
IX. Hazards and Hazardous Materials.				
Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☒	☐	☐
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?	☐	☒	☐	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☒	☐	☐
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?	☐	☐	☐	☒

1.9.1 IMPACT ANALYSIS

a & b) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment?

Less than Significant with Mitigation Incorporated. Hazardous materials such as gasoline, diesel fuel, asphalt, and other petroleum products may be used during the construction of the project. These materials are commonly used during construction, are not acutely hazardous and would be used in small quantities. Following construction, as part of bike path maintenance, weed control chemicals and asphalt for patching/crack sealing may also be used by City employees or contractors.

Construction workers, nearby persons or residents, and the surrounding environment could be exposed to hazards associated with accidental releases of the materials, whether through improper handling, unsound disposal methods, transportation accidents, or fires, explosions or other emergencies. Exposure could also result from unearthing contaminated soil or groundwater during earthmoving activities.

Contractors would be required to comply with applicable federal, state and local regulations for handling hazardous material. Worker safety regulations cover hazards related to the prevention of exposure to hazardous materials and a release to the environment from hazardous materials use. The California Division of Occupational Safety and Health (Cal-OSHA) also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees. Further, the Sacramento County Emergency Operations Plan and Area Plan for Emergency Response to Hazardous Materials Plan would reduce the potential for harm from accidental release.

The potential for project construction activities to result in the release of hazardous materials or contaminated soil into the environment is considered a significant impact. However, implementation of Mitigation Measure HAZ-1 (Hazardous Materials Management Plan) would ensure construction activities are conducted in accordance with regulatory requirements and in a manner that is protective of the environment and human health and safety.

The proposed project would be located along a high-voltage electrical transmission corridor. The relationship between electric and magnetic fields (EMF) exposure and health effects has been studied but not been scientifically substantiated. The California Public Utilities Commission policy report issued in 1993 determined studies did not show a relationship between EMFs and health effects, therefore transmission corridors are an acceptable location for low-intensity recreational uses such as bikeways.

The impact would be less than significant with implementation of mitigation measures.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Less than Significant. The proposed project would occur within ¼-mile of a Woodside Elementary School and Arrow Christian Academy. The construction and maintenance of bikeways

is similar in nature to other activities regularly occurring adjacent to or within school grounds. The construction of bikeways would not pose an undue risk to schools and students. The project would not utilize acutely hazardous materials or result in a new permanent source of hazardous emissions. The implementation of federal, state and local regulations for handling, use and disposal of hazardous materials would reduce the potential for impact to a less-than-significant level.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code §65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Less than Significant with Mitigation Incorporated. Government Code Section 65962.5 requires the Department of Toxic Substances Control to compile and regularly update a list of hazardous materials sites throughout the state. This list identifies locations where extensive investigation and/or cleanup actions are planned or have been completed. A Preliminary Initial Site Assessment (ISA) conducted for the project reviewed applicable lists and identified 14 hazardous materials sites, of which three are located within proximity to the project (WRECO, 2019b). The Preliminary ISA characterized the potential pollution risk for each site as low. One site is an open site assessment, one is an open remediation, and one was closed in 1996. The Preliminary ISA also identified the following additional recognized environmental conditions within the project area:

- Potential sources of aerially deposited lead due to leaded gasoline automobile exhaust near roadsides with exposed soils prior to 1990, when leaded fuel was banned;
- Potential sources of organochlorine pesticides and chlorinated herbicides, petroleum hydrocarbons (agricultural equipment), and metals from previous agricultural and ranch use of land near the creeks (and project area); and
- Potential polychlorinated biphenyls (PCBs), polynuclear aromatics (PNAs), and metals from the electrical lines and transmission towers and SMUD substation.

The potential impact associated with hazardous materials cases and the environmental conditions identified above is considered significant. However, implementation of Mitigation Measure HAZ-1 (Hazardous Materials Management Plan) would reduce the potential impact to a less-than-significant level by requiring proper monitoring, handling, and disposal of excavated materials and potentially hazardous materials or wastes per applicable local, state, and federal regulations.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

No Impact. The nearest airports to the project site are Sacramento International Airport, approximately 17 miles west, Sacramento Mather Air Field, approximately 8.5 miles south, and McClellan Airfield, approximately seven miles southwest. The project is not within the influence area of any airport. No impact would occur.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less than Significant. Construction may involve partial traffic lane closure during bike lane striping. Implementation of the City's Design/Construction Standards would be required for the

project, which includes implementation of traffic control measures in accordance with local, state and federal requirements. These regulations further require that the Police and Fire Departments, ambulance services, schools and bus systems receive 48 hours notice in advance of a road closures. Following construction, the project would not impair or interfere with an emergency response plan or emergency evacuation plan. The impact would be less than significant.

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

No Impact. The project is located in a non-fire hazard severity zone (CAL FIRE 2008). Therefore, the risk of wildland fires within the project area is minimal. No impact would occur.

Mitigation Measures:

Mitigation Measure HAZ-1: Hazardous Materials Management Plan

Prior to initiation of vegetation removal, demolition activities, and earthmoving activities, the project contractor shall prepare and implement a Hazardous Materials Management Plan that details procedures that will be taken to ensure proper transport, use, and storage of hazardous construction materials and the appropriate handling, stockpiling, testing, and disposal of excavated materials to prevent the inadvertent release of hazardous construction materials and/or contaminated soil to the environment during construction activities. Elements of the plan shall include, but would not necessarily be limited to, the following:

Worker Health and Safety

- Accident prevention measures.
- Measures to address hazardous materials and other site-specific worker health and safety issues during construction, including the specific level of protection required for construction workers. This shall include preparation of a site-specific health and safety plan in accordance with federal OSHA regulations (29 CFR 1910.120) and Cal-OSHA regulations (8 CCR Title 8, Section 5192) to address worker health and safety issues during construction.
- The requirement that all construction crew members be trained regarding best practices for the proper transport, use, and storage of hazardous construction materials and the appropriate handling, stockpiling, testing, and disposal of excavated materials prior to beginning work.

Soil Contamination

- Procedures for the proper handling, stockpiling, testing, and disposal of excavated materials in accordance with CCR Title 14 and Title 22.
- Soil contamination evaluation and management procedures, including: how to properly identify potential contamination (e.g., soil staining, odors, or buried material); the requirement that construction activities within a 50-foot-radius of potentially contaminated soil be halted until the hazard has been assessed and appropriately addressed; the requirement that access to potentially contaminated areas be limited to properly trained personnel; and procedures for notification and reporting, including internal management and local agencies (e.g., fire department, Sacrament County Environmental Management Department), as needed.

- Monitoring of ground disturbing activities for soil contamination may include visual and organic vapor monitoring by personnel with appropriate hazardous materials training, including 40 hours of Hazardous Waste Operations and Emergency Response (HAZWOPER) training. If visual and organic vapor monitoring indicates signs of suspected contaminated soil, then soil samples shall be collected and analyzed to characterize soil quality.

- Evaluation of all potentially contaminated materials encountered during project construction activities in accordance with applicable local, state and federal regulations and/or guidelines governing hazardous waste. All materials deemed to be hazardous shall be remediated and/or disposed of following applicable regulatory agency regulations and/or guidelines. Disposal sites for both remediated and non-remediated soils shall be identified prior to beginning construction. All evaluation, remediation, treatment, and/or disposal of hazardous waste shall be supervised and documented by qualified hazardous waste personnel.

Hazardous Construction Materials

- Appropriate work practices necessary to effectively comply with applicable environmental laws and regulations, including hazardous materials management, handling, storage, disposal, and emergency response. These work practices include the following: an on-site hazardous material spill kit shall be provided for small spills; totally enclosed containment shall be provided for all trash; and all construction waste, including trash, litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials, shall be removed to an appropriate waste facility permitted or otherwise authorized to treat, store, or dispose of such materials.

- The requirement that hazardous construction materials must be stored at least 50 feet from storm drain inlets, creeks, and other drainage features, and covered with tarps or stored inside buildings to ensure that materials are not released to the air during windy conditions or exposed to rain.

- Procedures for proper containment of any spills or inadvertent releases of hazards materials.

- Notification requirements in the event of an accidental release of hazardous materials into the environment. Construction crew members shall immediately notify a construction foreperson who shall then report the release to the Sacramento County Environmental Compliance Division of the Sacramento County Environmental Management Department to ensure the release is remediated in accordance with Sacramento County requirements.

1.10 HYDROLOGY AND WATER QUALITY

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
X. Hydrology and Water Quality.				
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i) Result in substantial on- or offsite erosion or siltation;	☐	☐	☒	☐
ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	☐	☒	☐	☐
iii) 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; or	☐	☒	☐	☐
iv) Impede or redirect flood flows?	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☐	☐	☒
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☐	☒

1.10.1 IMPACT ANALYSIS

The project is located in the upper tributaries of Cripple Creek and Arcade Creek in the Arcade Creek Watershed in the City of Citrus Heights in Sacramento County, approximately 16 miles northeast of the City of Sacramento and around 8 miles directly west of Folsom Dam. Cripple Creek is a tributary to Arcade Creek both of which flow into the American River. The larger Arcade Creek watershed drains an area of approximately 31 square miles at Del Paso Heights, which is located approximately 7 miles southwest of Sunrise Boulevard. Cripple Creek and Arcade Creek drain a watershed of approximately 18 square miles at their confluence. The proposed bridge locations are approximately 3.5 miles upstream of the Arcade and Cripple Creek confluence at the Arcade Creek crossing and approximately 6 miles upstream of the confluence at the Cripple Creek crossing (Wreco, 2019).

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

Less than Significant. Construction of the proposed project would result in grading and paving approximately 2.9 miles of 14-foot-wide Class I bikeways. The construction corridor is anticipated to be 20 feet wide. Isolated areas of additional excavation and disturbance would occur at creek crossings and alongside the proposed retaining walls. The total area of construction-related ground disturbance would be approximately 14.46 acres. Construction activities have the potential to degrade water quality by increasing soil erosion and resulting in increased sedimentation of receiving waterbodies, and from accidental spills or discharges of construction-related substances such as solvents, oils, and fuels. In turn, these activities have the potential to violate water quality standards and waste discharge requirements.

The City would be required to obtain coverage under the National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges associated with Construction and Land Disturbance Activities (Construction General Permit; Order No. 2009-009-DWQ as amended by 2010-2014-DWQ), and develop and implement a project-specific Storm Water Pollution Prevention Plan (SWPPP). The City's Construction Standards also require implementation of best management practices for sediment and erosion control. Since compliance with the NPDES Construction General Permit, preparation and implementation of a site-specific SWPPP, and adherence to the City's Construction Standards are all mandatory, the potential impact related to violation of water quality standards and waste discharge requirements during construction would be less than significant.

Upon completion of construction, the Class I trail would not substantially increase urban contaminants in runoff because bicycles and pedestrians contribute minimal quantities of contaminants to runoff. Further, the project would comply with the NPDES area-wide municipal separate storm sewer system (MS4) permit (Order R5-2015-0023, NPDES No. CAS082597), of which the City is a Permittee. Therefore, the potential to violate water quality standards and waste discharge requirements during project operations would be less than significant.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Less than Significant. The project is located in the Sacramento Valley Groundwater Basin, North American Subbasin (Bulletin 118). The project does not propose the use of groundwater. The amount of groundwater that is stored in aquifers is dependent on many factors, including groundwater pumping, soil permeability, the amount of impervious surfaces, the storage

characteristics of underlying aquifers, precipitation, etc. When impermeable surfaces such as roads and bike trails are constructed, groundwater recharge can be reduced. In most areas of Citrus Heights, soils are relatively impermeable and underlain by hardpan, which limits infiltration and groundwater recharge. The areas with the highest groundwater recharge potential are primarily along stream channels, and have been designated for open space and park uses, in part, to facilitate recharge potential. Constructing bikeways in these areas would reduce the area available for recharge by up to 5 acres. However, recharge would be not be substantially affected. Existing soil conditions throughout the Citrus Heights area already limit recharge potential, and the area paved for bikeway construction represents a small portion of the total surface area dedicated to open space and available for recharge. Off-street segments of the proposed trail would be designed to include 2-foot pervious shoulders on either side of the 10-foot-wide paved asphalt to promote stormwater infiltration and groundwater recharge. In addition, the amount of recharge contributed to the groundwater aquifer by the entire Citrus Heights area is relatively minimal compared to that contributed by the Sacramento Valley groundwater basin overall. Therefore, this impact is considered less than significant**.**

c-i) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would result in substantial on- or offsite erosion or siltation?

Less than Significant. Construction of the 14-foot-wide Class I trail would involve vegetation removal, earthwork, grading, and paving along creek corridors and in open space areas. Grading and paving may alter local drainage patterns and, if recently-vegetated areas are not stabilized before subsequent precipitation events, the project could increase erosion and siltation. The project includes the installation of retaining walls along certain sections of the proposed trail to stabilize banks and protect these areas from erosion. The SWPPP and the City's Design/Construction Standards would require implementation of project-specific measures and best management practices for sediment and erosion control. The City Drainage Policy further regulates development within floodplains. Implementation of the project-specific SWPPP and adherence to the City's Design/Construction Standards and Drainage Policy would avoid significant long-term impacts related to erosion and siltation.

c-ii, iii, iv) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite, create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, impede or redirect flood flows, or provide substantial additional sources of polluted runoff?

Less than Significant with Mitigation Incorporated. As was stated in the Bikeway Master Plan and General Plan Bikeway Map Update IS/MND (City of Citrus Heights, 2015a), the Citrus Heights area has substantial flooding issues and the construction of new bikeways could exacerbate those issues.

The majority of the proposed trail alignment is located within the FEMA Zone AE Special Flood Hazard Area (SFHA) along Arcade Creek and at the Cripple Creek crossing. Zone AE flood zones represent areas that are subject to flooding during the 100-year flood event and where base flood elevations have been determined.

Although the Class I bikeway would be designed with 2-foot shoulders made of stable pervious material to promote stormwater infiltration and groundwater recharge, implementation of the bikeway project would create roughly 5 acres of new impervious surfaces, thereby resulting in a net increase in site runoff and peak flows in downstream waterbodies if not mitigated. Increased runoff and peak flows could exacerbate flooding issues. The project would include earthwork and the placement of fill within the FEMA Zone AE SFHA for the construction of the new trail alongside the creeks and the replacement and construction of new bridges. The placement of fill within the FEMA Zone AE SFHA could displace floodwaters, which also has the potential to exacerbate flooding. Further, the proposed retaining walls and other means of bank stabilization could also contribute to the displacement of floodwaters, as well as potentially impede or redirect flood flows. Without proper mitigation, the addition of up to 5 acres of new impervious surfaces, the placement of fill within the FEMA Zone AE SFHA, and the construction of retaining walls and other bank stabilization measures within the creek channels could exacerbate existing flooding issues.

Consistent with the programmatic mitigation measures prescribed in the *Bikeway Master Plan and General Plan Bikeway Map Update IS/MND (City of Citrus Heights, 2015),* the City prepared the *Location Hydraulic Study Report for the Citrus Heights Electric Greenway Project* (Wreco, 2019) to evaluate the effects of the proposed project on the existing base 100-year flood elevations. Hydrologic models, published FEMA flood flows, and the Sacramento County drainage guidelines were used to determine the 100-year flow in Arcade Creek (830 cubic feet per second [cfs]) and Cripple Creek (1,720 cfs). The study found that, prior to mitigation, the project would result in a 0.8-foot and 0.2-foot increase in the 100-year water surface elevation at the Arcade Creek and Cripple Creek bridges, respectively.

Any increase in downstream flooding, displacement of floodwaters, or increase in flood elevations is considered a significant impact. However, with implementation of Mitigation Measures HY-1a (Minimization and Mitigation Measures for Floodplain Impacts) and HY-1b (Coordination with Local, State, and Federal Water Resources and Floodplain Management Agencies), the impact would be reduced to a less-than-significant level. These mitigation measures would require that cut and fill volumes be balanced such that there is no net increase in fill and no overall increase in the base flood elevations, and that the City coordinate with floodplain management agencies on project planning, design, and implementation.

The project's potential to contribute additional sources of polluted runoff is addressed above in item a, above.

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

No Impact. The project is not located in an area subject to hazards associated with seiche, tsunami, or mudflow. Further, inundation of the trail would not risk release of pollutants. No impact would result.

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

No Impact. With adherence to the NPDES General Construction Permit, NPDES area-wide MS4 permit, the City's Design/Construction Standards, and the City's Drainage Policy, the proposed project would not conflict with any water quality control plan or sustainable groundwater management plan. No impact would result.

Mitigation Measures:

Mitigation Measure HY-1a: Minimization and Mitigation Measures for Floodplain Impacts

To prevent any increase in the 100-year flood elevation, the City shall ensure cut and fill volumes in the 100-year floodplain are balanced such that there is no net increase in fill and no overall increase in the base flood elevations as determined by the hydraulic models developed for the project. Options for achieving the no net increase in fill and no overall increase in base flood elevations include implementation of one or more of the following at the two creek crossings:

- Widening the currently proposed single-span bridge openings,
- Grading the main channel and/or overbanks areas (balance cut and fill),
- Using flow equalizer pipes on the bridge approaches adjacent to the bridge openings, and/or
- A multi-span bridge (only for the bridge over Cripple Creek).

The final minimization and mitigation measures for the creek crossings will be determined during the final design phase of the project when more survey and detailed design information is available. The City of Citrus Heights General Services Department shall verify full compliance with this measure at each of the two creek crossings prior to approval of final grading permits and project construction specifications.

For the encroachments in the floodplain outside of the creek crossings, the trail profile is proposing to maintain the existing ground elevations to the maximum extent possible, while meeting ADA complaint design criteria. With this approach, the project will maintain existing drainage patterns and watershed boundaries to the maximum extent practical. In order to mitigate any permanent impacts or to mitigate existing flooding issues the project will provide positive drainage throughout the trail system and provide various drainage improvements as needed to ensure there are no increase runoff. Engineered water quality features will be installed to offset the increased stormwater blocked by the trails new pavement areas for a net-neutral impact to the areas stormwater patterns.

The City of Citrus Heights General Services Department shall verify full compliance with this measure at each of the floodplain crossings and within each drainage management area prior to approval of final grading permits and project construction specifications.

Mitigation Measure HY-1b: Coordination with Local, State, and Federal Water Resources and Floodplain Management Agencies

The City shall coordinate with local, state, and federal water resources and floodplain management agencies as necessary during final planning, design, and implementation of the proposed project. The City shall coordinate with Sacramento County, Caltrans, the Regional Water Quality Control Board, FEMA and the FEMA Floodplain Manager to ensure the design meets all local and State standards, to address any comments or requests, if any, including the need for a No Rise Certification (or, if necessary although not anticipated, a Conditional Letter of Map Revision (CLOMR)).

1.11 LAND USE AND PLANNING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XI. Land Use and Planning.				
Would the project:				
a) Physically divide an established community?	☐	☐	☐	☒
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

1.11.1 IMPACT ANALYSIS

a) Physically divide an established community?

No Impact. The project would not physically divide an established community. The project would complete a priority 1 trail project identified in the City of Citrus Heights's General Plan, Pedestrian Master Plan, and Bicycle Master Plan and the Sacramento County Bikeway Master Plan. The project would facilitate enhanced non-motorized access to residences, schools, commercial centers, and several community parks and/or open spaces. The Class II portions of the project would be located on existing roadways. The Class I bikeway would further link pedestrians and bicyclists from various areas of the city and provide an alternative mode of non-motorized transportation. No impact would result.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

Less than Significant. Land use compatibility was considered for the Class II facilities, including those that are part of the proposed project, during the adoption of the Citrus Heights General Plan in 2011 and the original Bicycle Master Plan. The 2015 Bikeway Master Plan and General Plan Update proposed several new Class I bike trails, including the proposed project, which is a Priority 1 trail segment identified by the City Council.

The designation of new trails within open space, parks and recreational areas would not result in a conflict with an adopted land use plan, policy or regulation.

The addition of an off-street facility would contribute to the achievement of the City's General Plan goals, including:

Goal 29: Plan, design, construct, and manage a Complete Streets transportation network that accommodates the needs of all mobility types, users, and ability levels.

Goal 34: Preserve, protect, and enhance natural habitat areas, including creek and riparian corridors, oak woodlands, and wetlands.

Goal 38: Establish a system of creekside trails, passive open space, and parks for public use.

Goal 39: Create open spaces in future urban development with natural features for public use and enjoyment.

Goal 59: Ensure that ample and appropriate parks and recreation facilities and programs are available to all residents.

The proposed project would provide a recreational amenity and improve access to open space areas for local residents as identified by the City's General Plan.

The project would also be consistent with relevant goals and policies of the Sacramento County General Plan Circulation Element, including:

Goal: Provide mobility for current and future residents of Sacramento County through complete streets and through a balanced and interconnected transportation system which includes all modes of travel - automobile, transit, pedestrian and bicycling.

Policy CI-1. Provide complete streets to provide safe and efficient access to a diversity of travel modes for all urban, suburban and rural land uses within Sacramento County except within certain established neighborhoods where particular amenities (such as sidewalks) are not desired. Within rural areas of the County, a complete street may be accommodated through roadway shoulders of sufficient width or other means to accommodate all modes of travel.

Policy CI-3. Travel modes shall be interconnected to form an integrated, coordinated and balanced multi-modal transportation system, planned and developed consistent with the land uses to be served.

Policy CI-6. Provide support for community based corridor planning processes on existing roadways with excess vehicle capacity within built communities to optimize the public right-of-way by utilizing the excess width for other modes of travel or public amenities such as bike lanes, landscaping, walkways, parking, or medians.

Goal: Provide safe, continuous, efficient, integrated, and accessible bicycle and pedestrian systems that encourages the use of the bicycle and walking as a viable transportation mode and as a form of recreation and exercise.

Policy CI-32. Develop a comprehensive, safe, convenient and accessible bicycle and pedestrian system that serves and connects the County's employment, commercial, recreational, educational, social services, housing and other transportation modes.

Policy CI-34. Construct and maintain bikeways and multi-use trails to minimize conflicts between bicyclists, pedestrians, and motorists.

Policy CI-36. Collaborate with neighboring jurisdictions and regional agencies to coordinate planning and development of the County's bikeways, pedestrian facilities and multiuse trails with those of neighboring jurisdictions, and to support a regional bicycle and pedestrian network.

There are also existing Class II bike routes within the project limits. The newly-proposed on-street facilities would be located on existing roadways. These roadways were previously determined to be compatible with their surrounding land uses either through the General Plan or Capital Improvement Project process.

The addition of bike lanes, crosswalks and signs/striping would not substantially alter the roadway as perceived by the adjacent land uses. For example, bike lane installation would not increase roadway capacity or noise. Further, roadway improvement projects, including bike lane construction, are a typical activity associated with roadways.

Other specific Citrus Heights General Plan policies adopted for the purpose of avoiding environmental effects are evaluated throughout this Initial Study under the corresponding issue areas. The project would not conflict with Citrus Heights or Sacramento County General Plan land use policies adopted for the purpose of avoiding or mitigating an environmental effect. The impact would be less than significant.

Mitigation Measures: No mitigation is required.

1.12 MINERAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XII. Mineral Resources.				
Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☐	☒

1.12.1 IMPACT ANALYSIS

a & b) 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? 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?

No Impact. The project site is not located within a designated mineral resource deposit area. Neither the Citrus Heights General Plan nor the Sacramento County General Plan identifies MRZ-2 mineral resource areas on or in the vicinity of the project site. No impact would occur.

Mitigation Measures: No mitigation is required.

1.13 NOISE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIII. Noise.				
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?	☐	☐	☒	☐
b) Generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

1.13.1 IMPACT ANALYSIS

a & b) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards? Generation of excessive groundborne vibration or groundborne noise levels?

Less than Significant.

Construction

Construction activities would generate noise, including ground born vibration resulting from the use of heavy construction vehicles and equipment. Construction activities would mainly involve ground clearing and paving. During each stage of construction, there would be a different mix of equipment operating, and noise levels would vary by stage, based on the amount of equipment in operation and the location at which the equipment is operating.

Noise sources associated with construction activities are exempt from the City of Citrus Heights Noise Ordinance and the County of Sacramento Noise Ordinance so long as construction occurs between the hours of 6:00 a.m. and 8:00 p.m. weekdays and between the hours of 7:00 a.m. and

8:00 p.m. on weekends. Construction activities would be limited to the allowable daylight hours of construction specified in the Citrus Heights and Sacramento County Noise Ordinances. No nighttime construction would be required. Given the temporary nature of construction activities and the required compliance with allowable daylight hours of construction specified by the City and County Noise Ordinances, the impact from construction noise would be less than significant.

Project construction activities may generate vibration in the immediate vicinity of work areas. Vibration levels would vary depending on construction methods and equipment used. Vibration levels from typical construction activities would be expected to be 0.2 in/sec peak particle velocity (PPV) or less at a distance of 25 feet, which is below the vibration levels that may cause structural damage for adjacent old buildings, older residential structures, and modern buildings. Following construction, the project would not result in substantial sources of ground borne vibration or ground borne noise. The impact from groundborne vibration and groundborne noise levels would be less than significant.

Bikeway Maintenance

Maintenance activities for Class I bike paths would include weed spraying and mowing, litter pick-up, sweeping of debris, and asphalt maintenance (including crack seal/patching, slurry seal and overlays). Crack seal and patching would occur as needed, while slurry seals/overlays would occur typically 1 time every 5 to 8 years, or as necessary. The City expects that all maintenance activities would occur during daytime hours.

Noise associated with these maintenance activities would include regular vehicular noise as well as noise from mechanical mowing and sweeping equipment. Slurry seals and overlays would use vehicles similar to those described in the construction activities section. Mowers, blowers, weed cutters, and tractors can produce noise levels of up to 80 dBA at a distance of 100 feet. Newer equipment is outfitted with mufflers, which reduce the noise output to approximately 65 decibels at 50 feet. During infrequent asphalt maintenance activities, higher noise levels would be generated in association with the use of heavier vehicles.

The City of Citrus Heights Noise Ordinance recognizes that typical municipal operations such as path and road maintenance may generate noise, and exempts City maintenance activities from the requirements of the Noise Ordinance. Since most maintenance activities are of limited duration and infrequent in nature, and given that City operations and activities are exempt from regulation by the Noise Ordinance, the impact would be less than significant.

Utilization of Class I Bike Trails

Normal use of the Class I bikeway would include commuter and recreational bicycling, walking, jogging, and rollerblading. Dogs on a leash are permitted on Citrus Heights bike paths. No motorized vehicles would be permitted on the Class I bike trail. Given these user characteristics, the normal noises resulting from use of the trail would be speech by trail users, and occasional dog barking.

The maximum allowable exposures to transportation noise sources are 60 dB Ldn for residential areas. Normal levels of speaking produce approximately 50 dB at a distance of 15 feet. As a result, normal use of bikeways is not expected to cause significant levels of operation-related noise. Individual violations of the noise ordinance may be addressed through the City's Police Department. As a result, this impact would be less than significant.

c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No Impact. The project is not located within two miles of a public airport or private airstrip. The project would not expose people working in the area to excessive noise levels. No impact would occur.

Mitigation Measures: No mitigation is required.

1.14 POPULATION AND HOUSING

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIV. Population and Housing.				
Would the project:				
a) Induce substantial unplanned 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)?	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

1.14.1 IMPACT ANALYSIS

a) Induce substantial unplanned 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)?

No Impact. The project would not directly or indirectly facilitate or induce population growth. Instead, the project is a transportation and recreational facility that would be made available to existing City residents. No impact would occur.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No Impact. The project would not require displacement of existing homes, businesses or persons. No impact would occur.

Mitigation Measures: No mitigation is required.

1.15 PUBLIC SERVICES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XV. Public Services. Would the project:				
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☒	☐
Parks?	☐	☐	☒	☐
Other public facilities?	☐	☐	☒	☐

1.15.1 IMPACT ANALYSIS

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

Fire protection?

No Impact. The project would not generate additional residents and would not result in the need for expanded fire facilities. Additional use of trails could increase calls for emergency services within open space. However, Class I trails are designed to accommodate emergency vehicles in emergency situations. No impact would occur.

Police protection?

No Impact. The project would not generate additional residents and would not result in the need for new or expanded police facilities. Property owners and residents commonly

express a concern regarding the potential for increased vandalism and illegal activities in areas where trails are constructed. Creek corridors and utility corridors are currently patrolled by police officers. The project would provide improved access for the Police Department and enable bike patrols and foot patrols of the creek corridors. No impact would occur.

Schools?

Less than Significant. The project would not generate additional residents and would not result in the need for new or expanded school facilities. A portion of the path would be located within an underutilized parking lot for Woodside Elementary School, and would not require the expansion of facilities. The impact would be less than significant.

Parks?

Less than Significant. The project would enhance access to seven existing parks and/or open spaces. The project would not generate additional residents and would not result in the need for new or expanded park facilities. The City's General Services Department would maintain any trail construction on City property or public trail easements. Maintenance activities include weed control, shrub and tree trimming, trash removal, drainage control and asphalt repair.

Portions of the project would be located on Sunrise Recreation and Park District (SRPD) properties and Orangevale Recreation and Park District (OVRPD) properties. The construction and maintenance of trails on those properties would be maintained by SRPD and OVRPD.

The project would increase the demand for bike path maintenance within the City. Although the maintenance requirements for trails would increase, the project would not result in the need for new or expanded parks or streets maintenance facilities. As a result, this impact is considered less than significant.

Other public facilities?

Less than Significant. The project would not result in the need for new or expanded transit, library, ambulance or other services. The project would include earthwork that has the potential to affect underground or aboveground utility services. Implementation of the City's Construction Standards would be required for the project, which include requirements to contact service providers that may be affected by construction to ensure that conflicts are avoided. As a result, the impact would be less than significant.

Mitigation Measures: No mitigation is required.

1.16 RECREATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVI. Recreation.				
Would the project:				
a) 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?	☐	☐	☒	☐
b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☒	☐

1.16.1 IMPACT ANALYSIS

a & b) 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? Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?

Less than Significant. The project would enhance access to several existing parks and/or open spaces. The project would not add new residents or create new land uses that would impact existing recreation facilities. The project would likely result in additional residents and visitors utilizing existing parks because the planned bikeways are intended to provide connections to parks. However, it would be expected that many of these users would already be utilizing the parks and recreation facilities and would subsequently use a non-motorized transportation alternative to reach the parks and open spaces. Increased use would not be expected to substantially impact the parks and facilities to the extent that physical deterioration would occur nor would the facilities need to be expanded. Therefore, the project would have a less than significant impact on recreation facilities.

Mitigation Measures: No mitigation is required.

1.17 TRANSPORTATION

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XVII. Transportation.				
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	☐	☐	☐	☒
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
d) Result in inadequate emergency access?	☐	☐	☒	☐

1.17.1 IMPACT ANALYSIS

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?

Less than Significant with Mitigation Incorporated. The project would not conflict with any applicable plans, ordinances or policies addressing the circulation system. An evaluation of potential impacts related to temporary construction activities, permanent roadway improvements, and increased recreational use is provided below.

Temporary Construction Impacts

Construction activities may require temporary partial lane closures during roadway striping efforts for new crosswalks, installation of a pedestrian traffic signal at Fair Oaks Boulevard, road crossings near Sunrise Boulevard/Sayonara Drive and Oak Avenue/Melva Street, a sidewalk extension along Oak Avenue, and at new trailheads. Partial lane closures may temporarily impede traffic flow or cause an intersection to operate outside of City level of service standards. This impact is considered potentially significant. Implementation of Mitigation Measure TR-1 would require development of a Construction Traffic Management Plan (plan) to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users. Implementation of Mitigation Measure TR-1 would mitigate potential temporary construction impacts to a less-than-significant level.

Permanent Roadway Impacts

The project would install new mid-block pedestrian crosswalks across Fair Oaks Boulevard, Woodmore Oaks Drive, Streng Avenue, and Villa Oak Drive to facilitate pathway access. The project would also install sidewalk along a portion of Oak Avenue between C-Bar-C Park and Olivine Avenue, and may include restriping of existing on-street Class II segments. The project would not remove travel lanes or otherwise significantly affect vehicular travel lanes during the installation of crosswalks, sidewalks, and striping. The project provides sufficient right-of-way and improvements to maintain existing and planned vehicular levels of service and would be designed to comply with the City's Construction Standards for lane width and overall design.

The project would also provide a pedestrian traffic signal at Fair Oaks Boulevard in the vicinity of Tempo Community Park, which could affect the arterial level of service (LOS), and queuing. To evaluate the effects of the pedestrian traffic signal on these conditions the City of Citrus Heights modeled traffic of the future crossing of Fair Oaks Boulevard between Tempo Community Park and Sundance Natural Area. The results of the evaluation concluded that the intersection would operate at LOS A in the AM and PM peak hours for future with-project conditions, consistent with the thresholds in the City's General Plan which allow intersections to operate at LOS E during peak hours. As there is no vehicle queuing in the existing conditions (no signal), vehicle queuing would increase under future project conditions. However, the traffic signal delay would be a maximum of 8.1 seconds during the peak periods (Kimley Horn, 2019, Appendix C).

As a result, this impact is less than significant.

Increased Recreational Use of Bikeways

The project would increase on-street and off-street recreational bicycling, walking, jogging, rollerblading and other non-cycling recreational trail use. Most recreational users would be Citrus Heights residents, with some non-residents. The City expects that a majority of bikeway users would begin and end their recreational trips at their home or worksite. However, some recreational users, including both residents and non-residents, would drive to the starting point of their recreational trip. The number of new recreational trips is not expected to be substantial. Further, the new recreational trips would typically take place on weekends and before or after work, outside peak commute hours. As a result, there would be little or no impact to traffic and no impact to levels of service resulting from increased recreational use of bikeway facilities. The potential impact is less than significant.

b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?

No Impact. The project would complete a priority 1 trail project identified in the City's General Plan, Pedestrian Master Plan, and Bicycle Master Plan. The project would facilitate enhanced non-motorized access to residences, schools, commercial centers, and several community parks and/or open spaces. Normal use of the project facilities would include commuter and recreational bicycling, walking, jogging, and rollerblading. No motorized vehicles would be permitted on the Class I bike trail.

As a proposed recreational facility that would encourage the use of non-motorized travel, the project is presumed to reduce, or have no impact on, vehicle miles travelled. No impact would occur.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Less than Significant. Implementation of the City's Design/Construction Standards would be required for the project, which include reference to the Caltrans Highway Design Manual, MUTCD, and other applicable standards. The standards include specifications for minimum width, clearance to obstructions, sight distance, signs, intersections width and relation to roadways, grading, structures (including bridges) and lighting. Compliance with these standards and Mitigation Measure TR-1 would ensure that bikeway design features do not result in hazards or incompatible uses. The impact would be less than significant.

d) Result in inadequate emergency access?

Less than Significant. Construction activities may require temporary partial lane closures during striping efforts. Lane closures could impede or slow emergency response vehicles. However, striping efforts would be of short duration and a minimum of one-way traffic would be maintained at all times. As noted previously, implementation of the City's Construction Standards would be required for the project, which require any project involving lane closures or otherwise affecting traffic on existing streets to institute a traffic control plan that includes measures to minimize the impact to local traffic and warning signs per the MUTCD. Implementation of a traffic control plan would take emergency response into consideration. Required implementation of the City's Construction Standards would reduce this potential impact to less than significant.

Class I trails are designed to accommodate emergency vehicles in emergency situations. Therefore, following construction, the new Class I trail lane would enhance emergency vehicle access into open space areas. No operational impact would occur.

Mitigation Measures:

Mitigation Measure TR-1: Traffic Controls

The project contractor shall develop a Construction Traffic Management Plan (plan) to minimize traffic impacts to public streets and maintain a high level of safety for all roadway users. The plan shall include items such as: the number and size of trucks per day, expected arrival/departure times, truck circulation patterns, location of truck staging areas, employee parking, and the proposed use of traffic control/partial street closures on public streets. The City of Citrus Heights shall ensure that the plan has been developed and approved by the City's General Services Division prior to issuance of demolition, grading, or building permits for the Electric Greenway Trail Project.

1.18 TRIBAL CULTURAL RESOURCES

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact

XVIII. Tribal Cultural Resources.

Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)?	☒ Yes		☐ No	
Would the project 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)?	☐	☒	☐	☐
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	☐	☒	☐	☐

Methodology

According to CEQA, a project that may cause a substantial adverse change in the significance of a tribal cultural resource may have a significant effect on the environment (Pub. Res. Code section 21084.2).

Efforts to identify tribal cultural resources that could be affected by the project consisted of a records search at the North Central Information Center, literature review, a sacred lands search through the Native American Heritage Commission, an intensive pedestrian survey, and consultation in compliance with Public Resources Code section 21080.3.1.

California Native American tribes were notified according to Public Resources Code section 21080.3.1 on November 7, 2018. As a result of this notification, the United Auburn Indian Community (UAIC), requested consultation on November 26, 2018. Consultation commenced between the UAIC and the City on November 28, 2018. No tribal cultural resources were identified; however, concerns regarding the sensitivity for tribal cultural resources was addressed through negotiated mitigation measures. Consultation was concluded in January 2019.

The results of the records search, literature review, sacred lands search, pedestrian survey, and tribal consultations are presented in the *Archaeological Survey Report for the Citrus Heights Electric Greenway Bike Trail* (InContext, 2019). Although no tribal cultural resources were identified, the study findings indicate that the project area has a moderate sensitivity for the presence of buried archaeological deposits, which could qualify as tribal cultural resources. Specifically, the two perennial water sources and associated habitat would have been resources for prehistoric people. The depth and alkalinity of soil, and the lack of disturbance in some areas indicates there is potential for buried cultural deposits to exist in the project area. Impacts to tribal cultural resources could result in a significant impact under CEQA. To reduce these potential impacts to a less-than-significant level, the City consulted with California Native American Tribes to develop mitigation measures that are consistent with the City's General Plan goals and policies related to tribal cultural resources.

1.18.1 IMPACT ANALYSIS

Would the project 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)?

Less than Significant with Mitigation Incorporated. No tribal cultural resources [(as defined in Public Resources Code section 5020.1(k)] are known to exist within the project area. However, the results of the Archaeological Survey Report indicates there is moderate potential for buried cultural deposits that qualify as tribal cultural resources to exist in the project area. The potential for inadvertent discovery of tribal cultural resources area is considered a significant impact. To reduce this potential impact to a less-than-significant level, the City would implement Mitigation Measures TCR-1a, TCR-1b, and TCR-1c.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?

Less than Significant with Mitigation Incorporated. No tribal cultural resources [(as defined in Public Resources Code section 5020.1(k)] are known to exist within the project area. However, the results of the Archaeological Survey Report indicates there is moderate potential for buried cultural deposits that qualify as tribal cultural resources to exist in the project area. The potential for inadvertent discovery of tribal cultural resources area is considered a significant impact. To reduce this potential impact to a less-than-significant level, the City would implement Mitigation Measures TCR-1a, TCR-1b, and TCR-1c.

Mitigation Measures:

Mitigation Measure TCR-1a: Ground Disturbance Site Visit

A minimum of seven days prior to beginning earthwork or other soil disturbance activities, the contractor shall notify the City of the proposed earthwork start-date, in order to provide the City representative sufficient time to contact the UAIC. A tribal representative shall be invited to, at its discretion, voluntarily inspect the project location, including any soil piles, trenches, or other disturbed areas, within the first five days of ground-breaking activity. Construction activity may be ongoing during this time. Should the tribe choose not to perform a field visit within the first five days, construction activities may continue as scheduled, as long as notification was made.

Mitigation Measure TCR-1b: Contractor Awareness Training

The developer shall ensure that a Contractor Awareness Training Program is developed and delivered to train equipment operators about tribal cultural resources. The program shall be designed to inform construction personnel about state regulations pertaining to tribal cultural resources; the subsurface indicators of resources that shall require work stoppage; procedures for notifying the City of any occurrences; and project-specific requirements; and enforcement of penalties and repercussions for non-compliance with the program.

The training shall be prepared by a qualified professional archaeologist and reviewed by City for approval, and may be provided in an audio-visual format, such as a DVD. The contractor shall provide culturally-affiliated tribes that consulted on the project and UAIC the option of attending the initial training in person and/or providing additional materials germane to the unanticipated discovery of tribal cultural resources for incorporation into the training.

The training shall be provided once to the Construction Contractor's superintendent, who shall then be responsible for ensuring that all future equipment operators and personnel view the video and review training materials prior to their first excavation on the property. All trained personnel shall be required to sign a form that acknowledges receipt of the training. A copy of the form shall be provided to the City of Citrus Heights as proof of compliance.

Mitigation Measure TCR-1c: Inadvertent Discoveries to Tribal Cultural Resources

If subsurface deposits believed to be cultural or human in origin, which could qualify as tribal cultural resources, are discovered during construction, all work shall halt within a 50-foot radius of the discovery, and the developer shall immediately notify the City of Citrus Heights Planning manager. The City of Citrus Heights will notify the tribes of the discovery, and a tribal representative shall have the opportunity to determine whether or not the find represents a tribal cultural resource. If a response is not received within five days of notification, the City will deem this portion of the measure completed in good faith as long as the notification was made and documented. The contractor shall retain a qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and historic archaeology and subject to approval by the City, to evaluate the significance of the find and develop appropriate management recommendations. All management recommendations shall be provided to the City in writing for the City's review and approval. If recommended by the qualified professional and approved by the City, this may include modification of the no-work

radius. The following notifications shall apply, depending on the nature of the find, subject to the review and approval of the City:

1. Work may resume immediately, and no agency notifications are required if: 1) the professional archaeologist determines that the find does not represent a cultural resource and, if a response from a tribal representative was received within five days, 2) the tribal representative determines that the find does not represent a tribal cultural resource or determines that no further action is necessary.

2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, the City shall be notified immediately, to consult on a finding of eligibility and implementation of appropriate treatment measures, if the find is determined to be a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines. Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) that the treatment measures have been completed to its satisfaction.

3. If the find represents a Native American or potentially Native American resource (including a Tribal Cultural Resource) that does not include human remains, the [tribe(s)] and City shall be notified. The City will consult with the tribe(s) on a finding of eligibility and implement appropriate treatment measures, if the find is determined to be either a Historical Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines, or a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code. Preservation in place is the preferred treatment, if feasible. Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the site either: 1) is not a Historic Resource under CEQA, as defined in Section 15064.5(a) of the CEQA Guidelines; or 2) not a Tribal Cultural Resource, as defined in Section 21074 of the Public Resources Code; or 3) that the treatment measures have been completed to its satisfaction.

If the finds include human remains, or remains that are potentially human, the construction supervisor or on-site archaeologist shall ensure reasonable protection measures are taken to protect the discovery from disturbance (AB 2641) and shall notify the city and Sacramento County Coroner (per §7050.5 of the Health and Safety Code). The provisions of §7050.5 of the California Health and Safety Code, § 5097.98 of the California Public Resources Code, and Assembly Bill 2641 shall be implemented. If the coroner determines the remains are Native American and not the result of a crime scene, the coroner will notify the Native American Heritage Commission, which then will designate a Native American Most Likely Descendant (MLD) for the project (§ 5097.98 of the Public Resources Code). The designated MLD will have 48 hours from the time access to the property is granted to make recommendations concerning treatment of the remains. If the Landowner does not agree with the recommendations of the MLD, the NAHC can mediate (§ 5097.94 of the Public Resources Code). If no agreement is reached, the landowner must rebury the remains where they will not be further disturbed (§ 5097.98 of the Public Resources Code). This will also include either recording the site with the NAHC or the appropriate information center; using an open space or conservation zoning designation or easement; or recording a reinternment document with the County in which the property is located (AB 2641). Work shall not resume within the no-work radius until the City, through consultation as appropriate, determines that the treatment measures have been completed to its satisfaction.

1.19 UTILITIES AND SERVICE SYSTEMS

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XIX. Utilities and Service Systems.				
Would the project:				
a) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in a determination by the wastewater treatment provider that 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?	☐	☐	☒	☐
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

1.19.1 IMPACT ANALYSIS

a-c) Require or result in the relocation or construction of construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects? Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? Result in a determination by the wastewater treatment provider that 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?

Less than Significant. The project would not require the construction of new water or wastewater facilities, nor would it affect wastewater treatment facilities. Therefore, the impacts to water and wastewater facilities would be less than significant.

Sacramento Area Sewer District (SASD) sewer lines are located within the project limits. Class I trail construction and maintenance activity could temporarily interfere with the ability of SASD staff to perform routine or emergency maintenance activities on affected sewer lines. However, implementation of the City's Construction Standards would be required for the project, including early consultation with all service providers. This consultation would minimize the potential impact related to temporary obstruction of access to sewer lines to a less-than-significant level. Since Class I trails are designed to facilitate maintenance vehicle access to open space per the Design/Construction standards, placement of bike trails in proximity to sewer lines would be beneficial.

Storm water in Citrus Heights is directed via drain inlets into a series of underground pipes within roadways and other public parcels. These pipes outfall into the City creek system, at which point the water flows downstream. The amount of stormwater that enters the creek system increases as undeveloped ground is replaced by impervious surfaces such as paved trails. Existing Class II bike lanes are located along existing roads and only striping changes and new crosswalks are being proposed. Therefore, new or modified drain inlets and pipes would not be required because there would not be an increase in the amount of impervious surfaces.

The proposed Class I trail would result in the need for new and in some cases modified drainage facilities. These would primarily be drainage swales with underground pipes spaced at intervals to convey surface water. The impervious surfaces resulting from the new Class I bike trail would have the potential to increase the amount of water entering the City's creek system. However, the project would install water quality features consistent with proven Best Management Practices and Low Impact Development to detain, retain and otherwise infiltrate or treat the water prior to entering the creek system. Implementation of the City's Construction Standards would also be required for the project, which includes Best Management Practices to minimize the environmental effects associated with storm water drainage. This would minimize the potential impact to a less-than-significant level.

d & e) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Less than Significant. Construction and operational waste generated as a result of the project would require management and disposal in accordance with local and state regulations. The project would not conflict with or impede implementation of such programs.

The project would generate solid waste during construction, mostly roadway materials (earthwork and asphalt concrete). The solid waste would be disposed of at a waste handling facility, which complies with all federal, state, and local regulations.

Following construction, public use of the new Class I bike route would not be expected to generate any significant amounts of solid waste. The Class I bike path and support facilities would provide trash receptacles at periodic intervals, specifically at trailheads. However, the amount of solid waste generated by use of the bikeways is anticipated to be minimal; therefore, the impact would be less than significant.

Active permitted regional landfills include the Forward Landfill, Kiefer Landfill, L&D Landfill, and Western Regional Sanitary Landfill. Solid waste generated during construction and operation of the project would represent a small fraction of the daily permitted tonnage of these facilities. The impact would be less than significant.

Mitigation Measures: No mitigation is required.

1.20 WILDFIRE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XX. Wildfire.				
Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones?				
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	☐ Yes			☒ No
a) Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	☐	☐	☐	☒
c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	☐	☒
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	☐	☒

1.20.1 IMPACT ANALYSIS

a-d) The project is not located in or near a state responsibility area or lands classified by CAL FIRE as very high fire hazard severity zones (CAL FIRE 2007). Therefore, State CEQA Guidelines Appendix G questions related to wildfire are not applicable to the project. No impact would occur.

Mitigation Measures: No mitigation is required.

1.21 MANDATORY FINDINGS OF SIGNIFICANCE

ENVIRONMENTAL ISSUES	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
XXI. Mandatory Findings of Significance.				
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☒	☐
c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

1.21.1 IMPACT ANALYSIS

a & c) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory? Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Less than Significant. As described throughout the above analysis, the proposed project would not result in any changes to General Plan land use designations or zoning districts, would not result in annexation of land, and would not allow for new land use development. The proposed project would not threaten a significant biological resource, nor would it eliminate important examples of California history or prehistory. The project would not have substantial adverse effects on human beings. Mitigation measures are presented in this document. With the implementation of these

mitigation measures, the proposed project would have a less-than-significant impact on these environmental topics.

b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Less than Significant. The cumulative impacts of the proposed project, in combination with other bikepaths in the City limits, were evaluated in the *Bikeway Master Plan and General Plan Bikeway Map Update IS/MND* (City of Citrus Heights, 2015). However, other unrelated cumulative projects could contribute impacts to the same resources. The project could incrementally contribute to cumulative impacts associated with new sources of lighting, construction-related impacts to water quality, construction-related air pollutant and GHG emissions, and impacts to biological resources. Lighting impacts would be minimized through project design features such as proper placement and shielding of the lights. Incremental water quality impacts would be reduced through compliance with applicable storm water regulations. Air quality and GHG emissions would be incremental but temporary as they would only occur during project construction. In addition, the bike path would reduce reliance on the single occupancy vehicle, resulting in a reduction in air pollutant emissions. Incremental impacts to biological resources would remain less than significant with implementation of mitigation measures described above under Section 7.4. In combination with other existing and proposed projects in the area, the project's contribution would not be cumulatively considerable.

1.22 REFERENCES

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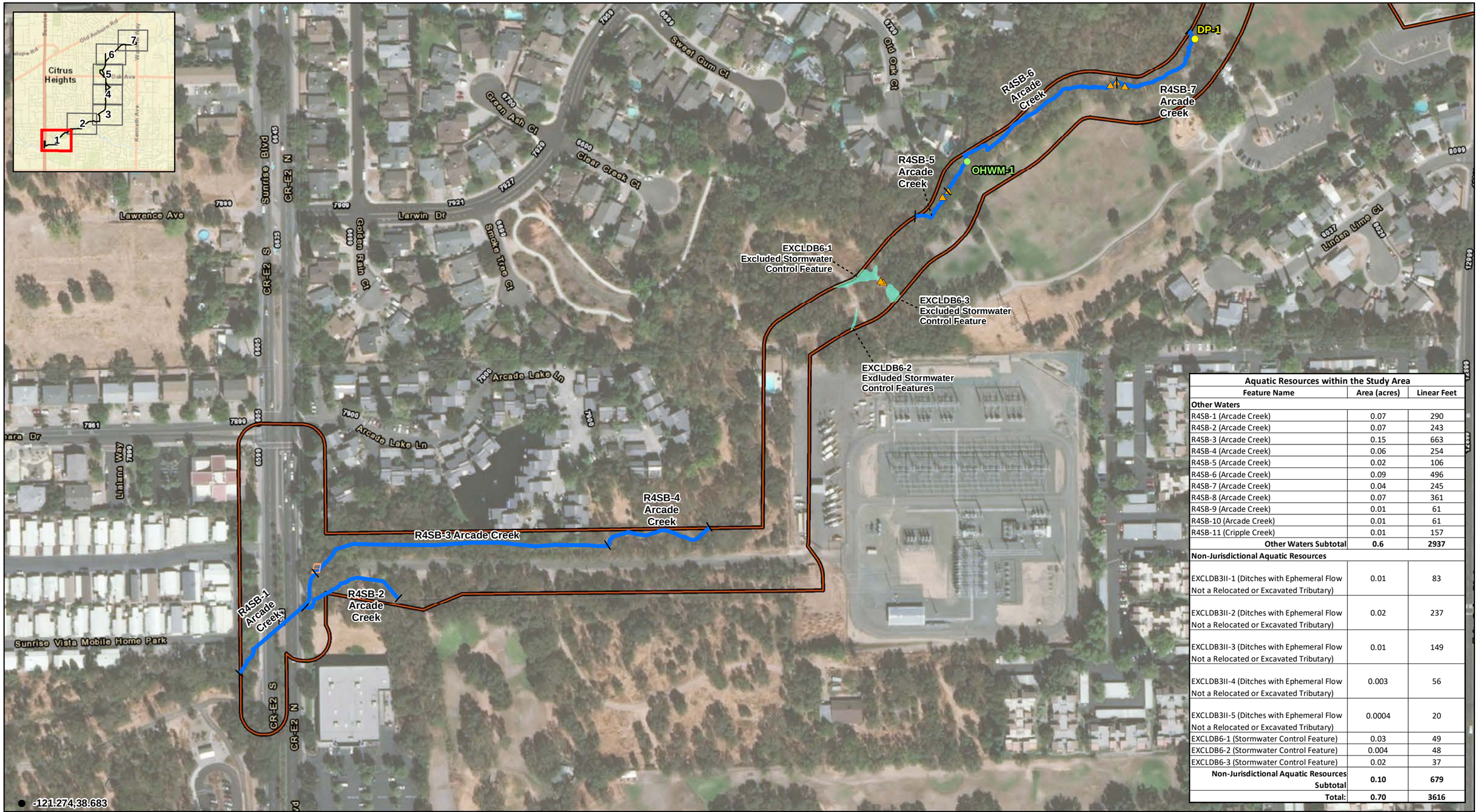
Appendices

Appendix A – Observed Aquatic Resources



Source: ESRI ArcGIS Online, GHD

Aquatic Resources within the Study Area		
Feature Name	**Area (acres)**	**Linear Feet**
Other Waters		
R4SB-1 (Arcade Creek)	0.07	290
R4SB-2 (Arcade Creek)	0.07	243
R4SB-3 (Arcade Creek)	0.15	663
R4SB-4 (Arcade Creek)	0.06	254
R4SB-5 (Arcade Creek)	0.02	106
R4SB-6 (Arcade Creek)	0.09	496
R4SB-7 (Arcade Creek)	0.04	245
R4SB-8 (Arcade Creek)	0.07	361
R4SB-9 (Arcade Creek)	0.01	61
R4SB-10 (Arcade Creek)	0.01	61
R4SB-11 (Cripple Creek)	0.01	157
Other Waters Subtotal	**0.6**	**2937**
Non-Jurisdictional Aquatic Resources		
EXCLDB3II-1 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.01	83
EXCLDB3II-2 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.02	237
EXCLDB3II-3 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.01	149
EXCLDB3II-4 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.003	56
EXCLDB3II-5 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.0004	20
EXCLDB6-1 (Stormwater Control Feature)	0.03	49
EXCLDB6-2 (Stormwater Control Feature)	0.004	48
EXCLDB6-3 (Stormwater Control Feature)	0.02	37
Non-Jurisdictional Aquatic Resources Subtotal	**0.10**	**679**
Total:	**0.70**	**3616**

0 100 200 Feet

1 inch = 200 feet

BARGAS Environmental Consulting

Citrus Heights Electric Greenway
Surveyor Name: Daniel Neal
Map Date: 2/12/2019
Map Author: Coral Fenech, Green Map GIS
Date Revised: 3/7/2019
Aerial Source: ESRI ArcGIS World Imagery, 8/8/2017
Coordinate System: NAD 1983 State Plane Zone 2 (US Feet)

- Study Area
- Bridge
- Map Reference Points
- Sample Point
- Culvert
- OHWM Data Point

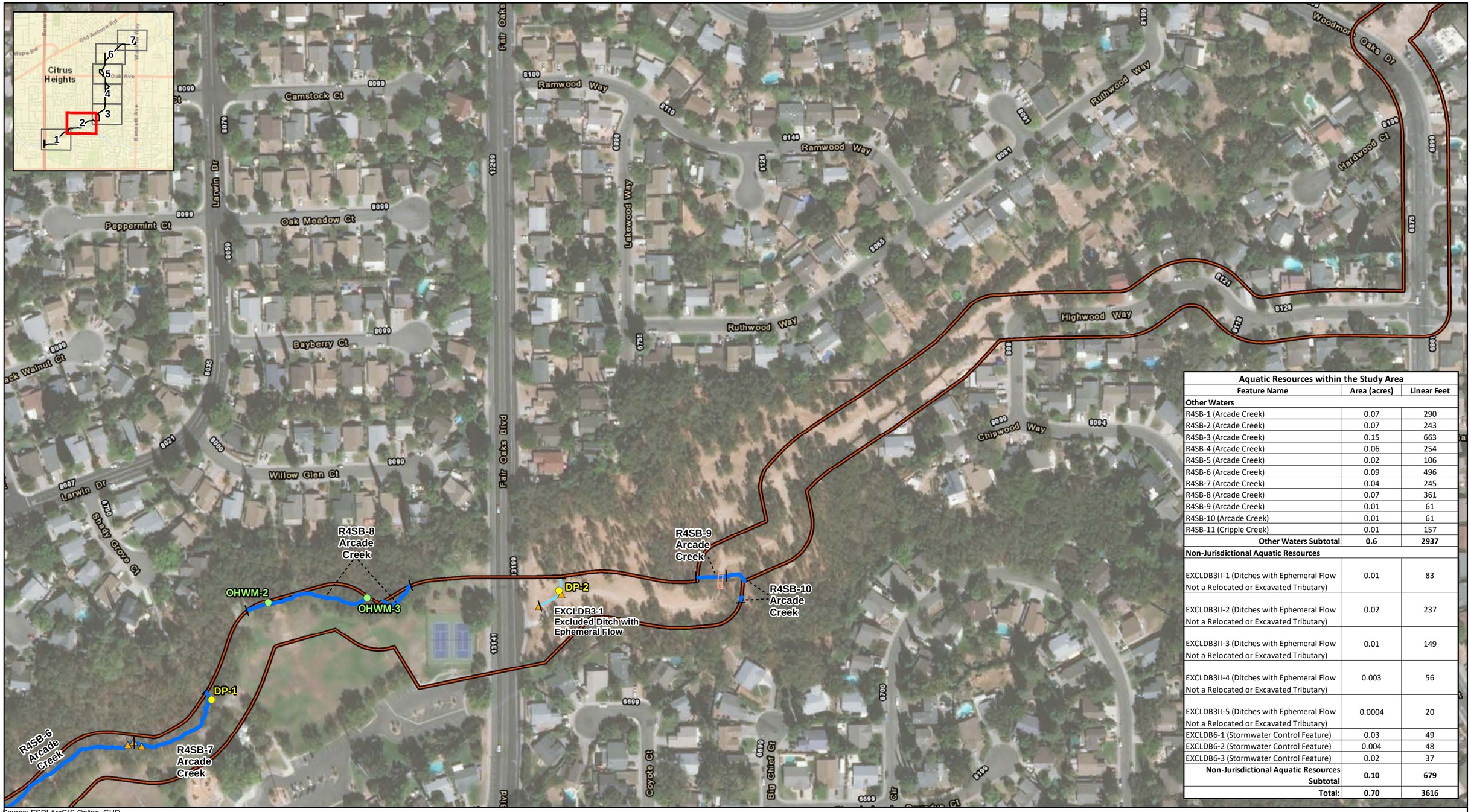
Other Waters
- R4SB - Streambed, Intermittent, Riverine

Non-Jurisdictional Aquatic Resources
- EXCLDB3II - Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary
- EXCLDB6 - Stormwater Control Feature

Appendix A
Sheet 1 of 7
Observed Aquatic Resources

Citrus Heights Electric Greenway

Map Created:2/12/2019, Map Revised:3/7/2019, Bargas Project Number: 2018-1008



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BARGAS Environmental Consulting

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Surveyor Name: Daniel Neal
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Map Author: Coral Fenech, Green Map GIS
Date Revised: 3/7/2019
Aerial Source: ESRI ArcGIS World Imagery, 8/8/2017
Coordinate System: NAD 1983 State Plane Zone 2 (US Feet)

- Study Area
- Bridge
- Map Reference Points
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- OHWM Data Point

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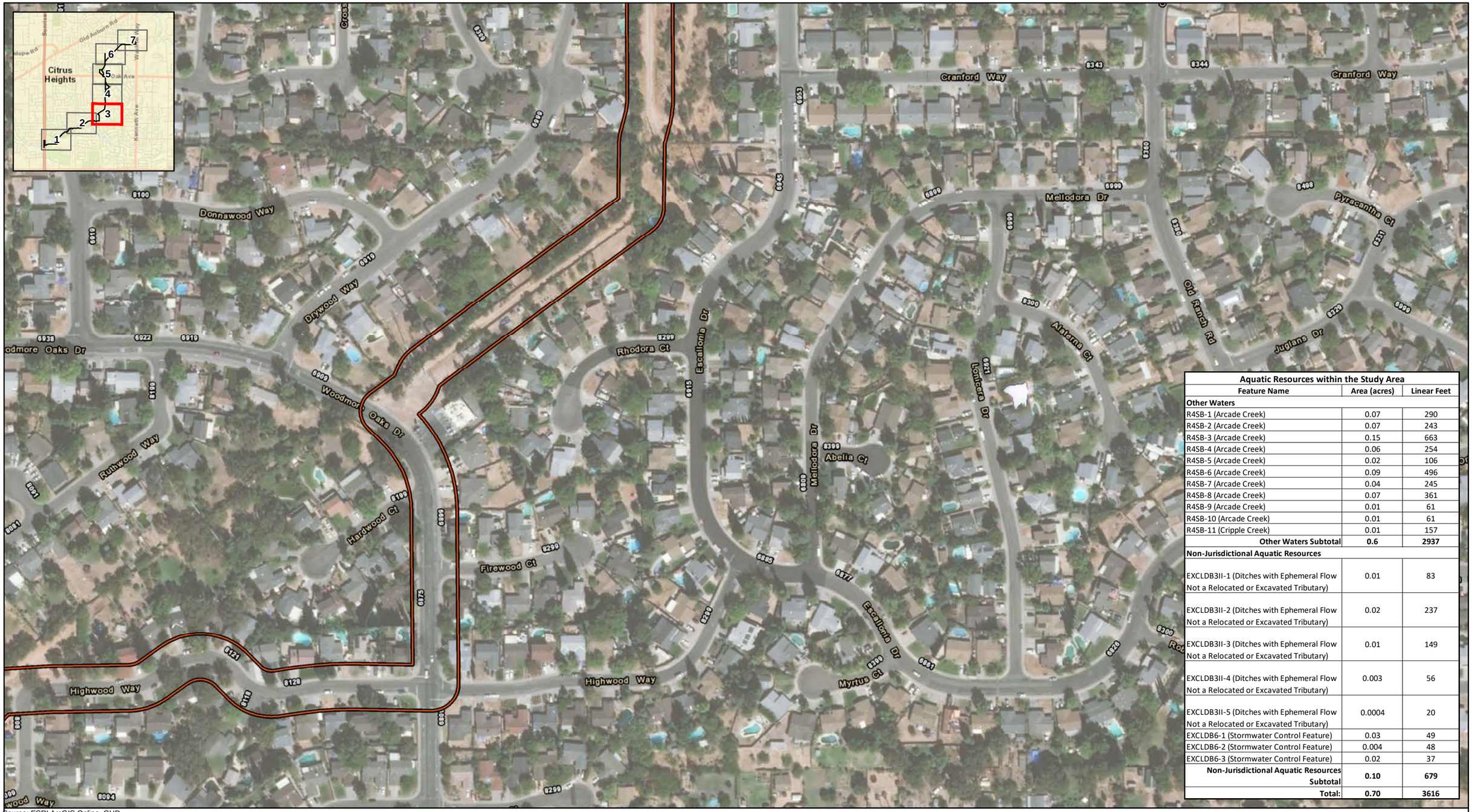
- R4SB - Streambed, Intermittent, Riverine

Non-Jurisdictional Aquatic Resources
- EXCLDB3II - Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary
- EXCLDB6 - Stormwater Control Feature

Appendix A
Sheet 2 of 7
Observed Aquatic Resources

Citrus Heights Electric Greenway

Map Created:2/12/2019, Map Revised:3/7/2019, Bargas Project Number: 2018-1008



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0 100 200 Feet

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BARGAS Environmental Consulting

Citrus Heights Electric Greenway
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Non-Jurisdictional Aquatic Resources
- EXCLDB3II - Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary
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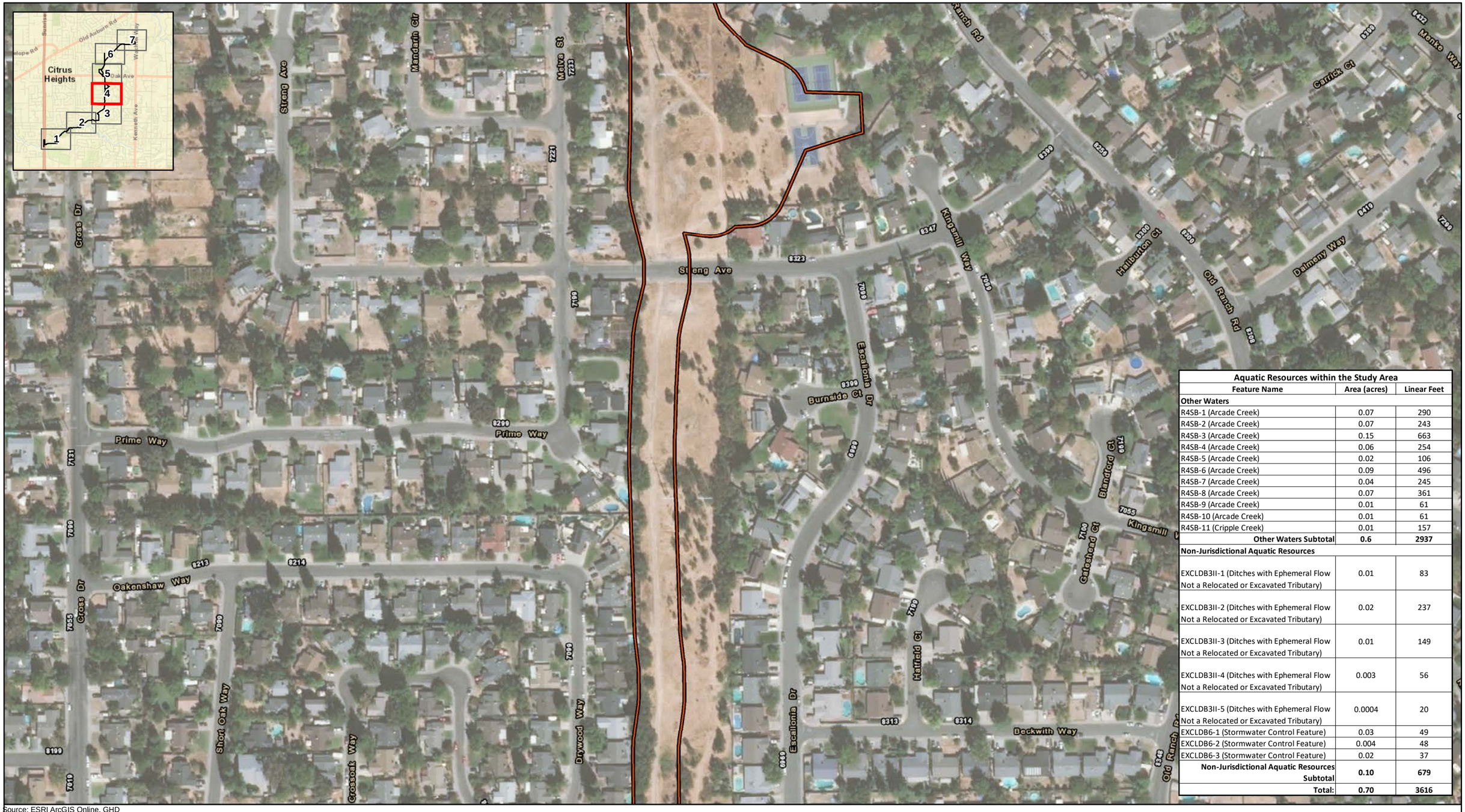
Appendix A
Sheet 3 of 7
Observed Aquatic Resources

Citrus Heights Electric Greenway

Map Created:2/12/2019, Map Revised:3/7/2019, Bargas Project Number: 2018-1008



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Total:	**0.70**	**3616**

Source: ESRI ArcGIS Online, GHD

N

0 100 200 Feet

1 inch = 200 feet

BARGAS Environmental Consulting

Citrus Heights Electric Greenway
Surveyor Name: Daniel Neal
Map Date: 2/12/2019
Map Author: Coral Fenech, Green Map GIS
Date Revised: 3/7/2019
Aerial Source: ESRI ArcGIS World Imagery, 8/8/2017
Coordinate System: NAD 1983 State Plane Zone 2 (US Feet)

- Study Area
- Bridge
- Map Reference Points
- Sample Point
- Culvert
- OHWM Data Point

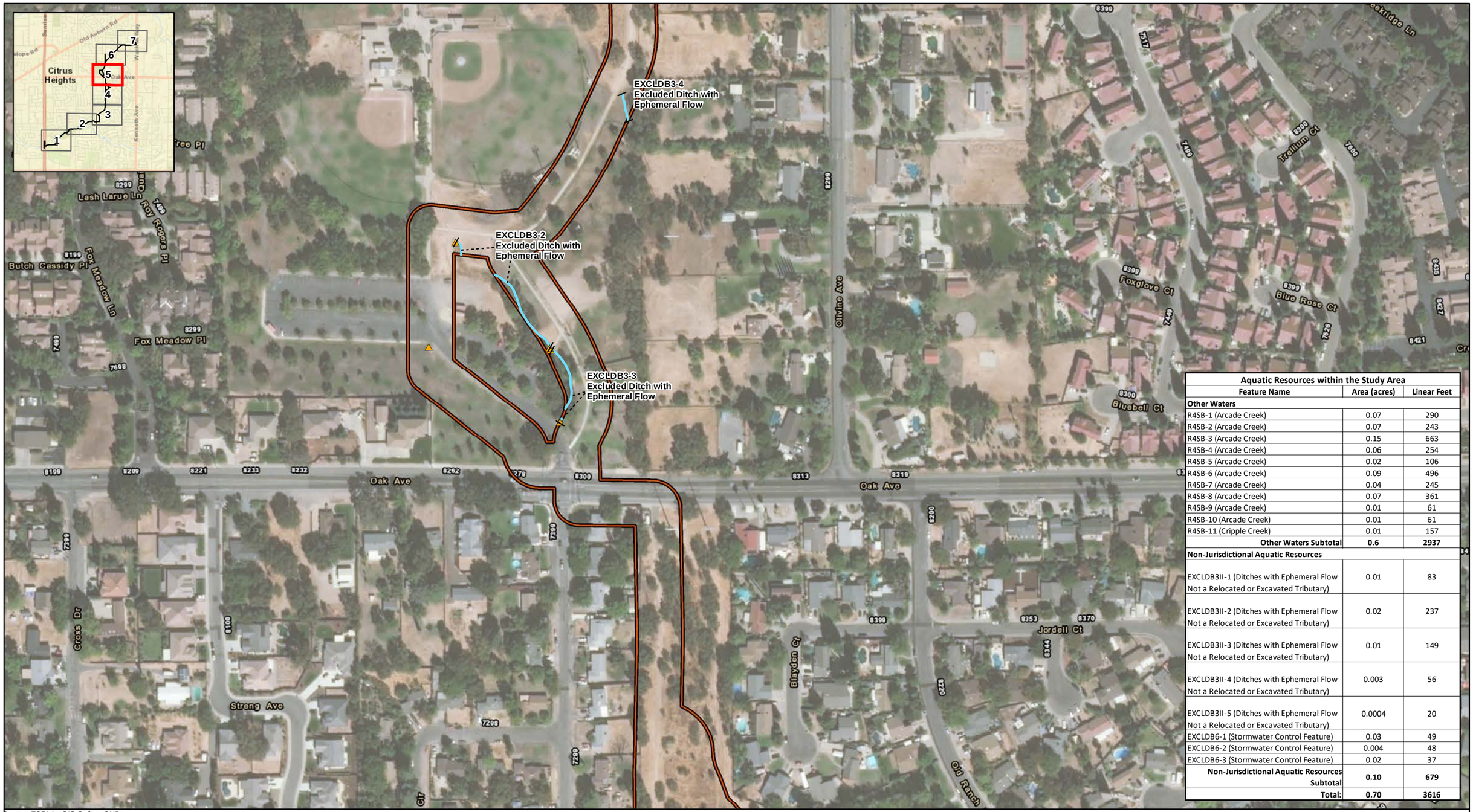
Other Waters
- R4SB - Streambed, Intermittent, Riverine

Non-Jurisdictional Aquatic Resources
- EXCLDB3II - Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary
- EXCLDB6 - Stormwater Control Feature

Appendix A
Sheet 4 of 7
Observed Aquatic Resources

Citrus Heights Electric Greenway

Map Created:2/12/2019, Map Revised:3/7/2019, Bargas Project Number: 2018-1008



Aquatic Resources within the Study Area		
Feature Name	**Area (acres)**	**Linear Feet**
Other Waters		
R4SB-1 (Arcade Creek)	0.07	290
R4SB-2 (Arcade Creek)	0.07	243
R4SB-3 (Arcade Creek)	0.15	663
R4SB-4 (Arcade Creek)	0.06	254
R4SB-5 (Arcade Creek)	0.02	106
R4SB-6 (Arcade Creek)	0.09	496
R4SB-7 (Arcade Creek)	0.04	245
R4SB-8 (Arcade Creek)	0.07	361
R4SB-9 (Arcade Creek)	0.01	61
R4SB-10 (Arcade Creek)	0.01	61
R4SB-11 (Cripple Creek)	0.01	157
Other Waters Subtotal	**0.6**	**2937**
Non-Jurisdictional Aquatic Resources		
EXCLDB3II-1 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.01	83
EXCLDB3II-2 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.02	237
EXCLDB3II-3 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.01	149
EXCLDB3II-4 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.003	56
EXCLDB3II-5 (Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary)	0.0004	20
EXCLDB6-1 (Stormwater Control Feature)	0.03	49
EXCLDB6-2 (Stormwater Control Feature)	0.004	48
EXCLDB6-3 (Stormwater Control Feature)	0.02	37
Non-Jurisdictional Aquatic Resources Subtotal	**0.10**	**679**
Total:	**0.70**	**3616**

Source: ESRI ArcGIS Online, GHD

0 100 200 Feet

1 inch = 200 feet

BARGAS Environmental Consulting

Citrus Heights Electric Greenway
Surveyor Name: Daniel Neal
Map Date: 2/12/2019
Map Author: Coral Fenech, Green Map GIS
Date Revised: 3/7/2019
Aerial Source: ESRI ArcGIS World Imagery, 8/8/2017
Coordinate System: NAD 1983 State Plane Zone 2 (US Feet)

Study Area
Bridge
Map Reference Points
Sample Point
Culvert
OHWM Data Point

Other Waters
R4SB - Streambed, Intermittent, Riverine

Non-Jurisdictional Aquatic Resources
EXCLDB3II - Ditches with Ephemeral Flow Not a Relocated or Excavated Tributary
EXCLDB6 - Stormwater Control Feature

Appendix A
Sheet 5 of 7
Observed Aquatic Resources

Citrus Heights Electric Greenway

Map Created:2/12/2019, Map Revised:3/7/2019, Bargas Project Number: 2018-1008

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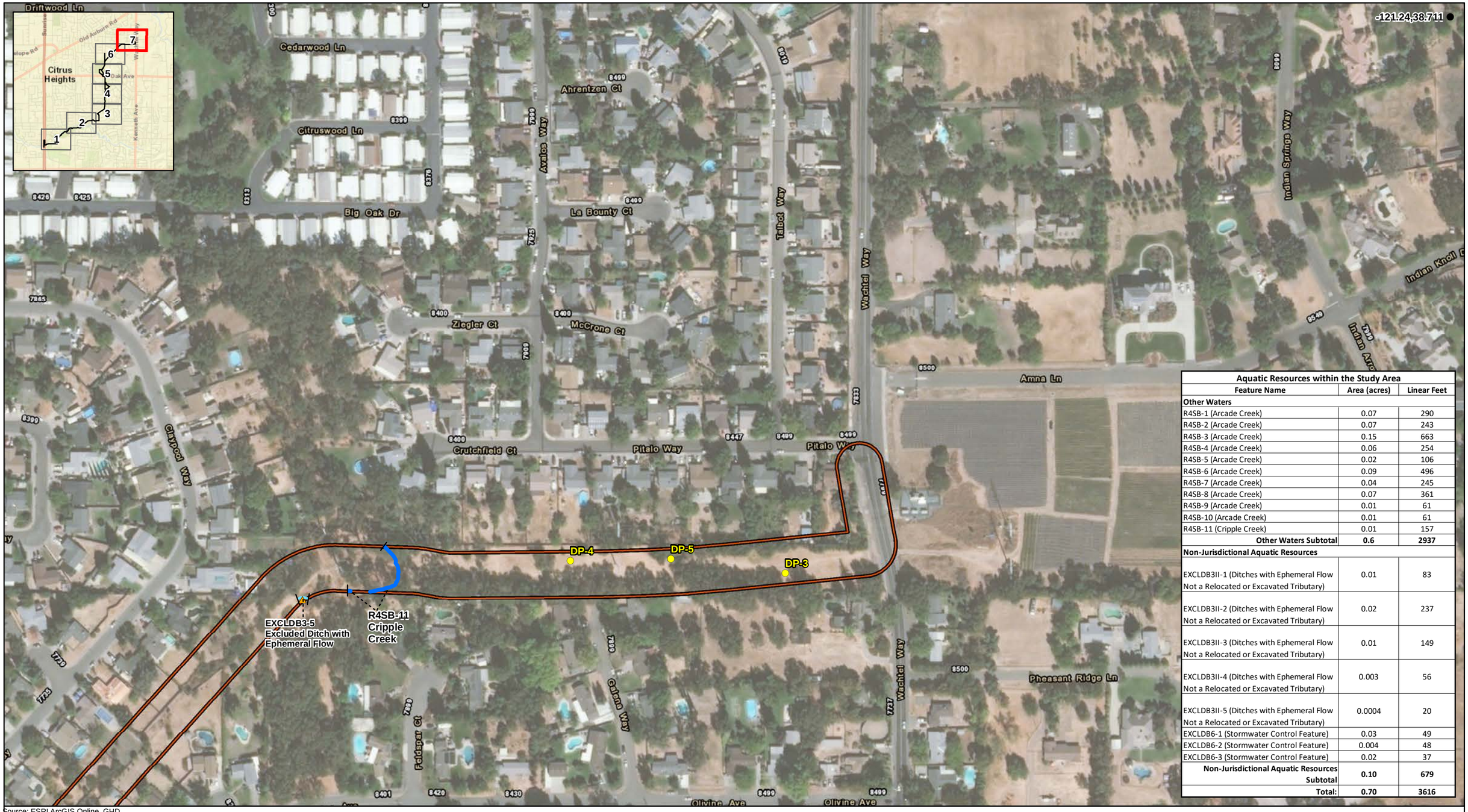
Appendix A
Sheet 6 of 7
Observed Aquatic Resources

Citrus Heights Electric Greenway

Map Created:2/12/2019, Map Revised:3/7/2019, Bargas Project Number: 2018-1008



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Source: ESRI ArcGIS Online, GHD

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Surveyor Name: Daniel Neal
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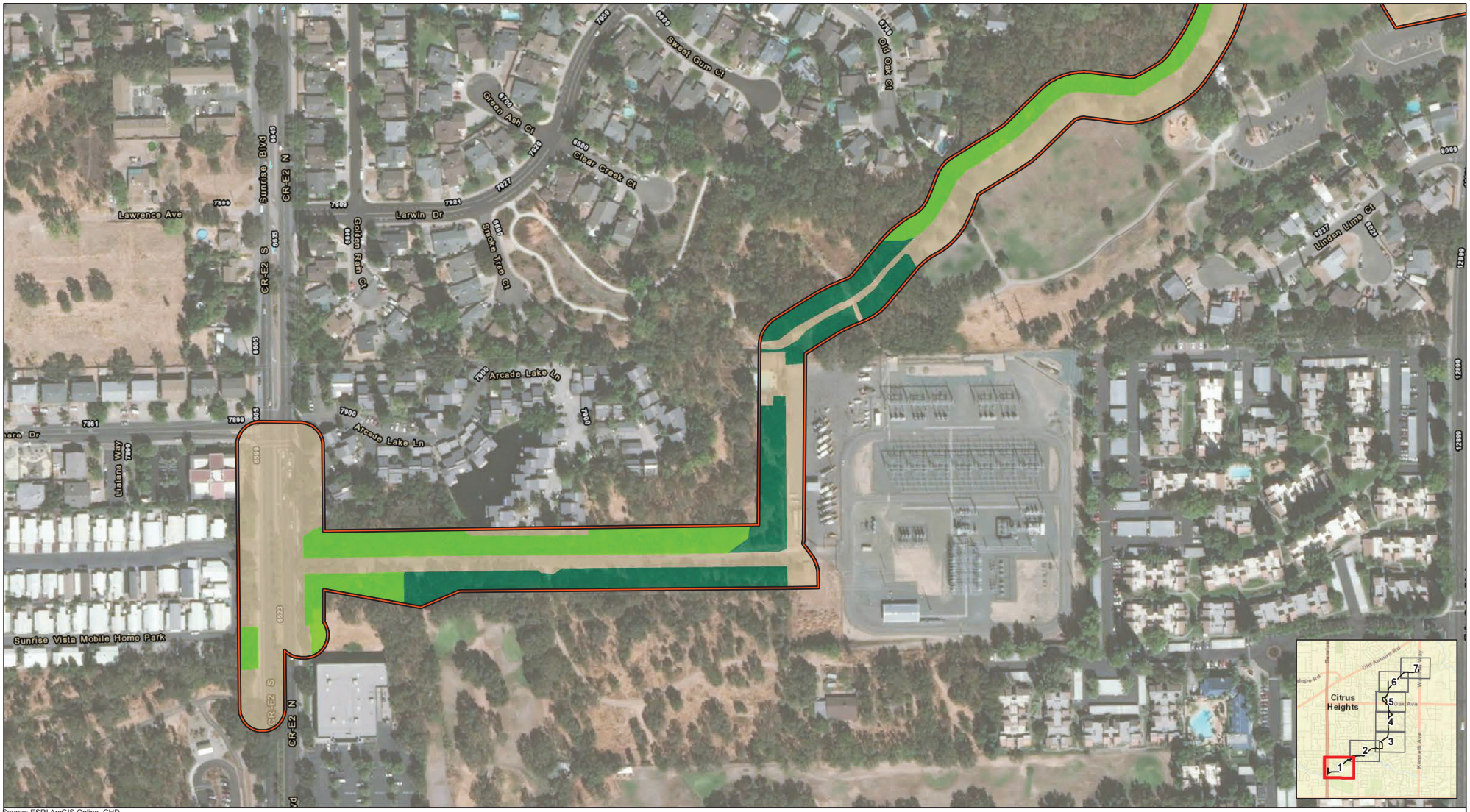
Appendix A
Sheet 7 of 7
Observed Aquatic Resources

Citrus Heights Electric Greenway

Map Created:2/12/2019, Map Revised:3/7/2019, Bargas Project Number: 2018-1008

Appendix B – Vegetation Communities in Study Area



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BARGAS Environmental Consulting

Citrus Heights Electric Greenway
Surveyor Name: Krystal Pulsipher
Map Date: 3/10/2019
Map Author: Coral Fenech, Green Map GIS
Date Revised: N/A
Aerial Source: ESRI ArcGIS World Imagery, 8/8/2017
Coordinate System: NAD 1983 State Plane Zone 2 (US Feet)

Study Area

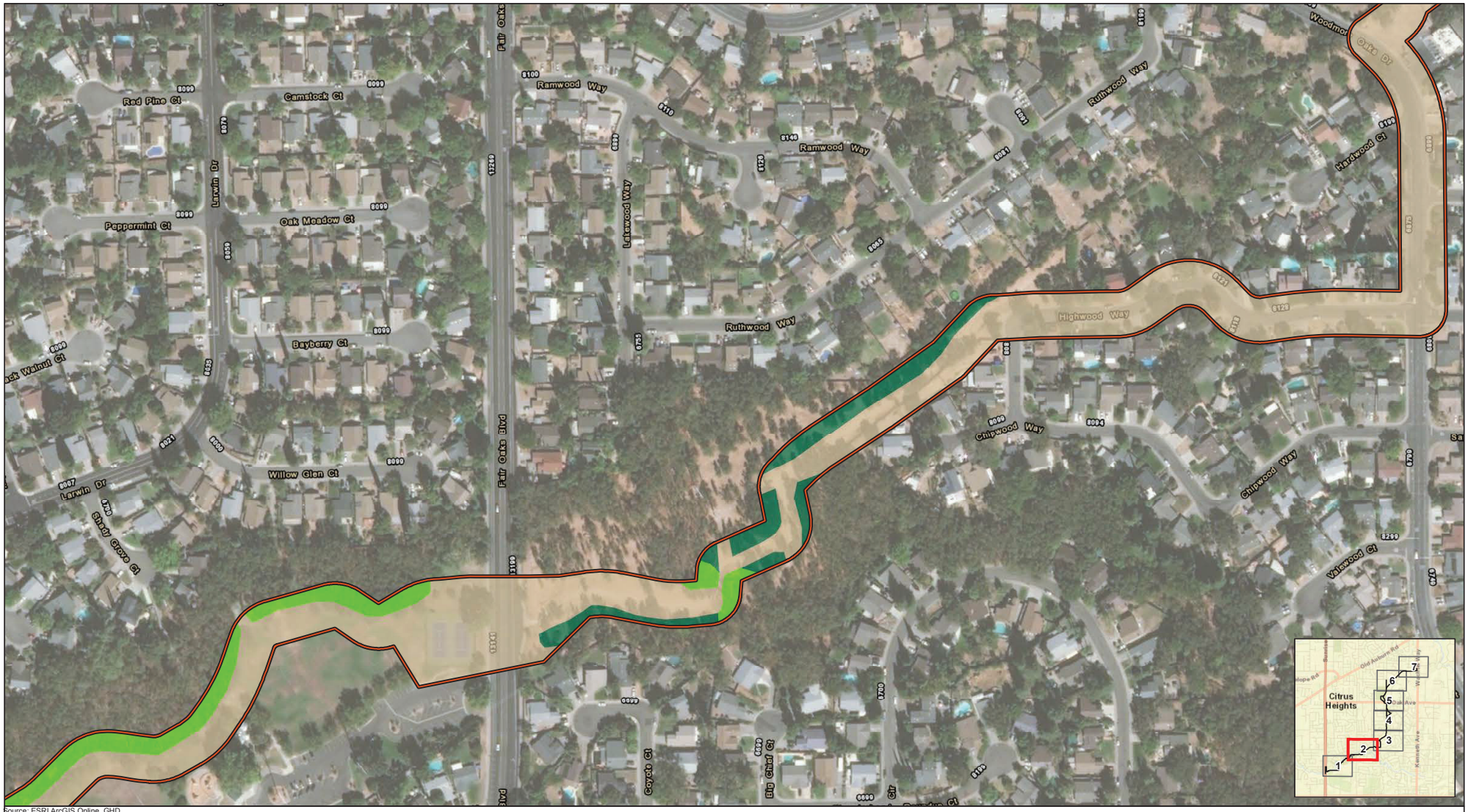
Vegetation Communities

- Oak Woodland (5.08 acres)
- Riparian Woodland (3.32 acres)
- Urban/Developed (36.81 acres)

Appendix B
Sheet 1 of 7
Vegetation Communities in Study Area

Citrus Heights Electric Greenway

Map Created:3/10/2019, Map Revised:N/A, Bargas Project Number: 2018-1008



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Appendix B
Sheet 2 of 7
Vegetation Communities in Study Area

Citrus Heights Electric Greenway

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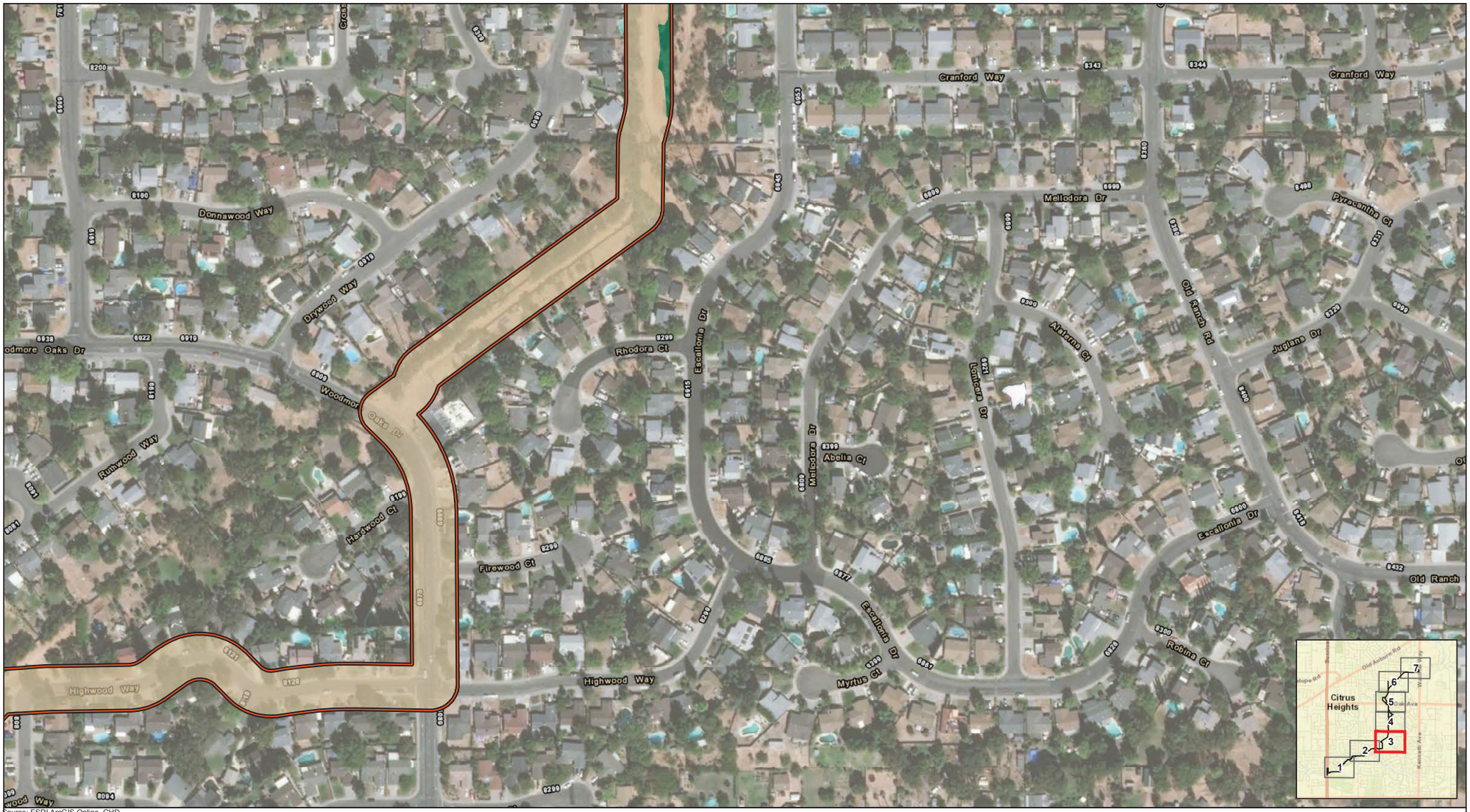

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Appendix B
Sheet 3 of 7
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Citrus Heights Electric Greenway

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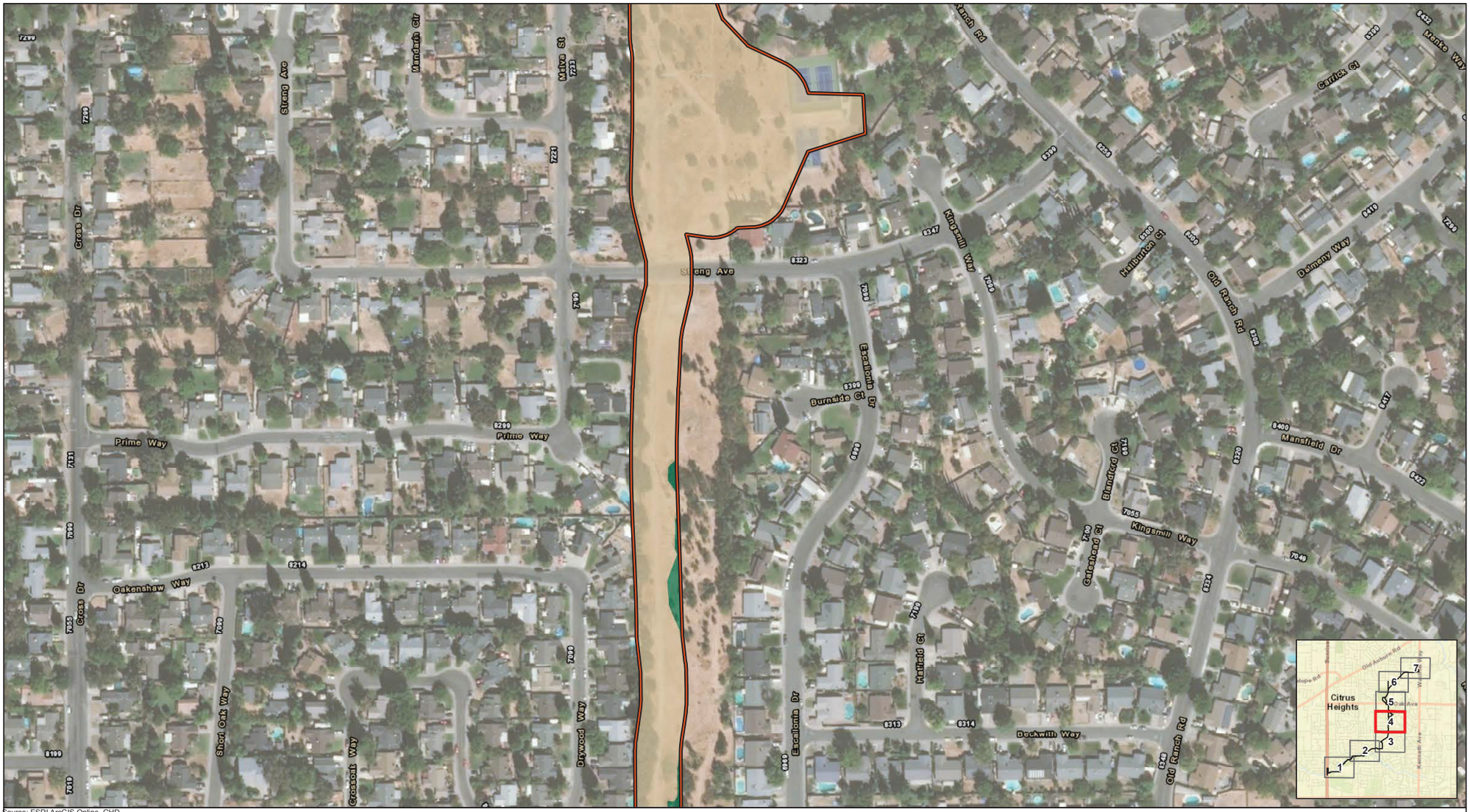

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Appendix B
Sheet 4 of 7
Vegetation Communities in Study Area

Citrus Heights Electric Greenway

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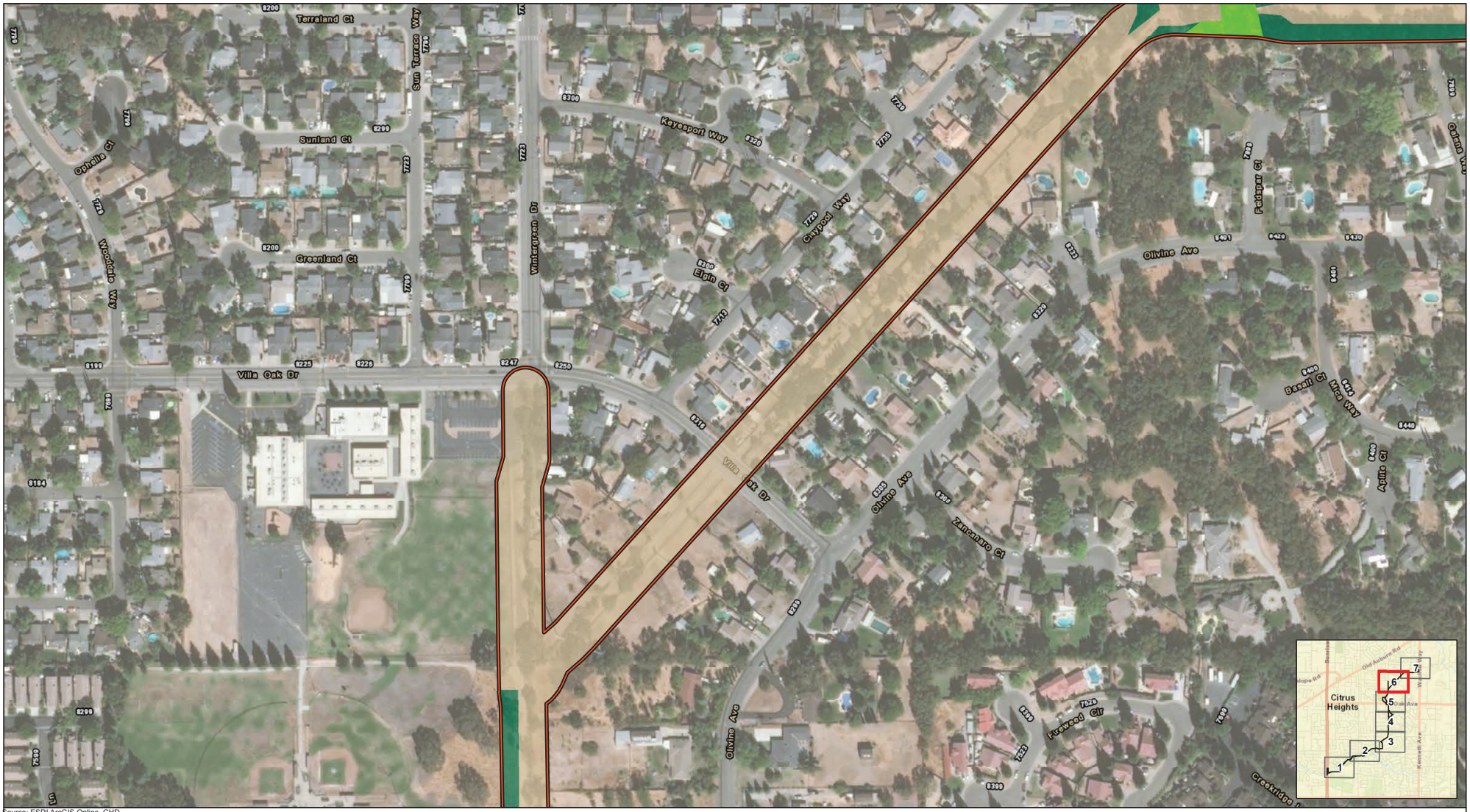
Appendix B
Sheet 5 of 7
Vegetation Communities in Study Area

Citrus Heights Electric Greenway

Map Created:3/10/2019, Map Revised:N/A, Bargas Project Number: 2018-1008



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Appendix B
Sheet 6 of 7
Vegetation Communities in Study Area

Citrus Heights Electric Greenway

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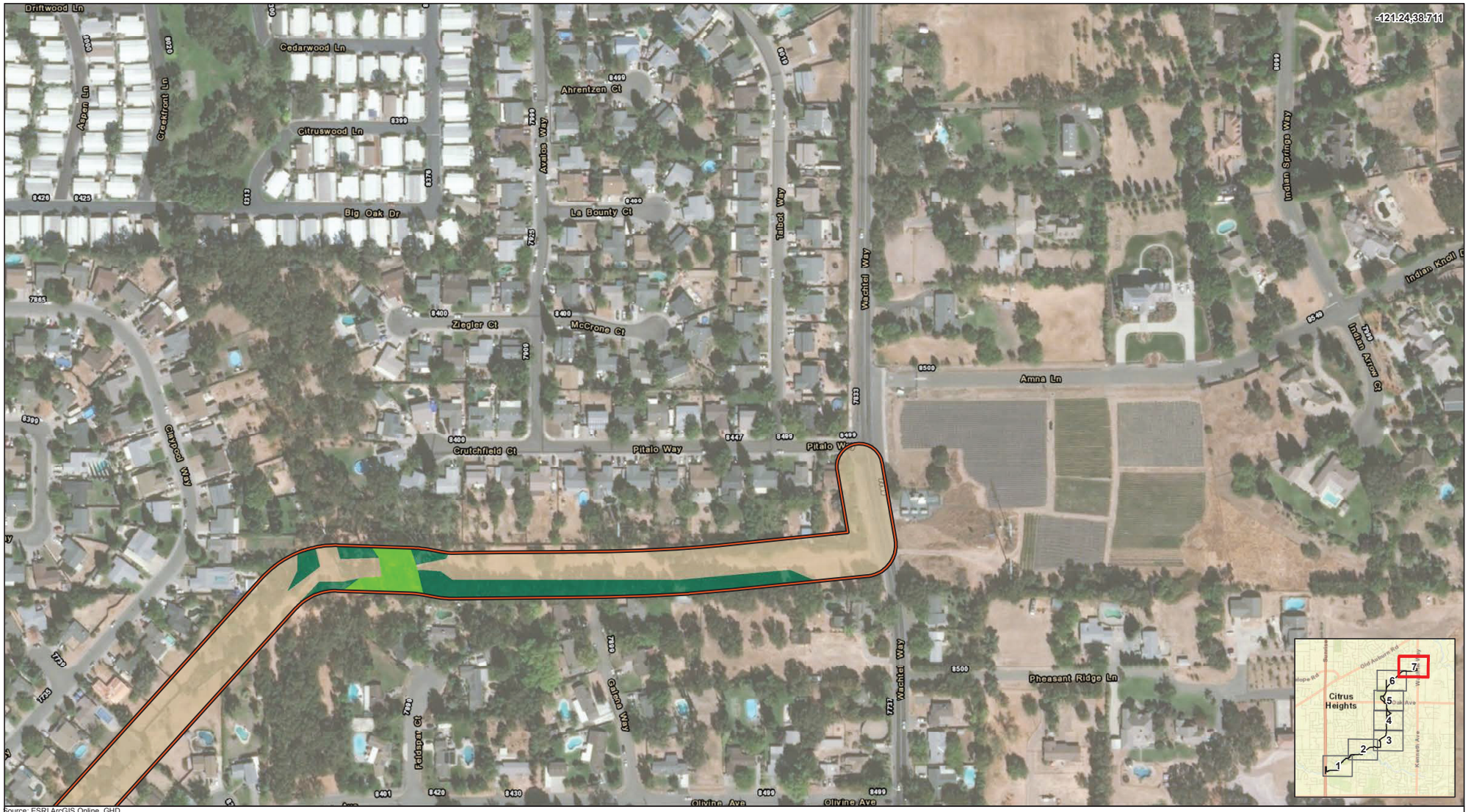

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Appendix B
Sheet 7 of 7
Vegetation Communities in Study Area

Citrus Heights Electric Greenway

Map Created:3/10/2019, Map Revised:N/A, Bargas Project Number: 2018-1008

Appendix **C** – Pedestrian Signal Evaluation

Kimley»Horn

Memorandum

To: Leslie Blomquist
City of Citrus Heights

From: Robert Paderna, P.E.
Makinzie Clark

Re: **Fair Oaks Boulevard Pedestrian Signal Evaluation**
On-Call Traffic Engineering – Task Order #6

Date: April 22, 2019

The purpose of this memorandum is to document the results of an evaluation completed for a proposed pedestrian traffic signal (the "Project") to be located along Fair Oaks Boulevard in the vicinity of Tempo Park (see **Exhibit 1**). This memorandum documents traffic signal delay, level of service, and queuing for Existing (2016) and Forecasted (2021 & 2023) Conditions (with and without the addition of the Project).

Traffic Volumes (Motorized & Non-Motorized)

Motorized traffic volumes for years 2016 and 2021 were provided by the City and are presented in **Appendix A**. Motorized traffic volumes for year 2023 were established by applying the growth rate provided by the City[1] to the 2021 volumes. Based on the Existing (2016) data, the AM and PM peak-hours assumed in this evaluation are 7:15 – 8:15 AM and 5:00 – 6:00 PM, respectively. Secondly, total daily non-motorized (bicycle and pedestrian) volumes (with the addition of the Project) for years 2016, 2021, and 2023 were provided by the City. Non-motorized volumes for years 2021 and 2023 are understood to have been estimated using a growth rate of approximately 5% per year applied to Existing (2016) Conditions. Peak-hour non-motorized volumes are similarly understood to have been developed using a peak-hour to daily ratio for motorized volumes and applying it to the daily non-motorized volumes (see **Appendix A**). The resulting motorized and non-motorized volumes used in this evaluation are presented in **Table 1** and **Exhibit 1**.

Table 1 – Motorized & Non-Motorized Volumes

Scenario Year	Peak-Hour	Peak-Hour Motorized Volume			Peak-Hour Non-Motorized Volume*		
		NB	SB	Total	Ped	Bike	Total
2016	AM	522	736	1258	56	25	81
	PM	834	660	1494	66	30	96
2021	AM	586	827	1413	71	32	103
	PM	937	741	1678	85	38	123
2023	AM	614	866	1481	79	35	114
	PM	982	777	1759	93	42	135

*Plus Project conditions only.

[1] Based on the observed growth between 2012 and 2016 traffic volumes (see Appendix A).

Kimley»Horn

Signal Delay, LOS & Queuing

Intersection Level of Service (LOS) was determined for the Fair Oaks Boulevard @ Tempo Park Pedestrian Crossing intersection for Existing (2016) and Forecasted (2021 & 2023) AM and PM peak-hour scenarios. It is important to establish conditions without the addition of the Project to establish baseline conditions to which the effect of the proposed Project is compared. Therefore, a No Project (NP) scenario was established for comparison to the 2016, 2021, and 2023 conditions with the addition of the Project. Traffic volumes described in the section above were used to complete these analyses. LOS was determined using methods defined in the *Highway Capacity Manual*, using the Synchro 10 software. Queuing was approximated using the Synchro software's 95th percentile vehicle queues. Table 2 presents the peak-hour intersection operating conditions for the analysis scenarios.

Table 2 – Intersection Level of Service

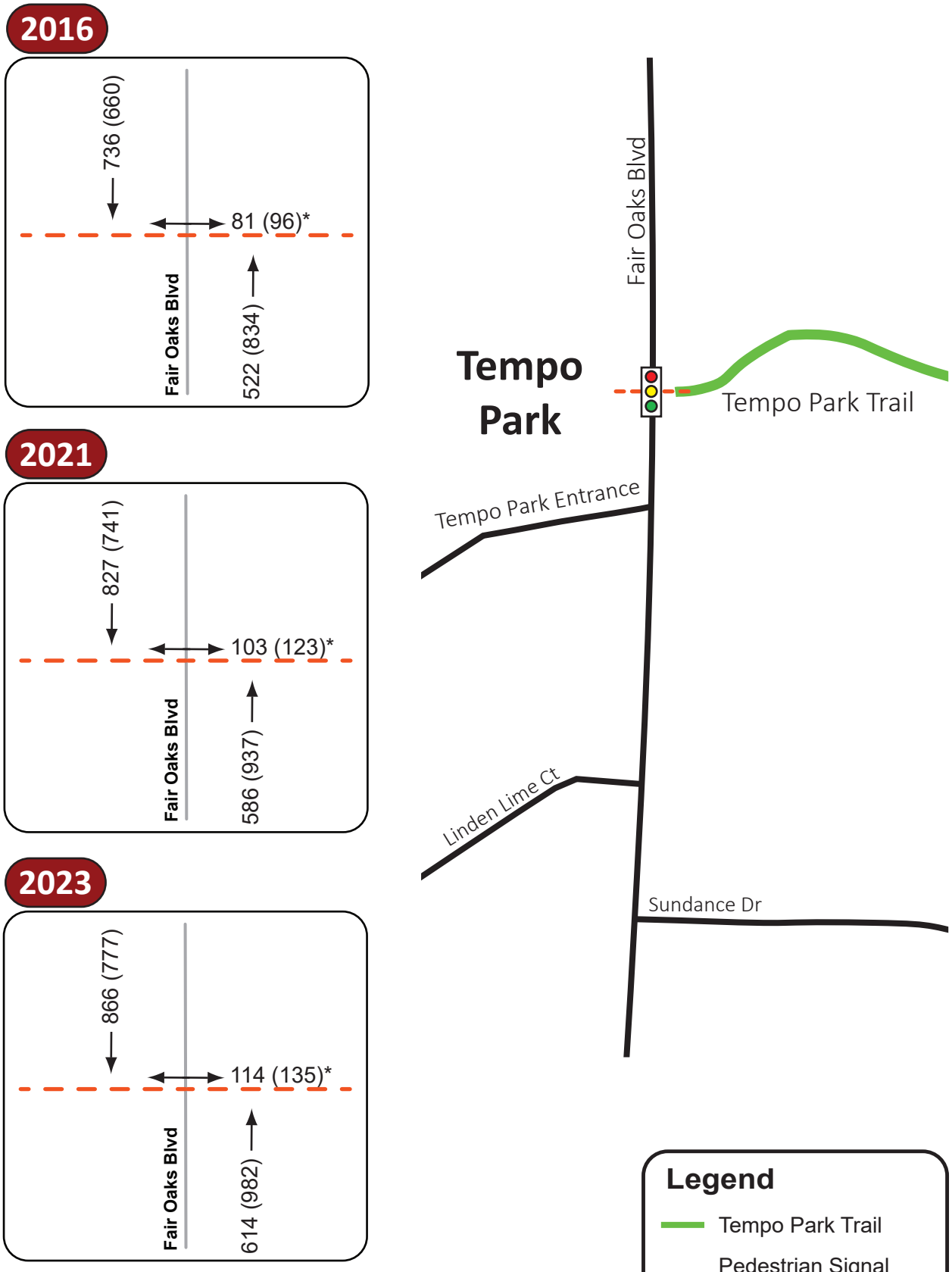
Scenario Year	Peak-Hour	Queue (ft)		Delay (sec)	LOS
		NB	SB		
2016	NP	0	0	0.0	A
	AM	264	458	6.6	A
	PM	**567**	366	6.9	A
2021	NP	0	0	0.0	A
	AM	305	557	6.7	A
	PM	**715**	436	7.4	A
2023	NP	0	0	0.0	A
	AM	327	616	7.1	A
	PM	**899**	478	8.1	A

Note: NP represents conditions without a pedestrian crossing.
Bold represents queue lengths that extend beyond the Sundance Drive intersection at Fair Oaks Boulevard.

As shown in Table 2, the Fair Oaks Boulevard @ Tempo Park Pedestrian Crossing intersection operates at LOS A in the AM and PM peak-hours for Existing (2016) and Forecasted (2021 & 2023) Conditions. The addition of the Project is expected to result in a 95th percentile vehicle queue of approximately 570 feet for the northbound approach during the PM peak-hour, extending beyond the Fair Oaks Boulevard intersection with Sundance Drive. In addition, vehicle queuing is anticipated to increase from 2016 to 2023 as the additional Fair Oaks Boulevard traffic will result in additional queuing at the Project. Analysis worksheets are provided in Appendix B.

Attachments

Exhibit 1 – Peak-Hour Volumes
Appendix A – Traffic Count Worksheets
Appendix B – Analysis Worksheets



*Plus Project Conditions Only

Appendix A – Traffic Count Worksheets

6/5/2012 - 6/7/2012 City: Citrus Heights Project #: 12-7207-018s

Location: Fair Oaks Boulevard between Stacey Hills Drive and Greenback Lane (Speed Average).

Start	Southbound		Hour Totals		Northbound		Hour Totals		Combined Totals	
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	16	96		376	16	99		361		737
12:15	13	111		399	20	97		371		770
12:30	15	109		410	8	89		373		783
12:45	13	110	57	426	10	97	54	382	111	808
1:00	9	101	50	431	10	119	48	402	98	833
1:15	7	112	44	432	9	114	37	419	81	851
1:30	6	115	35	438	7	119	36	449	71	887
1:45	4	103	26	431	5	111	31	463	57	894
2:00	6	120	23	450	5	116	26	460	49	910
2:15	4	100	20	438	7	117	24	463	44	901
2:30	4	124	18	447	3	117	20	461	38	908
2:45	8	115	22	459	2	114	17	464	39	923
3:00	3	137	19	476	6	136	18	484	37	960
3:15	6	130	21	506	2	169	13	536	34	1042
3:30	2	122	19	504	3	162	13	581	32	1085
3:45	6	118	17	507	3	138	14	605	31	1112
4:00	7	119	21	489	4	130	12	599	33	1088
4:15	6	118	21	477	3	152	13	582	34	1059
4:30	7	132	26	487	4	157	14	577	40	1064
4:45	14	145	34	514	4	164	15	603	49	1117
5:00	16	135	43	530	9	170	20	643	63	1173
5:15	17	142	54	554	8	196	25	687	79	1241
5:30	23	151	70	573	16	184	37	714	107	1287
5:45	43	147	99	575	17	173	50	723	149	1298
6:00	47	151	130	591	28	172	69	725	199	1316
6:15	54	132	167	581	27	166	88	695	255	1276
6:30	73	135	217	565	28	148	100	659	317	1224
6:45	118	127	292	545	53	148	136	634	428	1179
7:00	109	125	354	519	70	116	178	578	532	1097
7:15	135	124	435	511	70	125	221	537	656	1048
7:30	154	103	516	479	89	106	282	495	798	974
7:45	190	89	588	441	120	94	349	441	937	882
8:00	182	88	661	404	121	87	400	412	1061	816
8:15	140	85	666	365	96	87	426	374	1092	739
8:30	111	89	623	351	92	99	429	367	1052	718
8:45	108	83	541	345	91	88	400	361	941	706
9:00	100	87	459	344	76	99	355	373	814	717
9:15	94	76	413	335	70	88	329	374	742	709
9:30	86	86	388	332	84	85	321	360	709	692
9:45	97	61	377	310	78	74	308	346	685	656
10:00	100	55	377	278	84	64	316	311	693	589
10:15	98	51	381	253	77	57	323	280	704	533
10:30	89	47	384	214	90	30	329	225	713	439
10:45	96	41	383	194	96	38	347	189	730	383
11:00	100	30	383	169	97	39	360	164	743	333
11:15	88	25	373	143	87	34	370	141	743	284
11:30	98	29	382	125	87	24	367	135	749	260
11:45	94	21	380	105	88	23	359	120	739	225
Total	2816	4852	2816	4852	2080	5331	2080	5331	4896	10183
Combined Total	7668		7668		7411		7411		15079	
AM Peak	7:30 AM				7:45 AM					
Vol.	666				429					
P.H.F.	0.876				0.886					
PM Peak		5:15 PM				5:15 PM				
Vol.		591				725				
P.H.F.		0.978				0.925				
Percentage	36.7%	63.3%			28.1%	71.9%				

Prepared by NDS/ATD

VOLUME

Fair Oaks Boulevard north of Linden Lime Court

Day: AVERAGE
Date: 4/12/16-4/14,

City: Citrus Heights
Project #: 16-7268-004

DAILY TOTALS	NB	SB	EB	WB	Total
	8,215	8,336	0	0	16,551

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	13		13		0	0	26		12:00	122		111		0	0	233	
00:15	9		11		0	0	20		12:15	119		119		0	0	238	
00:30	6		11		0	0	17		12:30	121		125		0	0	246	
00:45	8	36	6	41	0	0	14	77	12:45	127	489	122	477	0	0	249	966
01:00	8		9		0	0	17		13:00	112		119		0	0	231	
01:15	4		7		0	0	11		13:15	135		112		0	0	247	
01:30	4		4		0	0	8		13:30	123		117		0	0	240	
01:45	4	20	5	25	0	0	9	45	13:45	133	503	128	476	0	0	261	979
02:00	8		5		0	0	13		14:00	150		115		0	0	265	
02:15	4		4		0	0	8		14:15	138		124		0	0	262	
02:30	6		3		0	0	9		14:30	149		137		0	0	286	
02:45	2	20	4	16	0	0	6	36	14:45	151	588	142	518	0	0	293	1106
03:00	2		2		0	0	4		15:00	159		130		0	0	289	
03:15	6		3		0	0	9		15:15	171		140		0	0	311	
03:30	6		4		0	0	10		15:30	172		137		0	0	309	
03:45	5	19	8	17	0	0	13	36	15:45	164	666	155	562	0	0	319	1228
04:00	5		3		0	0	8		16:00	177		132		0	0	309	
04:15	6		4		0	0	10		16:15	185		147		0	0	332	
04:30	10		15		0	0	25		16:30	177		145		0	0	322	
04:45	8	29	15	37	0	0	23	66	16:45	201	740	152	576	0	0	353	1316
05:00	15		19		0	0	34		17:00	206		170		0	0	376	
05:15	17		35		0	0	52		17:15	212		155		0	0	367	
05:30	23		50		0	0	73		17:30	221		166		0	0	387	
05:45	28	83	51	155	0	0	79	238	17:45	195	834	169	660	0	0	364	1494
06:00	32		69		0	0	101		18:00	197		144		0	0	341	
06:15	44		98		0	0	142		18:15	165		148		0	0	313	
06:30	55		129		0	0	184		18:30	147		134		0	0	281	
06:45	95	226	157	453	0	0	252	679	18:45	131	640	131	557	0	0	262	1197
07:00	109		160		0	0	269		19:00	120		110		0	0	230	
07:15	129		186		0	0	315		19:15	111		106		0	0	217	
07:30	146		184		0	0	330		19:30	101		95		0	0	196	
07:45	133	517	204	734	0	0	337	1251	19:45	105	437	94	405	0	0	199	842
08:00	114		162		0	0	276		20:00	86		94		0	0	180	
08:15	115		145		0	0	260		20:15	86		82		0	0	168	
08:30	101		143		0	0	244		20:30	98		69		0	0	167	
08:45	102	432	138	588	0	0	240	1020	20:45	83	353	69	314	0	0	152	667
09:00	80		106		0	0	186		21:00	73		66		0	0	139	
09:15	93		103		0	0	196		21:15	72		64		0	0	136	
09:30	89		111		0	0	200		21:30	62		60		0	0	122	
09:45	89	351	102	422	0	0	191	773	21:45	45	252	50	240	0	0	95	492
10:00	88		104		0	0	192		22:00	41		42		0	0	83	
10:15	81		112		0	0	193		22:15	31		36		0	0	67	
10:30	89		100		0	0	189		22:30	37		33		0	0	70	
10:45	96	354	109	425	0	0	205	779	22:45	23	132	28	139	0	0	51	271
11:00	104		94		0	0	198		23:00	25		22		0	0	47	
11:15	104		112		0	0	216		23:15	20		27		0	0	47	
11:30	95		113		0	0	208		23:30	19		20		0	0	39	
11:45	116	419	98	417	0	0	214	836	23:45	11	75	13	82	0	0	24	157
TOTALS		2506		3330				5836	TOTALS		5709		5006				10715
SPLIT %		42.9%		57.1%				35.3%	SPLIT %		53.3%		46.7%				64.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	8,215	8,336	0	0	16,551

AM Peak Hour	07:15	07:15				07:15	PM Peak Hour	16:45	17:00				17:00
AM Pk Volume	522	736				1258	PM Pk Volume	840	660				1494
Pk Hr Factor	0.894	0.902				0.933	Pk Hr Factor	0.950	0.971				0.965
7 - 9 Volume	949	1322	0	0		2271	4 - 6 Volume	1574	1236	0	0		2810
7 - 9 Peak Hour	07:15	07:15				07:15	4 - 6 Peak Hour	16:45	17:00				17:00
7 - 9 Pk Volume	522	736	0	0		1258	4 - 6 Pk Volume	840	660	0	0		1494
Pk Hr Factor	0.894	0.902	0.000	0.000		0.933	Pk Hr Factor	0.950	0.971	0.000	0.000		0.965

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VOLUME

Fair Oaks Boulevard north of Linden Lime Court

Day: AVERAGE
Date: 4/12/16-4/14

City: Citrus Heights
Project #: 16-7268-004

Fair Oaks Growth Rate Calculation	
2012 ADT =	15079 (4 years' growth)
2016 ADT =	16551
Equation:	15079 * x^4 = 16551
x =	1.02356

DAILY TOTALS	NB	SB	EB	WB	Total
	8,215	8,336	0	0	18,595

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	15		15		0	0	29		12:00	137	137	125	125	0	0	262	
00:15	10		12		0	0	22		12:15	134	271	134	258	0	0	267	
00:30	7		12		0	0	19		12:30	136	407	140	399	0	0	276	
00:45	9	40	7	46	0	0	16	87	12:45	143	549	137	536	0	0	280	1085
01:00	9	35	10	42	0	0	19	76	13:00	126	538	134	545	0	0	260	1083
01:15	4	29	8	37	0	0	12	66	13:15	152	556	126	537	0	0	278	1093
01:30	4	27	4	29	0	0	9	56	13:30	138	558	131	528	0	0	270	1086
01:45	4	22	6	28	0	0	10	51	13:45	149	565	144	535	0	0	293	1100
02:00	9	22	6	24	0	0	15	46	14:00	169	608	129	530	0	0	298	1138
02:15	4	22	4	20	0	0	9	43	14:15	155	611	139	544	0	0	294	1155
02:30	7	25	3	19	0	0	10	44	14:30	167	640	154	566	0	0	321	1207
02:45	2	22	4	18	0	0	7	40	14:45	170	661	160	582	0	0	329	1243
03:00	2	16	2	15	0	0	4	30	15:00	179	671	146	599	0	0	325	1270
03:15	7	18	3	13	0	0	10	31	15:15	192	708	157	617	0	0	349	1325
03:30	7	18	4	15	0	0	11	33	15:30	193	734	154	617	0	0	347	1350
03:45	6	21	9	19	0	0	15	40	15:45	184	748	174	631	0	0	358	1380
04:00	6	25	3	20	0	0	9	45	16:00	199	768	148	634	0	0	347	1402
04:15	7	25	4	21	0	0	11	46	16:15	208	784	165	642	0	0	373	1426
04:30	11	29	17	34	0	0	28	63	16:30	199	790	163	650	0	0	362	1440
04:45	9	33	17	42	0	0	26	74	16:45	226	831	171	647	0	0	397	1479
05:00	17	44	21	60	0	0	38	103	17:00	231	864	191	690	0	0	422	1554
05:15	19	56	39	94	0	0	58	151	17:15	238	894	174	699	0	0	412	1593
05:30	26	71	56	134	0	0	82	204	17:30	248	944	186	722	0	0	435	1666
05:45	31	93	57	174	0	0	89	267	17:45	219	937	190	741	0	0	409	1678
06:00	36	112	78	230	0	0	113	343	18:00	221	927	162	712	0	0	383	1639
06:15	49	143	110	301	0	0	160	444	18:15	185	874	166	704	0	0	352	1578
06:30	62	179	145	390	0	0	207	568	18:30	165	791	151	668	0	0	316	1459
06:45	107	254	176	509	0	0	283	763	18:45	147	719	147	626	0	0	294	1345
07:00	122	340	180	611	0	0	302	952	19:00	135	633	124	588	0	0	258	1220
07:15	145	436	209	710	0	0	354	1146	19:15	125	572	119	540	0	0	244	1112
07:30	164	538	207	772	0	0	371	1310	19:30	113	520	107	497	0	0	220	1017
07:45	149	581	229	825	0	0	379	1405	19:45	118	491	106	455	0	0	224	946
08:00	128	586	182	827	0	0	310	1413	20:00	97	453	106	437	0	0	202	890
08:15	129	571	163	781	0	0	292	1352	20:15	97	425	92	410	0	0	189	835
08:30	113	520	161	735	0	0	274	1255	20:30	110	421	78	381	0	0	188	802
08:45	115	485	155	661	0	0	270	1146	20:45	93	397	78	353	0	0	171	749
09:00	90	447	119	598	0	0	209	1045	21:00	82	382	74	321	0	0	156	703
09:15	104	422	116	551	0	0	220	973	21:15	81	366	72	301	0	0	153	667
09:30	100	409	125	515	0	0	225	924	21:30	70	326	67	291	0	0	137	617
09:45	100	394	115	474	0	0	215	868	21:45	51	283	56	270	0	0	107	553
10:00	99	403	117	472	0	0	216	875	22:00	46	247	47	243	0	0	93	490
10:15	91	390	126	482	0	0	217	872	22:15	35	201	40	211	0	0	75	412
10:30	100	390	112	470	0	0	212	859	22:30	42	173	37	181	0	0	79	354
10:45	108	398	122	477	0	0	230	875	22:45	26	148	31	156	0	0	57	304
11:00	117	416	106	466	0	0	222	882	23:00	28	130	25	134	0	0	53	264
11:15	117	442	126	466	0	0	243	908	23:15	22	118	30	124	0	0	53	242
11:30	107	448	127	481	0	0	234	929	23:30	21	98	22	109	0	0	44	207
11:45	130	471	110	468	0	0	240	939	23:45	12	84	15	92	0	0	27	176
TOTALS		2815		3741				6557	TOTALS		6414		5624				12038
SPLIT %		42.9%		57.1%				35.3%	SPLIT %		53.3%		46.7%				64.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,229	9,365	0	0	18,595

Trail Users by hour:

	Pedestrians	Bicyclists
Total number of Daily Active Users (EXISTING)	***705***	***317***
Total number of Daily Active Users (2021)	***900***	***405***
Total number of Daily Active Users (1 year after CON; 2023)	***992***	***446***

numbers used for traffic warrant analysis

Vehicle ADT hourly percentages used to calculate the hourly non-motorized hourly volumes

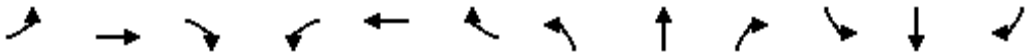
18595 Total ADT
17822 ADT during hours reasonably expected for non-motorized users (5AM - 10PM)

Hour	Hourly Vehicular Volume	Hourly Vehicular Percentage	Hourly Ped Volume	Hourly Bike Volume	**Hourly Total Non-Motorized Volume**
17:00	1678	9.4%	85	38	**123**
16:00	1479	8.3%	75	34	**108**
8:00	1413	7.9%	71	32	**103**
15:00	1380	7.7%	70	31	**101**
18:00	1345	7.5%	68	31	**98**
14:00	1243	7.0%	63	28	**91**
13:00	1100	6.2%	56	25	**81**
12:00	1085	6.1%	55	25	**79**

Appendix B – Analysis Worksheets

Lane Group	NBT	SBT
Lane Group Flow (vph)	567	800
v/c Ratio	0.41	0.58
Control Delay	10.2	13.2
Queue Delay	0.0	0.0
Total Delay	10.2	13.2
Queue Length 50th (ft)	175	302
Queue Length 95th (ft)	264	458
Internal Link Dist (ft)	295	280
Turn Bay Length (ft)		
Base Capacity (vph)	1356	1356
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.42	0.59

Intersection Summary



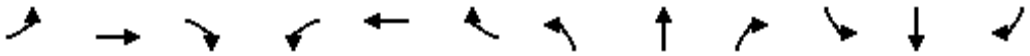
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	522	0	0	736	0
Future Volume (vph)	0	0	0	0	0	0	0	522	0	0	736	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.5			4.5	
Lane Util. Factor								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1863			1863	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	567	0	0	800	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	567	0	0	800	0
Turn Type								NA			NA	
Protected Phases								2			2	
Permitted Phases												
Actuated Green, G (s)								45.4			45.4	
Effective Green, g (s)								45.4			45.4	
Actuated g/C Ratio								0.67			0.67	
Clearance Time (s)								4.5			4.5	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1254			1254	
v/s Ratio Prot								0.30			c0.43	
v/s Ratio Perm												
v/c Ratio								0.45			0.64	
Uniform Delay, d1								5.2			6.3	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.3			1.1	
Delay (s)								5.4			7.4	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			5.4			7.4	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	67.4	Sum of lost time (s)	9.0
Intersection Capacity Utilization	42.5%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBT	SBT
Lane Group Flow (vph)	907	717
v/c Ratio	0.64	0.50
Control Delay	13.6	10.6
Queue Delay	0.0	0.0
Total Delay	13.6	10.6
Queue Length 50th (ft)	381	251
Queue Length 95th (ft)	567	366
Internal Link Dist (ft)	295	280
Turn Bay Length (ft)		
Base Capacity (vph)	1424	1424
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.64	0.50

Intersection Summary



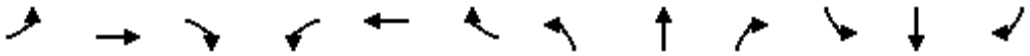
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								↑			↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	834	0	0	660	0
Future Volume (vph)	0	0	0	0	0	0	0	834	0	0	660	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.5			4.5	
Lane Util. Factor								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1863			1863	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	907	0	0	717	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	907	0	0	717	0
Turn Type								NA			NA	
Protected Phases								2			2	
Permitted Phases												
Actuated Green, G (s)								52.7			52.7	
Effective Green, g (s)								52.7			52.7	
Actuated g/C Ratio								0.71			0.71	
Clearance Time (s)								4.5			4.5	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1316			1316	
v/s Ratio Prot								c0.49			0.38	
v/s Ratio Perm												
v/c Ratio								0.69			0.54	
Uniform Delay, d1								6.3			5.2	
Progression Factor								1.00			1.00	
Incremental Delay, d2								1.5			0.5	
Delay (s)								7.8			5.7	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			7.8			5.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	74.6	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBT	SBT
Lane Group Flow (vph)	637	899
v/c Ratio	0.45	0.63
Control Delay	9.7	13.4
Queue Delay	0.0	0.0
Total Delay	9.7	13.4
Queue Length 50th (ft)	209	375
Queue Length 95th (ft)	305	557
Internal Link Dist (ft)	295	280
Turn Bay Length (ft)		
Base Capacity (vph)	1427	1427
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.45	0.63

Intersection Summary



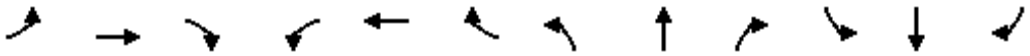
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								↑			↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	586	0	0	827	0
Future Volume (vph)	0	0	0	0	0	0	0	586	0	0	827	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.5			4.5	
Lane Util. Factor								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1863			1863	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	637	0	0	899	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	637	0	0	899	0
Turn Type								NA			NA	
Protected Phases								2			2	
Permitted Phases												
Actuated Green, G (s)								52.4			52.4	
Effective Green, g (s)								52.4			52.4	
Actuated g/C Ratio								0.71			0.71	
Clearance Time (s)								4.5			4.5	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1313			1313	
v/s Ratio Prot								0.34			c0.48	
v/s Ratio Perm												
v/c Ratio								0.49			0.68	
Uniform Delay, d1								4.9			6.2	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.3			1.5	
Delay (s)								5.2			7.7	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			5.2			7.7	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	74.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBT	SBT
Lane Group Flow (vph)	1018	805
v/c Ratio	0.69	0.55
Control Delay	14.6	10.5
Queue Delay	0.0	0.0
Total Delay	14.6	10.5
Queue Length 50th (ft)	484	306
Queue Length 95th (ft)	715	436
Internal Link Dist (ft)	295	280
Turn Bay Length (ft)		
Base Capacity (vph)	1469	1469
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.69	0.55

Intersection Summary



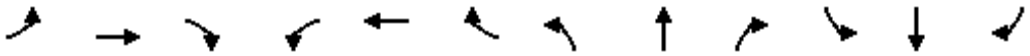
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								↑			↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	937	0	0	741	0
Future Volume (vph)	0	0	0	0	0	0	0	937	0	0	741	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.5			4.5	
Lane Util. Factor								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1863			1863	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	1018	0	0	805	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	1018	0	0	805	0
Turn Type								NA			NA	
Protected Phases								2			2	
Permitted Phases												
Actuated Green, G (s)								61.2			61.2	
Effective Green, g (s)								61.2			61.2	
Actuated g/C Ratio								0.73			0.73	
Clearance Time (s)								4.5			4.5	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1368			1368	
v/s Ratio Prot								c0.55			0.43	
v/s Ratio Perm												
v/c Ratio								0.74			0.59	
Uniform Delay, d1								6.5			5.2	
Progression Factor								1.00			1.00	
Incremental Delay, d2								2.2			0.7	
Delay (s)								8.7			5.8	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			8.7			5.8	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	83.3	Sum of lost time (s)	9.0
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBT	SBT
Lane Group Flow (vph)	667	941
v/c Ratio	0.47	0.66
Control Delay	10.0	14.4
Queue Delay	0.0	0.0
Total Delay	10.0	14.4
Queue Length 50th (ft)	224	410
Queue Length 95th (ft)	327	616
Internal Link Dist (ft)	295	280
Turn Bay Length (ft)		
Base Capacity (vph)	1404	1404
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.48	0.67

Intersection Summary



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	614	0	0	866	0
Future Volume (vph)	0	0	0	0	0	0	0	614	0	0	866	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.5			4.5	
Lane Util. Factor								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1863			1863	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	667	0	0	941	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	667	0	0	941	0
Turn Type								NA			NA	
Protected Phases								2			2	
Permitted Phases												
Actuated Green, G (s)								53.7			53.7	
Effective Green, g (s)								53.7			53.7	
Actuated g/C Ratio								0.71			0.71	
Clearance Time (s)								4.5			4.5	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1319			1319	
v/s Ratio Prot								0.36			c0.51	
v/s Ratio Perm												
v/c Ratio								0.51			0.71	
Uniform Delay, d1								5.0			6.5	
Progression Factor								1.00			1.00	
Incremental Delay, d2								0.3			1.9	
Delay (s)								5.3			8.4	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			5.3			8.4	
Approach LOS		A			A			A			A	

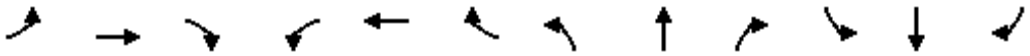
Intersection Summary			
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	75.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Lane Group	NBT	SBT
Lane Group Flow (vph)	1067	845
v/c Ratio	0.73	0.58
Control Delay	15.7	11.0
Queue Delay	0.0	0.0
Total Delay	15.7	11.0
Queue Length 50th (ft)	538	334
Queue Length 95th (ft)	#899	478
Internal Link Dist (ft)	295	280
Turn Bay Length (ft)		
Base Capacity (vph)	1469	1469
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.73	0.58

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations								↑			↑	
Traffic Volume (vph)	0	0	0	0	0	0	0	982	0	0	777	0
Future Volume (vph)	0	0	0	0	0	0	0	982	0	0	777	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)								4.5			4.5	
Lane Util. Factor								1.00			1.00	
Frt								1.00			1.00	
Flt Protected								1.00			1.00	
Satd. Flow (prot)								1863			1863	
Flt Permitted								1.00			1.00	
Satd. Flow (perm)								1863			1863	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	0	0	0	0	0	1067	0	0	845	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	0	0	0	0	0	1067	0	0	845	0
Turn Type								NA			NA	
Protected Phases								2			2	
Permitted Phases												
Actuated Green, G (s)								64.2			64.2	
Effective Green, g (s)								64.2			64.2	
Actuated g/C Ratio								0.74			0.74	
Clearance Time (s)								4.5			4.5	
Vehicle Extension (s)								3.0			3.0	
Lane Grp Cap (vph)								1377			1377	
v/s Ratio Prot								c0.57			0.45	
v/s Ratio Perm												
v/c Ratio								0.77			0.61	
Uniform Delay, d1								6.9			5.4	
Progression Factor								1.00			1.00	
Incremental Delay, d2								2.8			0.8	
Delay (s)								9.7			6.2	
Level of Service								A			A	
Approach Delay (s)		0.0			0.0			9.7			6.2	
Approach LOS		A			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	86.8	Sum of lost time (s)	9.0
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group