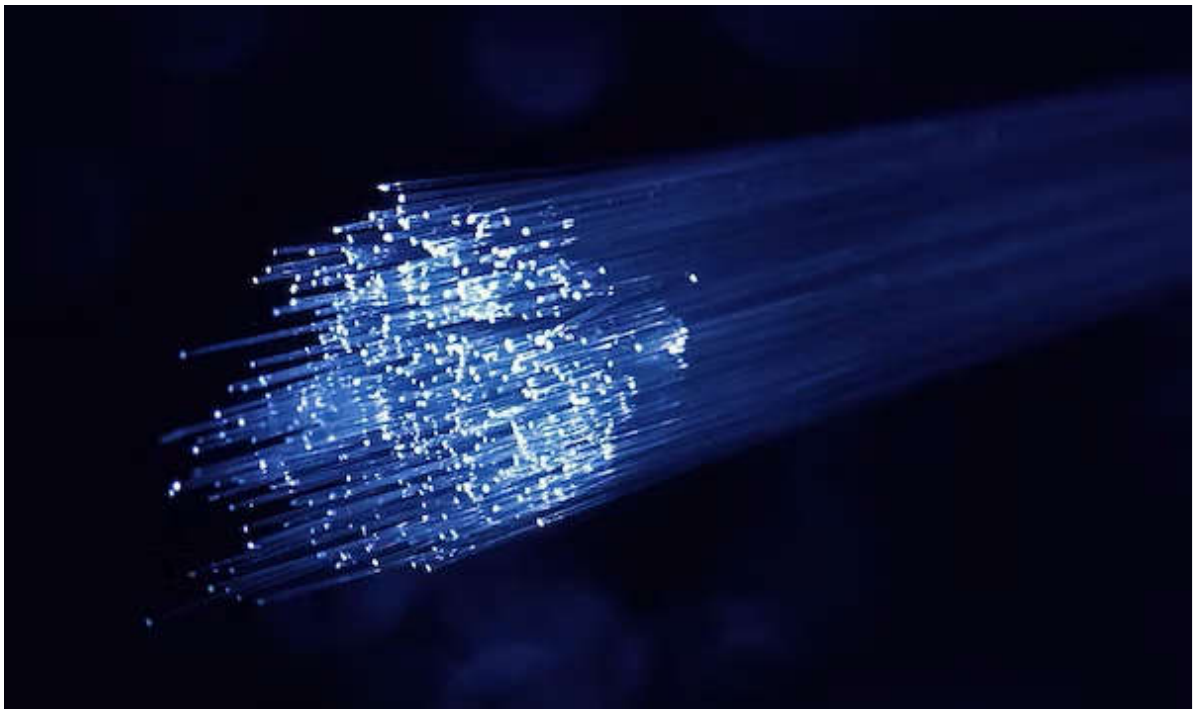

Fiber-To-The-Premises Project

Initial Study – Mitigated Negative Declaration

prepared by

City of Palo Alto
250 Hamilton Avenue
Palo Alto, California 94301
Contact: Dave Yuan, Utilities Strategic Business Manager

prepared with the assistance of

Rincon Consultants, Inc.
99 South Almaden Boulevard
San José, California 95113

May 2024

RINCON CONSULTANTS, INC. SINCE 1994

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Initial Study

1. Project Title

City of Palo Alto Fiber-To-The-Premises Project

2. Lead Agency Name and Address

City of Palo Alto
Development Center
285 Hamilton Avenue, Suite 100
Palo Alto, California 94301

3. Contact Person and Phone Number

Dave Yuan, Utilities Strategic Business Manager
(650) 329-2522
Dave.Yuan@cityofpaloalto.org

4. Project Location

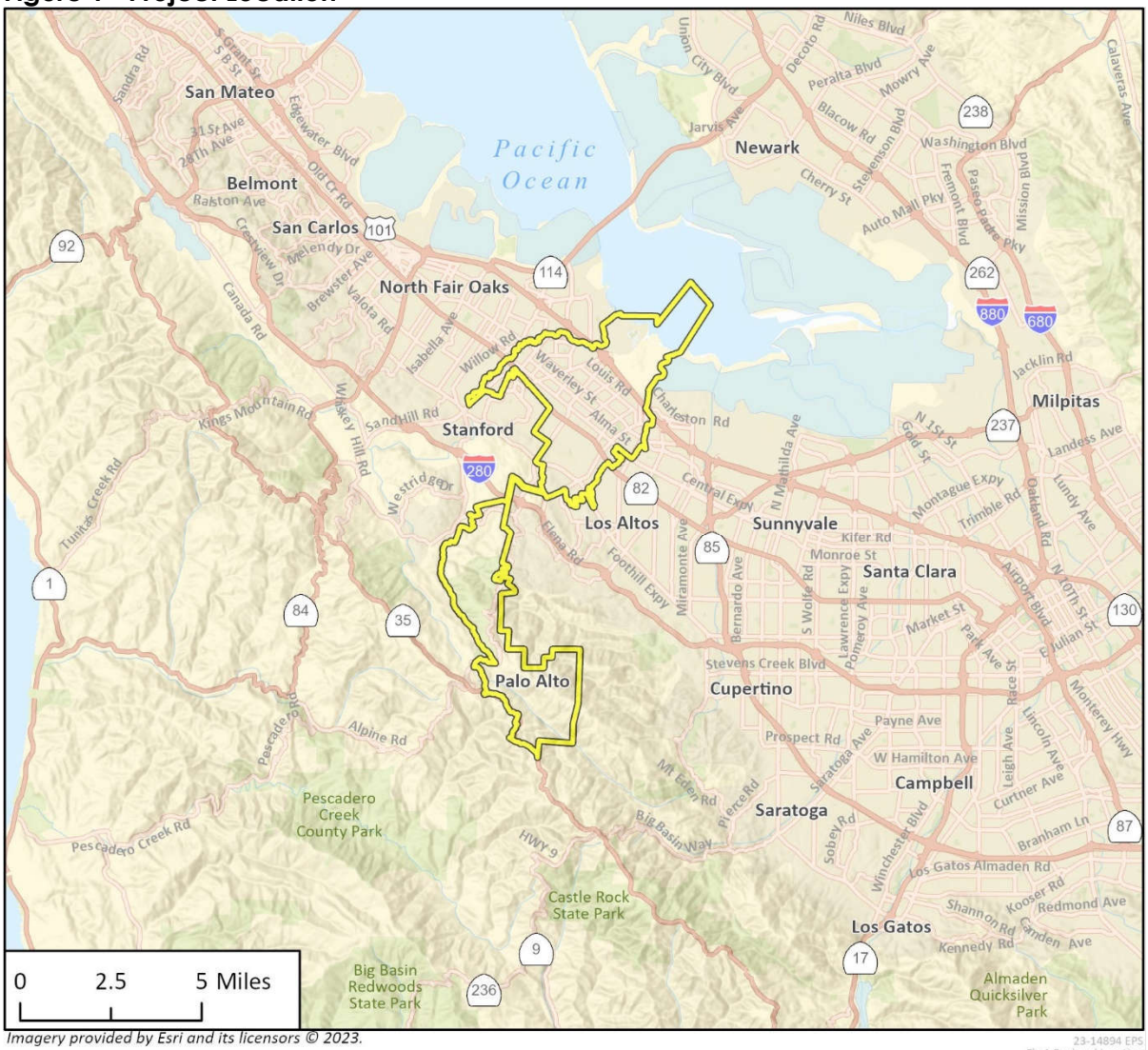
The City of Palo Alto currently maintains and operates a fiber optic system. Some of the dark fiber is licensed to business customers who procure their own internet to "light" the dark fiber themselves. This proposed project consists of the construction and expanded operation of the citywide fiber optic system to provide municipal fiber broadband internet services to businesses and residents in Palo Alto. Therefore, the project location is the entire city of Palo Alto. Palo Alto is part of the San Francisco Bay Area, and more specifically, is in Santa Clara County. The San Francisco Bay is immediately east of Palo Alto. The Stanford University campus is west of Palo Alto. Within the City of Palo Alto, the proposed project would generally be located within rights-of-ways of existing roads. However, some portions of the project would be in areas outside of existing road rights-of-way, such as within existing electrical substations or communications sites. Additionally, some portions of the project would occur along roads in open space or undeveloped areas of the city, such as in the Santa Cruz Mountains on the west side of Palo Alto. The project location (i.e., City of Palo Alto and small areas of surrounding Santa Clara County) is shown in a regional context on Figure 1. The project location is also referred to interchangeably as the project area in this document. Additional figures provided in Appendix A show more detail on the location of project components within the City of Palo Alto.

A small segment of fiber-optic cable would also be located within unincorporated Santa Clara County, adjacent to the city limits of Palo Alto. This segment can be seen in the figures included as Appendix A to this Initial Study.

5. Project Sponsor's Name and Address

City of Palo Alto Public Works Utilities Division
250 Hamilton Avenue
Palo Alto, California 94301

Figure 1 Project Location



6. General Plan Designation

The proposed project would be city-wide and within multiple General Plan land use designations.

7. Zoning

The proposed project would be city-wide and within multiple zoning districts.

8. Description of Project

Project Overview

The proposed project consists of the construction of a fiberoptic backbone and fiber-to-the-premises (FTTP) infrastructure to provide communication services throughout the City of Palo Alto. FTTP would provide municipal high-speed internet service to residences and businesses in Palo Alto. The proposed project includes the following main components:

1. the installation of approximately 194 miles of fiberoptic cables (consisting of about 90 miles of below ground installation and 104 miles of aerial installation using existing utility poles);
2. the installation of approximately two local aggregation sites either inside modular communications shelters (i.e., fiber huts) or enclosed within existing commercial buildings;
3. Up to approximately 4,200 underground utility vaults and 147 aboveground utility cabinets; and,
4. connections directly to customers who subscribe to fiber internet ("subscribers").

Except for the local aggregation sites and connections to subscribers, the fiberoptic cables, vaults, and cabinets would be located within existing public rights-of-way or easements. Fiber-optic cable installation within the existing rights-of-way and easements is fully compatible with existing uses and purposes. The core of the cable would be made of one or more glass or plastic fibers that transmit signals using light instead of electricity. As such, fiber-optic cable is immune to electrical interference and there is no electromagnetic radiation from fiber-optic cable.

Fiber Cable/Conduit

The project would include approximately 194 miles of fiberoptic cable throughout the city of Palo Alto. The fiber ring, huts, vaults, and cabinets would be interconnected by the basic trunk and branch architecture of the system. To the maximum extent practicable, cable required for the proposed project would be installed aerially on existing utility poles. With new aerial construction, the fiberoptic cables would be lashed to new strand wire connected to existing aboveground poles. Where aerial installation is not available or practicable, an underground conduit required to carry cable for the proposed project would be installed within existing rights-of-way via horizontal directional drilling (HDD) and trenching (see *Construction* section below on HDD). Up to six conduits would be installed approximately 36 inches below the ground surface in these selected locations. Depending on the final design, the diameter of the conduits would be 1-inch, 2-inch or 4-inch, which corresponds to the standard dimension-ratio of high-density polyethylene pipe. To comply with

specific design requirements, borings under rail and highway corridors could require installation of steel pipe.

Local Aggregation Sites

The proposed project would include the installation of two local aggregation sites. One of the local aggregation sites would be located within the existing Colorado Substation, which is near the end of Colorado Avenue, directly west of Highway 101. The other local aggregation site would be located within existing space at Equinix.

The local aggregation site at Colorado Substation would consist of a modular building designed and built to specifications measuring approximately 12 feet wide by 28 feet long by 10 feet. The modular building, refered to as a fiber hut, would have an air-conditioning unit mounted on the side of the hut, a fiber-optic cable underground access vault, and a backup generator. The backup generator would be connected to a small aboveground tank that would contain diesel or propane fuel to power the generator during a power outage. The project applicant would require 24-hour access to the hut. Accordingly, the proposed project includes modifying the perimeter fence of the substation to add a gate or door for access directly to the hut.

The local aggregation site at Equinix (or within any other commercial building) would not require a hut because the existing building itself would shelter the fiber aggregation equipment. This local aggregation site would contain the fiber aggregation equipment, including computers, equipment and ladder racks, network equipment, cable trays, and fiber patch panels, inside the existing building. Power and heating, ventilating, and air conditioning already provided inside the building would serve the local aggregation site. The equipment would be delivered to Equinix or another commercial building if not Equinix by trailer truck and installed within the building.

Underground Utility Vaults and Aboveground Utility Cabinets

Vaults would be installed throughout the city to connect huts and neighborhoods receiving service. Vaults would be up to 36 inches by 78 inches and would have no aboveground profile. The majority of vaults would be approximately 36 inches by 48 inches or smaller, and 34 inches deep. Vaults would provide system access as well as space for fiberoptic splice locations and fiberoptic cable storage. Typical vault locations would be within existing rights-of-way where other similar utility equipment is placed.

Cabinets would be sited based on visual shading and preferential placement away from where they could be seen by people. If utilized, some of the aboveground cabinets could be up to 33 inches by 17 inches and less than 3 feet high. However, most cabinets would generally only be 17 by 17 inches and less than 3 feet high. Placement of cabinets would be in accordance with the City of Palo Alto Municipal Code Minimum Criteria.

Customer Connections

Connections to customers who subscribe to municipal fiber broadband internet services would be provided in the form similar to paths for existing utilities such as fiber-optic cable buried directly to individual houses and businesses, or strung on existing utility poles. Connections to customers would generally be in private lawns or beneath existing hardscape, such as parking lots and sidewalks.

Construction

Prior to commencing construction activities, field teams would mark the necessary underground areas with spray paint along the conduit alignments for fiber cable route location identification purposes to assist in preclearance surveys. Surveys of both underground and aboveground build corridors would identify potential build risks or potential tree-trimming needs.

The project would be fully installed within approximately 6 years of project approval. Construction of the FTTP service would be staggered throughout the city for efficiency. An individual portion of the fiber network might have multiple separate construction crews working at a given time, with aerial installation, trenching/micro-trenching, directional drilling, and vault and cabinet installation occurring at the same time in different locations in Palo Alto. These techniques are described in more detail later in this section.

All construction activity conducted along roads and highways would employ standard traffic control measures in accordance with the California Department of Transportation (Caltrans) *California Manual on Uniform Traffic Control Devices* (Caltrans 2023).

Local Aggregation Site Installation

As discussed above under *Local Aggregation Sites*, the proposed project would include the installation of two local aggregation sites. One site would be a prefabricated fiber hut that would be located at the existing Colorado Substation on Colorado Avenue. The hut unit would be delivered to the site completely assembled on a diesel truck with lowboy trailer and would be lowered onto the site by crane. Construction activities at the hut site would consist of site preparation, pouring of a level concrete slab, installing power feeds and conduits for fiber cables, and modifying the existing substation fencing to add a door or gate for access.

The other local aggregation site would be inside of an existing commercial or industrial building, most likely existing space within Equinix. Equipment would be delivered to the site by trailer truck and installed within the building. Regardless of configuration, a construction crew of approximately six workers would complete each local aggregation site in approximately 8 weeks.

Vault and Cabinet Installation

All vaults would either be installed underground to a depth of up to approximately 48 inches with the top of the vault at grade or, in a few cases, be installed in above ground cabinets, as described earlier in this section. All vaults would be installed in direct line with or directly adjacent to the installed buried conduit. For above ground cabinets, curbs and storm water infrastructure that might be temporarily taken out of service during construction would be retained.

Fiber Optic Aerial Installation

The method of installation of fiber-optic cable on existing utility poles would include installing suspension clamps at each pole. Fiberoptic cables would then be supported by (lashed to) high-strength galvanized suspension strands held in place by the suspension clamps. The strand would be high-tensile steel and would be placed under tension to control sag. Standard aerial construction techniques and typical two-axle, rubber-tire vehicles would be used to attach cables and associated equipment to most utility poles. Basic equipment required for aerial installation would include bucket trucks and cable reel trucks or cable trailers. At least one crew and one bucket truck would travel the pole line alignment. The cable reel truck would carry spooled fiberoptic cable that would be unwound for installation on the existing poles.

Fiber Optic Below-Ground Installation

Fiber Optic Trenching

When an open trench is utilized for construction and placement of fiber optic in concrete or asphalt, the typical construction process would consist of using trenching/excavating equipment to cut an approximately 14-inch-wide opening, The trench would be excavated to a depth of approximately 40 inches. The 40-inch depth below existing grade would be maintained during installation, except where existing obstructions, underground congestion, or other reasons necessitate a shallower depth. Conduits would be placed at the bottom of the trench. The trench would then be backfilled and compacted, and the surface restored to a condition of equal quality as the pre-construction condition, or better.

Fiber Optic Micro-Trenching

Micro-trenching would be used to cut a shallower trench than regular trenching, generally less than 2 inches wide and to a maximum depth of about 24 inches. Micro-trenching would be performed using a saw that looks like a large circular saw, which can make a trench in either concrete or asphalt. Crews would lay the fiber-optic cable inside the trench immediately behind the micro-trenching. As with regular trenching, the micro-trench would then be backfilled and compacted, and the surface restored to a condition of equal quality as the pre-construction condition, or better. Generally, the trench is backfilled with the material that was removed from the trench.

Horizontal Directional Drilling

The HDD method of construction, if required, would be used to place fiberoptic cable bundles that cross under roads, utilities, dry washes, or other obstacles in the ground. This method of construction consists of subsurface boring using a guided drill head. To start the bore, a typical surface-operated drilling device would be angled into the ground near the entry pit, creating an approximately 3- to 4-inch pilot hole. Typically, a 6-inch back ream would then be attached and pulled back through the pilot hole, connecting the receiving pit to the entry pit. The back ream would increase the pilot hole to the required diameter, approximately 6 inches, to a maximum depth of approximately 60 inches below existing ground surface.

Horizontal directional drilling would use a bentonite/water mixture that is pumped down the drill stem to run the drill head, lubricate the drill pipe, maintain the bore hole, and remove bore cuttings. Bentonite is a non-toxic fine clay that, when mixed with water, provides the necessary lubrication and operating fluid for the drilling process. The bentonite/water mix would be prepared on-site and circulated in tanks and/or tanker trucks.

Stream Crossings

Based on current design, the proposed project would avoid jurisdictional streams and waters during project construction to the extent feasible. If crossings are unavoidable, fiber conduits would be attached to existing structures (i.e. bridges or utility crossings) or placed in existing conduit. Work at the stream crossing would be conducted from existing structures, disturbed areas, or rights-of-way outside the bed and bank of jurisdictional waters and wetlands. For all other crossings where avoidance or use of existing infrastructure is not practicable, horizontal directional drilling would be utilized to avoid construction work within waters and streambed/banks.

The entry and exit points of each bore (as well as staging areas and mud pits) would be located greater than 20 feet from the edge of a jurisdictional feature and would not result in permanent

disturbance of riparian habitat if present. If stream crossings are unavoidable and horizontal directional drilling is required, the applicant would consult with the appropriate regulatory authorities in accordance with regulatory requirements to obtain the necessary permits and approvals for completing the drilling.

Potholing

Limited potholing would be required in conjunction with underground construction for all types of excavation including horizontal directional drilling operations. Potholing is the practice of excavating a test hole to expose underground utilities to ascertain the horizontal and vertical location of the facility prior to construction activities. While potholing can be accomplished through various types of excavation methods, vacuum excavation would be the preferred and default method for non-destructive exposure of buried facilities. This method would utilize pressurized water or air to break up soil that is removed through a truck-mounted suction hose and deposited into a debris tank on the truck. Once the dirt is removed, the exact location of the utility would be exposed. After the underground utility has been located, the pothole would be restored in accordance with the City's standards and specifications. This technique could also be utilized in situations where other sensitive underground features, such as tree roots, need to be avoided.

Construction Workforce and Equipment

A labor pool of approximately 40 people would be required for construction of the proposed project. The approximately 40 people comprising the construction workforce may not be required at all times. Depending on the specific project component under construction, the number of construction workers present and active could be less than 40.

Estimates of construction activity duration is from 2024 through 2030.

The typical construction equipment required for the project would include:

- Semi trucks
- Pick-up trucks
- Flatbed truck
- Crane
- Concrete mixing truck
- Excavator
- Cable/conduit trailer
- Dump trucks
- Trencher
- Backhoe
- Boring rig
- Bucket truck

Most construction equipment and materials would be stored at contractor and/or supplier facilities until needed. Staging areas, if necessary, would be established within public rights of way or other disturbed areas along the proposed fiber-optic route, and would not exceed an area greater than 200 feet by 200 feet. If it is not possible to locate staging areas in the rights of way due to narrow roads or other constraints, the contractor would locate staging areas, equipment laydown areas, and storage areas in paved or graveled yards or other disturbed areas as close to the construction areas as possible.

Operations

Following construction of the proposed project, operations and maintenance activities required for the project would be minimal. Operations would be limited to the intermittent maintenance of the new fiber-optic line and associated equipment installed throughout the network. A small backup generator rated at 85 kilowatts or equivalent, located at the local aggregation site that would be at Colorado Substation, would be operated for up to 1 hour monthly to maintain operational functionality.

Because the proposed project would be located within existing utility easements and road rights-of-way, there would be as-needed maintenance activities, similar to those already occurring at pole locations and within underground utility easements and rights-of-way to maintain these existing utilities. Maintenance activities associated with the proposed project would consist of periodic inspection by patrol in a pickup truck of the project route facilities to determine if repairs and/or vegetation trimming would be required. If repairs are necessary, these activities would generally be similar to construction-related activities; however, the duration, intensity, and/or frequency of said activities would be substantially less.

9. Surrounding Land Uses and Setting

The proposed project consists of the construction and operation of a citywide fiber optic system in Palo Alto. The project location (i.e., City of Palo Alto) is shown in a regional context on Figure 1.

Within the City of Palo Alto, the proposed project would generally be located within rights-of-ways of existing roads and utility rights-of-way and easements. Land uses surrounding these rights-of-way and easements include a mix of urban development and rural open space. Examples of urban development surrounding the proposed fiber optic route include residential development, commercial development, and industrial development. Open space and rural development areas are generally in the western areas of Palo Alto.

10. Other Public Agencies Whose Approval is Required

The following permits and approvals are required or anticipated as part of the proposed project:

- City of Palo Alto – Master Encroachment Permit from the Department of Public Works for work in the public right of way, such as work within City roadways.
- City of Palo Alto – Building, Electrical, and Grading Permits.
- City of Palo Alto – Tree Removal Permit.
- City of Palo Alto – Temporary Encroachment Permit for crane use (if the crane encroaches in the public right of way) from the Department of Public Works Engineering.
- Bay Area Air Quality Management District (BAAQMD) – Authority to Construct and Permit to Operate for small generators.
- Santa Clara County Grading and/or Encroachment Permits (for work in unincorporated urbanized areas of Santa Clara County that are contiguous to the City).
- Caltrans – Right of way encroachment permits, if needed.

Additional approvals may be required for horizontal directional drilling if a stream crossing is needed:

- U.S. Army Corps of Engineers – Department of the Army Nationwide 12 Permit

- California Department of Fish and Wildlife (CDFW) – Lake and Streambed Alteration Agreement
- Regional Water Quality Control Board (RWQCB) – Water Quality Certification and/or Discharge Permit

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?

The Tamien Nation is the only California Native American Tribes traditionally and culturally affiliated with the project area that has requested consultation pursuant to Public Resources Code Section 21080.3.1. However, the City sent letters to all tribes that the Native American Heritage Commission identified as being traditionally and culturally affiliated with the project area. None of the tribes have requested to consult on this project. Please see Section 18, Tribal Cultural Resources for additional discussion of tribal cultural resources.

Environmental Factors Potentially Affected

This project would potentially affect the environmental factors checked below, involving at least one impact that is "Potentially Significant" or "Less than Significant with Mitigation Incorporated" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	■ Air Quality
■ Biological Resources	■ Cultural Resources	☐ Energy
■ Geology and Soils	☐ Greenhouse Gas Emissions	■ Hazards and Hazardous Materials
■ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☐ Noise	☐ Population and Housing	☐ Public Services
☐ Recreation	■ Transportation	■ Tribal Cultural Resources
☐ Utilities and Service Systems	☐ Wildfire	■ Mandatory Findings of Significance

Determination

Based on 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 to 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 "less than significant with mitigation incorporated" 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 potential 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	Title

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Environmental Checklist

1 Aesthetics

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, 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. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☐	■	☐
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	■	☐

a. Would the project have a substantial adverse effect on a scenic vista?

The project would be located throughout Palo Alto, including within scenic hillside areas and within or near roads that the City designates as Scenic Routes (City of Palo Alto 2017).

The proposed activities would primarily consist of underground utility infrastructure that would have no impact on the visual character of Palo Alto because the underground infrastructure would have no above-ground profile. Above-ground features would consist of pole attachments, utility cabinets, and up to approximately two local aggregation sites. One local aggregation site would be installed within the fence of an existing electrical substation and the other would be inside of a building. Accordingly, there would be no impact on scenic vistas resulting from the installation of these local aggregation sites in developed, urbanized areas of Palo Alto. These aggregation sites would be surrounded by buildings typical of the urbanized areas of Palo Alto and not visible from the undeveloped areas, such as areas west of Interstate 280. Fiber-optic cable would be attached to existing poles and, while some amount of pole replacement would be necessary, no poles would be installed in entirely new locations as part of the project and an additional transmission line between

existing poles would not substantially alter or block views or scenic vistas in developed or undeveloped areas. Underground conduit would not be visible, and therefore would not obstruct or alter scenic vistas. If required, utility cabinets would be less than 3 feet high and would generally be sited in locations where existing utility cabinets already exist and are part of the existing viewshed. As a result, cabinets that are part of the project would not impact scenic viewsheds and routes and would be consistent with the existing visual setting.

The proposed project would have no impact on scenic vistas, scenic routes, and scenic viewsheds, such as the hillsides in the western areas of Palo Alto and Santa Clara County.

NO IMPACT

b. Would the project substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The proposed project would not cross or be within the right-of-way of a designated state scenic highway (Caltrans 2023). The nearest designated state scenic highway is State Route 35, which is almost 1 mile from the project at its closest point (Caltrans 2019). Portions of the project would be within the right-of-way of Interstate 280, which is eligible for designation as a state scenic highway but is not officially designated (Caltrans 2019). The portion of the proposed project that would be within the right-of-way of Interstate 280 would be below ground and within the existing right-of-way of Arastradero Road as it crosses beneath Interstate 280. Because Arastradero Road is an existing road developed with the road surface and utilities, there would be no visible change from Interstate 280 as a result of the project, and no trees, rock outcroppings, or historic buildings would be substantially affected. Therefore, the proposed project would not impact resources within a state scenic highway. Other above-ground components of the project, such as cabinets and the local aggregation site at the existing Colorado Substation, would not be visible from Interstate 280 and State Route 35 due to distance and intervening topography, trees and structures. Accordingly, the project would have no impact on scenic resources within a state scenic highway.

NO IMPACT

c. Would the project, in non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

According to the California Code of Regulations (CCR) Section 15387:

> *"Urbanized area means a central city or a group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 persons per square mile. A lead agency shall determine whether a particular area meets the criteria in this section either by examining the area or by referring to a map prepared by the U.S. Bureau of the Census which designates the area as urbanized… Use of the term "urbanized area" in Section 15182 is limited to areas mapped and designated as urbanized by the U.S. Bureau of the Census."*

According to the U.S. Census Bureau, the City of Palo Alto and the project area are within an urbanized area (U.S. Census Bureau 2023).

Project construction would be temporary and would occur within the existing right-of-way and easements or within existing utility infrastructure or other development/disturbance, such as the existing Colorado Substation or within existing buildings. The impact of project construction would therefore be less than significant.

After installation, there would be no visual impacts from underground project facilities, such as fiber optic conduit installed using horizontal directional drilling or the underground vaults.

Above ground project facilities would include pole attachments, local aggregation sites, and, if necessary, cabinets. With respect to pole attachments, as explained above, fiber-optic cable would be attached to poles in areas where there are existing poles with utility lines and, while some amount of pole replacement would be necessary, no poles other than replacement poles would be installed as part of the project. As a result, this component of the proposed project would not substantially change the existing visual character or quality of the project surroundings. The majority of existing poles are within existing right-of-way without zoning designations. Underground utilities are permissible in the City's zoning districts.

The prefabricated fiber hut for the local aggregation site would be located within the existing Colorado Substation. The hut would be similar in appearance to other utility buildings that exist within the substation and elsewhere throughout Palo Alto (e.g., water, electrical, and other small service buildings) and thus would not substantially alter the visual character of the project surroundings. The hut would be generally smaller than surrounding residential buildings near the Colorado Substation. Before installation the City must issue the project applicant a conditional use permit for installation of the hut, which requires reviewing its consistency with the zoning ordinance. The other local aggregation site would be inside Equinix or another existing building, preventing it from being visible to the public.

If aboveground cabinets are needed, they would be located throughout Palo Alto. The cabinets would be small (less than 3 feet high); would be consistent in appearance and context with other, existing aboveground utility infrastructure; and would be located in consultation with the City to minimize aesthetic impacts and consistency with design guidelines and zoning code.

In summary, there could be some minor, highly localized changes to the visual character, primarily as a result of the potential for aboveground cabinets to be placed in residential areas or rural areas. Similar utility structures exist throughout the City and the project would be consistent with the existing visual character of the City's developed areas. The proposed project would not substantially degrade the existing visual character or quality of the City and would not conflict with zoning. The impact of the project would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Project construction and installation activities are planned to occur only during workday hours. Normal construction lighting would be required during working hours during the winter months when daylight hours are shorter but would be temporary and not a long-term change.

The proposed project would not introduce permanent new sources of light or glare except for lighting on the prefabricated fiber hut. The hut would be located at the existing Colorado Substation, which already has exterior light sources such as streetlights on Colorado Avenue. Additionally, exterior lighting on the prefabricated fiber hut would be required to comply with the

City's exterior lighting requirements, found in Palo Alto Municipal Code Section 18.40.250. According to these regulations, lighting on the exterior of a building must be of the lowest intensity and energy use adequate for its purpose, and lights must be designed to focus illumination downward to avoid excessive illumination above the light fixture. Accordingly, project impacts associated with substantial light and glare would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

2 Agriculture and Forestry Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on 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?	☐	☐	☐	■

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

b. Would the project conflict with existing zoning for agricultural use or a Williamson Act contract?

c. Would the project 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. Would the project result in the loss of forest land or conversion of forest land to non-forest use?

e. Would the project 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?

The proposed project would not occur within areas of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on maps prepared pursuant to the Farmland Mapping and Monitoring Program (California Department of Conservation 2020). Accordingly, the proposed project would not convert these types of Farmland areas to non-agricultural uses. The proposed project would have no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

The proposed project would not occur on properties or land subject to a Williamson Act contract (California Department of Conservation 2020). The proposed project would install a new fiber-optic conduit adjacent to or in proximity to several areas of Palo Alto designated for agricultural uses, such as land on the north side of Deer Creek Road. However, new fiber-optic conduit in these areas would be underground or attached to existing poles and in public rights of way along existing roadways. Therefore, no agricultural lands of any type would be converted to non-agricultural uses and no impacts on lands under Williamson Act would occur as a result of the proposed project.

The proposed project would not impact forest resources because project facilities would be located within existing utility and roadway rights-of-way and easements, inside existing buildings, or in disturbed (non-forested areas) next to roadways. Most of the project facilities would be located along city streets in the eastern portions of Palo Alto, which is the most urbanized area of the city where forests do not occur. The fiber-optic network would extend through the western area of the City, within the Santa Cruz Mountains and Santa Clara County where forests do occur. However, in these areas the fiber-optic cable would be installed in existing belowground conduit or attached to existing poles. Accordingly, the project would not result in the loss of forest or timberland. The proposed project would have no impact.

NO IMPACT

3 Air Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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?	☐	☐	■	☐

Criteria Pollutants and Attainment Status

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants. Under these laws, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established the National Ambient Air Quality Standards and the California Ambient Air Quality Standards for "criteria pollutants" and other pollutants. Some pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere, including carbon monoxide, volatile organic compounds (VOC)/reactive organic gases (ROG),[1] nitrogen oxides (NO_X), particulate matter with diameters of ten microns or less (PM_{10}) and 2.5 microns or less ($PM_{2.5}$), sulfur dioxide, and lead. Other pollutants are created indirectly through chemical reactions in the atmosphere, such as ozone, which is created by atmospheric chemical and photochemical reactions primarily between ROG and NO_X. Secondary pollutants include oxidants, ozone, and sulfate and nitrate particulates (smog).

The project area is located in the San Francisco Bay Area Air Basin, which is under the jurisdiction of the Bay Area Air Quality Management District (BAAQMD). BAAQMD has jurisdiction over much of the nine-county Bay Area, including Santa Clara County. As the local air quality management agency, BAAQMD is required to monitor air pollutant levels to ensure that the National Ambient Air Quality Standards and California Ambient Air Quality Standards are met and, if they are not met, to develop strategies to meet the standards. Depending on whether the standards are met or exceeded, the San Francisco Bay Area Air Basin is classified as being in "attainment" or "nonattainment." In areas designated as non-attainment for one or more air pollutants, a cumulative air quality impact exists

[1] CARB defines VOC and ROG similarly as, "any compound of carbon excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate," with the exception that VOC are compounds that participate in atmospheric photochemical reactions. For the purposes of this analysis, ROG and VOC are considered comparable in terms of mass emissions, and the term ROG is used in this IS-MND.

for those air pollutants, and the human health impacts associated with these criteria pollutants, presented in Table 1, are already occurring in that area as part of the environmental baseline condition.

Under state law, air districts are required to prepare a plan for air quality improvement for pollutants for which the district is in non-compliance. The San Francisco Bay Area Air Basin is designated a nonattainment area for the federal 8-hour ozone standard, federal $PM_{2.5}$ annual and 24-hour standards, state 8-hour and 1-hour ozone standards, state PM_{10} annual and 24-hour standards, and the state $PM_{2.5}$ annual standard (BAAQMD 2022). This nonattainment status is a result of several factors, such as mobile sources, wood burning, industrial combustion, and dust, in the San Francisco Bay Area Air Basin.

Table 1 Health Effects Associated with Non-Attainment Criteria Pollutants

Pollutant	Adverse Effects
Ozone	(1) Short-term exposures: (a) pulmonary function decrements and localized lung edema in humans and animals and (b) risk to public health implied by alterations in pulmonary morphology and host defense in animals; (2) long-term exposures: risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans; (3) vegetation damage; and (4) property damage.
Suspended particulate matter (PM_{10})	(1) Excess deaths from short-term and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease (including asthma).[1]
Suspended particulate matter ($PM_{2.5}$)	(1) Excess deaths from short- and long-term exposures; (2) excess seasonal declines in pulmonary function, especially in children; (3) asthma exacerbation and possibly induction; (4) adverse birth outcomes, including low birth weight; (5) increased infant mortality; (6) increased respiratory symptoms in children, such as cough and bronchitis; and (7) increased hospitalization for both cardiovascular and respiratory disease, including asthma.

Source: United States Environmental Protection Agency 2020

Air Quality Management

Because the San Francisco Bay Area Air Basin currently exceeds the federal ozone and $PM_{2.5}$ standards and the state ozone, PM_{10}, and $PM_{2.5}$ standards, BAAQMD is required to implement strategies to reduce pollutant levels to achieve attainment of the National Ambient Air Quality Standards and California Ambient Air Quality Standards. BAAQMD adopted the 2017 Clean Air Plan (2017 Plan) as an update to the 2010 Clean Air Plan. The 2017 Plan provides a regional strategy to protect public health and the climate. Consistent with the greenhouse gas (GHG) reduction targets adopted by the state, the 2017 Plan lays the groundwork for a long-term effort to reduce Bay Area GHG emissions to 40 percent below 1990 levels by 2030 and 80 percent below 1990 levels by 2050. To fulfill state ozone planning requirements, the 2017 control strategy includes all feasible measures to reduce emissions of ozone precursors (ROG and NO_X) and reduce transport of ozone and its precursors to neighboring air basins. In addition, the 2017 Plan builds upon and enhances BAAQMD's efforts to reduce emissions of fine particulate matter and toxic air contaminants (TAC) (BAAQMD 2017).

Sensitive receptors are facilities or land uses that include members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. According to BAAQMD, sensitive receptors are defined as facilities or land uses that include members of the population that are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples include schools, hospitals and residential areas (BAAQMD 2017).

Toxic Air Contaminants

TACs are a broad class of compounds known to have health effects. They include but are not limited to criteria pollutants. TACs are found in ambient air, especially in urban areas, and are caused by industry, agriculture, diesel fuel combustion, and commercial operations (e.g., dry cleaners). TACs are typically found in low concentrations, even near their source (e.g., diesel particulate matter [DPM] near a freeway).

Diesel exhaust is the predominant TAC in urban air and is estimated to represent about three-quarters of the cancer risk from TACs. Diesel exhaust is a complex mixture of gases, vapors, and fine particles. Medium- and heavy-duty diesel trucks represent the bulk of DPM emissions from California highways. The majority of DPM is small enough to be inhaled into the lungs. Most inhaled particles are subsequently exhaled, but some deposit on the lung surface or are deposited in the deepest regions of the lungs (most susceptible to injury) (CARB 2024). Chemicals in diesel exhaust, such as benzene and formaldehyde, have been previously identified as TACs by the California Air Resources Board (CARB).

California Environmental Quality Act

The BAAQMD has adopted guidelines for quantifying and determining the significance of air quality emissions in its *California Environmental Quality Act Air Quality Guidelines* (BAAQMD 2022). BAAQMD recommends that lead agencies determine appropriate air quality emissions thresholds of significance based on substantial evidence in the record. BAAQMD's significance thresholds in the updated 2022 *CEQA Air Quality Guidelines* for project operations within the San Francisco Bay Area Air Basin are the most appropriate thresholds for use in determining air quality impacts of the project. BAAQMD developed screening criteria to provide lead agencies and project applicants with a conservative indication of whether a project could result in potentially significant air quality impacts.

Table 2 presents the significance thresholds for construction and operational-related criteria air pollutant and precursor emissions used for the purposes of this analysis. These represent the levels at which a project's individual emissions of criteria air pollutants or precursors would result in a cumulatively considerable contribution to the San Francisco Bay Area Air Basin existing air quality conditions. For the purposes of this analysis, the project would result in a significant impact if construction or operational emissions would exceed one or more of the thresholds shown in Table 2.

Table 2 Criteria Air Pollutant Significance Thresholds

	Construction Thresholds	Operational Thresholds	
Pollutant	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
ROG	54	54	10
NO_X	54	54	10

	Construction Thresholds	Operational Thresholds	
Pollutant	Average Daily Emissions (lbs/day)	Average Daily Emissions (lbs/day)	Maximum Annual Emissions (tons/year)
PM_{10}	82 (exhaust)	82	15
$PM_{2.5}$	54 (exhaust)	54	10
Fugitive Dust	Construction Dust Ordinance or other Best Management Practices	Not Applicable	

OG = reactive organic gases, NO_X = nitrogen oxides, PM_{10} = particulate matter 10 microns in diameter or less, $PM_{2.5}$ = particulate matter 2.5 microns in diameter or less; lbs/day = pounds per day, BAAQMD = Bay Area Air Quality Management District

Source: BAAQMD 2022

The City of Palo Alto, as lead agency, has chosen to apply the BAAQMD thresholds of significance presented in Table 2 to this analysis.

Impact Assessment

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

Under BAAQMD's methodology, a determination of consistency with the 2017 Plan should demonstrate that a project:

- Supports the primary goals of the air quality plan
- Includes applicable control measures from the air quality plan
- Does not disrupt or hinder implementation of any air quality plan control measures

A project that would not support the 2017 Plan's goals would not be considered consistent with the 2017 Plan. On an individual project basis, consistency with BAAQMD quantitative thresholds is interpreted as demonstrating support for the clean air plan's goals. The goals of the 2017 Air Quality Plan, according to BAAQMD (2017), include:

- Protect air quality and health at the regional and local scale by attaining all national and state air quality standards and eliminating disparities among Bay Area communities in cancer health risk from TACs
- Protect the climate by reducing Bay Area GHG emissions to 40 percent below 1990 levels by 2030, and 80 percent below 1990 levels by 2050

The proposed project would support these primary goals. As discussed below for CEQA checklist question 'b', the proposed project would not exceed emissions thresholds for criteria pollutants. Additionally, as discussed below for CEQA checklist question 'c', the proposed project would not result in disparities of cancer health risks from TACs. The proposed project would result in temporary GHG emissions during construction, but operational emissions would be negligible, supporting the goal to reduce GHG emissions. More discussion of the potential GHG impacts of the proposed project are discussed in Section 8, *Greenhouse Gas Emissions*.

As shown in Table 3, below, the proposed project would not disrupt of hinder implementation of applicable control measures of the 2017 Air Quality Plan. Because the proposed project is effectively a communications utility, most of the 2017 Air Quality Plan control measures are not applicable, such as measures pertaining to transportation, agricultural operations, refineries, and residential development.

Table 3 2017 Air Quality Plan Control Measure Consistency Analysis

2017 Air Quality Plan Control Measure	Analysis of Project Consistency
Reduce emissions of diesel PM and black carbon from back-up generators through Draft Rule 11-18, resulting in reduced health risks to impacted individuals, and in climate protection benefits.	**Consistent**. The proposed project would include a back-up generator at the proposed local aggregation site at existing Colorado Substation. Colorado Substation is adjacent to property developed with residences. However, the generator at this site would be small, rated at 85 kilowatts or equivalent, Additionally, the generator would be operated for no more than 1 hour monthly for testing purposes, even though actually testing would generally last no more than 30 minutes in one day (and testing is expected to occur once per month) to maintain operational functionality. Given the small size of the generator and limited use, emissions of diesel PM and black carbon would not exceed risk factors presented in Draft Rule 11-18.
Develop or identify an existing model municipal tree planting ordinance and encourage local governments to adopt such an ordinance. Include tree planting recommendations the Air District's technical guidance, best practices for local plans and CEQA review.	**Consistent**. This control measure pertains to BAAQMD adopting tree planting practices and is not directly applicable to private projects, such as the proposed project. However, the proposed project supports this control measure because the project must confirm with the City's tree ordinance found in Title 8 of the Palo Alto Municipal Code. Additionally, the proposed project is designed to avoid tree removal to the extent feasible.

Source of Control Measures: BAAQMD 2017.

Because the proposed project would support the primary goals of the 2017 Air Quality Plan and would be consistent with applicable control measures of the 2017 Air Quality Plan, the project would not conflict with or obstruct implementation of the applicable air quality plan. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project 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?

The San Francisco Bay Area Air Basin is designated a nonattainment area for the federal 8-hour ozone standard, federal $PM_{2.5}$ annual and 24-hour standards, state 8-hour and 1-hour ozone standards, state PM_{10} annual and 24-hour standards, and the state $PM_{2.5}$ annual standard (BAAQMD 2022).

In order to determine if the proposed project would result in a cumulatively considerable net increase of one or more of these pollutants, the project's estimated pollutant emissions were evaluated against the significance thresholds presented in Table 2. The California Emissions Estimator Model (CalEEMod) Version 2022.1 was used to estimate emissions from construction of the project. The anticipated construction schedule and fleet were input to CalEEMod based on data provided to the City by the project applicant. The model output and detailed assumptions from CalEEMod are included in Appendix B. Given the project is a utility and requires little operational activity requiring emissions sources, operational emissions are evaluated qualitatively.

Construction

Project construction would require the use of heavy equipment that emits air pollution, such as backhoes and dump trucks. Table 4 shows average daily construction emissions of ROG, NO_x, PM_{10}

exhaust, and $PM_{2.5}$ exhaust during construction of the project. As indicated in Table 4, predicted construction-period average daily emissions would not exceed the BAAQMD significance thresholds.

Table 4 Construction Emissions (pounds/day)

Pollutant	Average Daily Emissions	Significance Threshold	Significant Impact?
ROG	2.4	54	No
NO_x	20.5	54	No
CO	23.8	N/A	No
SO_x	0.1	N/A	No
PM_{10} Exhaust	0.9	82	No
$PM_{2.5}$ Exhaust	0.8	54	No

N/A = Not Applicable
See Appendix B for CalEEMod worksheets.

Table 4 does not present fugitive dust emissions that would result from construction equipment operating on soil. Site preparation and trenching, as well as operating equipment on unpaved roads, may cause wind-blown dust that could contribute particulate matter into the local atmosphere. BAAQMD does not have quantitative thresholds for fugitive dust emissions during construction. Instead, BAAQMD recommends Best Management Practices (BMPs) be implemented to reduce fugitive dust emissions. The proposed project does not explicitly include these BMPs. However, the EIR prepared in 2017 for the City's Comprehensive Plan includes Mitigation Measure AIR-2a, which requires development projects to implement the BAAQMD BMPs for fugitive dust emissions. The proposed project is a development project, and therefore would be required to implement Mitigation Measure AIR-2a of the 2017 EIR. Accordingly, construction impacts would be less than significant with adherence to the Comprehensive Plan mitigation requirements. Mitigation Measure AIR-2a of the City's Comprehensive Plan EIR states:

MITIGATION MEASURE AIR-2A

As part of the City's development approval process, the City shall require applicants for future development projects to comply with the current BAAQMD basic control measures for reducing construction emissions of PM10 (Table 8-1, Basic Construction Mitigation Measures Recommended for All Proposed Projects, of the BAAQMD CEQA Guidelines).

Operations

The proposed project would generate minimal operational air emissions. One backup generator would run up to approximately 12 hours annually to ensure correct functionality. The applicant would be required to obtain a BAAQMD Permit to Construct and Permit to Operate for small generators that would regulate the operation and maintenance of the equipment. Maintenance and repair activities associated with the other proposed project facilities, such as underground vaults and fiberoptic cable would be minimal in terms of duration, intensity and frequency, and would consist only of periodic inspection of project facilities by a single utility truck. Periodic operation of a truck and operation of a generator for no more than 12 hours annually would have negligible emissions of criteria pollutants.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

Project construction activities would generate airborne emissions of diesel exhaust containing diesel particulate matter associated with the operation of construction vehicles. The emissions would be isolated to the immediate vicinity of the construction site and limited to a finite period of time that would be relatively short in duration as construction activities move along the fiber-optic alignment. Maintenance of the proposed project would involve limited activities that would be temporary in duration and location; therefore, it would not create substantial concentrations of diesel particulate matter.

Operations at the local aggregation site at the Colorado Substation would include periodic testing of the backup generator, which would also create temporary diesel exhaust, if diesel is used instead of propane fuel. Installation and operation of the generator would require a stationary source permit from the Bay Area Air Quality Management District. As part of the permitting process, the project applicant must first demonstrate that the generator would not create adverse health effects due to emissions of diesel exhaust. Additionally, the generator would be sized 85 watts or less, which is below the threshold that the Bay Area Air Quality Management District considers substantial enough to potentially generate concentrations of diesel exhaust. Accordingly, the proposed project would not expose sensitive receptors to substantial pollutant concentrations. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Project construction activities would generate airborne odors associated with the operation of construction vehicles (i.e., diesel exhaust). The emissions would be isolated to the immediate vicinity of the construction site and limited to a finite period of time that would be relatively short in duration as construction activities move along the fiber-optic alignment. Maintenance of the proposed project would involve limited activities that would be temporary in duration and location; therefore, it would not create significant objectionable odors. Operations at the local aggregation site at the Colorado Substation would include periodic testing of the backup generator, which would also create temporary diesel exhaust, but would be consistent with emissions already present, such as exhaust from Highway 101, next to Colorado Substation, and back-up generators already present at Colorado Substation. As such, impacts related to creation of odors during construction, operation, and maintenance of the proposed project would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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4 Biological Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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 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 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?	☐	☐	■	☐

a. Would the project 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 U.S. Fish and Wildlife Service?

According to the Draft Environment Impact Report prepared for the City's 2030 Comprehensive Plan, there are two special-status species of plants known to occur in Palo Alto. The known and potential locations of special-status plant species are primarily in open space preserves. Another 23 special-status species of plant may also occur in Palo Alto, though the occurrence has not been confirmed (City of Palo Alto 2016). It is reasonable to assume these plant species could occur in surrounding areas of Santa Clara County.

According to the Draft Environment Impact Report for the City's 2030 Comprehensive Plan, several special-status species of wildlife do or could occur in Palo Alto (City of Palo Alto 2016). These species include amphibians, birds, reptiles, fish, and mammals, and they are briefly described below.

- **Longfin smelt** are found in open water estuaries and lakes along the north Pacific coast of North America including San Francisco Bay. They can be found in seawater and freshwater habitats, where they prey on the opossum shrimp (*Neomysis mercdis*) as well as other copepods and small crustaceans.
- **Foothill yellow-legged frog** forages in semi-shaded shallow streams with a rocky substrate. Breeding habitat consists of low velocity streams with cobble-sized rocks where egg laying occurs between April and July, depending upon when stream velocities slow after winter and spring rains.
- **California red-legged frog** occurs in grassland, riparian woodland, oak woodland, and coniferous forest but requires quiet freshwater pools, slow-flowing streams, and freshwater marshes with heavily vegetated shores for breeding. These frogs typically stay near the shore hidden in vegetation rather than in open water.
- **California tiger salamander** require a mosaic of habitats consisting of seasonally filled pools located in or near grasslands or oak woodlands. Semi-permanent ponds, reservoirs, and portions of slow-moving, seasonal creeks may also be used. For most of the year, they live in the burrows of ground squirrels, gophers, and other rodents in open wooded or grassy areas.
- **Ridgway's rail** is a federal and California endangered species threatened by loss and fragmentation of habitat and predation by non-native red fox. It inhabits tidal marshes and sloughs, foraging on mudflats or in shallow water where vegetation cover is still present at high tide.
- **Black rail** is a small member of the family *Rallidae*, which includes gallinules and coots. This very secretive species is found in the tidal salt marshes of San Francisco Bay where it is seldom seen, but is instead identified by its distinctive call. Black rail also inhabit freshwater marshes and wet meadows with dense vegetation for nesting.
- **Western snowy plover** nests on salt flats and salt pond levees in areas with gravelly or friable soils. It also nests above the high tide level on coastal beaches and dunes, and estuaries.
- **California least tern** typically breeds on beaches. However, generally breeding habitat consists of flat, sparsely vegetated substrates including alkali flats or even paved surfaces.
- **American peregrine falcon** inhabits open wetland habitats near cliffs where it nests. It is increasingly known to occur in cities where it nests on tall structures, and forages on common urban-adapted bird species such as rock dove (*Columba livia*), mourning dove (*Zenaida macroura*), and European starling (*Sturnus vulgaris*).
- **Short-eared owl** forages in open grasslands and marshes and nests on the ground. Its roosts are found on the ground or on low perches in open areas.

- **Long-eared owl** frequents dense, riparian and live oak thickets near meadow edges, as well as nearby woodland and forest habitats. It may be found in oak woodland, oak savanna, mixed evergreen forest, redwood forest, and creek-riparian habitats.
- **Western burrowing owl** is a yearlong resident of open, dry grassland and desert habitats and also occurs in grass, herbaceous plant, open shrub stages of pinyon-juniper, and ponderosa pine habitats. It eats mostly insects, but also small mammals, reptiles, birds, and carrion. It uses ground squirrel burrows for cover and nesting.
- **Saltmarsh common yellowthroat** mostly breeds and winters in wet meadow, fresh emergent wetland, and saline emergent wetland habitats in areas around the south end of San Francisco Bay.
- **Loggerhead shrike** is a medium-sized songbird that breeds and forages in open areas with short vegetation, such as pastures and open woodlands.
- **Alameda song sparrow** is a subspecies of the song sparrow, endemic to the tidal salt marshes of Alameda and San Mateo counties.
- **San Francisco dusky-footed woodrat** occurs in the Palo Alto foothills and along riparian corridors, including San Francisquito Creek, Matadero Creek, Los Trancos Creek, Arastradero Creek and Deer Creek.
- **Ringtail** occurs across the arid west usually at elevations from sea level to 1400 meters. They are solitary, nocturnal and secretive, and are known to occur in rocky areas in chaparral, oak woodland, riparian woodland, and conifer forests, with a home range up to 336 acres.
- **San Francisco garter snake** currently appears to be limited to small areas within this historic range; primarily along the San Mateo County Coast and near the San Francisco International Airport. It is a highly aquatic species found in or near densely vegetated freshwater ponds with adjacent open hillsides where they can bask, feed, and find cover in rodent burrows.
- **Central California Coast steelhead** (steelhead) is an anadromous fish that is native to coastal streams from Baja California to Alaska and parts of Asia. It occurs only in aquatic habitats, including the ocean, San Francisco Bay, and certain tributary streams to the San Francisco Bay and Pacific Ocean.
- **Western pond turtle** occurs in ponds, small lakes, marshes, streams and irrigation ditches with abundant vegetation. It is also found in marshes, streams, rivers, reservoirs and occasionally brackish water.
- **Pallid bat** is an insectivorous bat that catches its prey on the ground. It ranges from western Canada to central Mexico, which hibernates in rock crevices and roosts in caves, mines, hollow trees, and manmade structures close to water. The pallid bat forages in open habitats such as grasslands, shrub lands, woodlands and forests.
- **Saltmarsh wandering shrew** inhabits the salt marshes of the southern arm of the San Francisco Bay where it is found in medium height marsh, sheltering under driftwood and similar material in pickleweed habitat.
- **American badger** is found in western and central United States, northern Mexico and south-central Canada. It inhabits open grasslands where it preys on small mammals. A fossorial animal, the badger constructs a den, also known as a sett, in well-drained soil.

Project construction is proposed mostly within developed urban areas and within existing public roadway and utility rights-of-way and easements. Generally, these urbanized and developed areas do not provide habitat supportive of special status species. The special-status plant species with potential to occur in Palo Alto and the project area are associated with natural features, such as vernal pools and alkaline soils. The potential plant species in Palo Alto and the project area are not associated with fill material that underlies most urban development and roadways. Likewise,

special-status wildlife species would not occur in urbanized areas where most of the proposed project would be located.

Streams and wetlands in Palo Alto support special-status species, especially amphibians, reptiles, fish, and plants. However, as described in Section 8, *Description of Project*, the proposed project is designed to avoid direct impacts to surface waters by utilizing existing infrastructure, such as bridges or poles on either side of a creek to span the waterway. Horizontal directional drilling would be used where existing infrastructure is not feasible for the stream or wetland crossing, avoiding impacts to waterbodies. The proposed project would not occur within the surface waters of the San Francisco Bay. Accordingly, the proposed project would not impact special-status species that occur in wetlands and waterways in Palo Alto.

The proposed project would also involve installing fiber-optic cable west of the urbanized area of Palo Alto, in the Santa Cruz Mountains and Santa Clara County west of Interstate 280. This area is not urbanized and could support special-status wildlife and plant species. In this area, the cable would be located within existing or previously permitted underground conduit or attached to existing poles. Accordingly, even within less urbanized areas of Palo Alto and Santa Clara County, project construction would be unlikely to result in the direct or indirect loss of special-status plant and wildlife species. However, the project could impact individual plants and wildlife that are special-status species through temporary ground disturbance needed for construction, such as staging for attaching the fiber-optic cable to existing poles. If special-status plant species are near poles they could be crushed or uprooted by trucks or other heavy equipment. This would be a potentially significant impact and implementation of Mitigation Measure BIO-1 is required.

Although project construction would occur in mostly developed areas of Palo Alto, developed (and undeveloped) areas include trees, building awnings, and even birdhouses in residential lawns that could support migratory nesting birds. Nesting migratory birds and all parts of their nest, including their eggs, are protected under the Migratory Bird Treaty Act. While the project would avoid tree removal, the project would require limited tree trimming where needed and require construction equipment to operate near trees that could contain protected nests. These activities could result in the adult birds abandoning the nests, resulting in loss of the eggs or young birds. Likewise, special-status bats could also roost in trees and be impacted by project activities near trees. Impacts would be potentially significant, and implementation of mitigation measures BIO-2 and BIO-3 are required.

Operation of the project would involve inspecting the fiber-optic network using existing roads and a truck. The inspection activities would not impact special-status species because they would occur on roadways and on existing poles. Likewise, testing of back-up generators at the local aggregation sites would occur at the existing Colorado Substation and at Equinix or a similar commercial building. These areas do not provide habitat for special-status species. Project operation would have no impact on special-status species.

Mitigation Measures

> **BIO-1:** Prior to initiating construction activities west of Interstate 280 that involve ground disturbance off existing roadway surfaces, sidewalks, maintained lawns and landscaping, or existing utility pads, a qualified biologist or botanist shall conduct a field survey of the proposed disturbance area to confirm the absence of special-status plant species. The survey shall cover the entire area of ground disturbance. If special-status plant species are detected during the survey, the biologist or botanist shall establish a buffer around the plant or plants in which no construction or ground disturbance shall occur. The buffer size or distance shall be at the discretion of the biologist or botanist based primarily on the extent

of the plant and its root system. Prior construction or issuance of construction permits (whichever occurs first) in the applicable areas west of Interstate 280, the biologist or botanist shall submit a report indicating the results of the survey and designated buffer zones to the satisfaction of the City of Palo Alto.

BIO-2: Prior to the issuance of tree removal, tree trimming, or other construction and activities or the issuance of project permits (whichever comes first), the project applicant shall schedule all construction activities to avoid the nesting season. The nesting season for most birds, including most raptors in the San Francisco Bay area, extends from February 1st through August 31st (inclusive). Construction activities include site disturbance such as, but not limited to, tree trimming or removal, trenching, boring, and drilling.

If construction activities cannot be scheduled between September 1st and January 31st (inclusive), pre-construction surveys for nesting birds shall be completed by a qualified ornithologist or biologist to ensure that no active nests shall be disturbed during construction activities. This survey shall be completed no more than 14 days prior to the initiation of construction activities during the early part of the breeding season (February 1st through April 30th inclusive) and no more than 30 days prior to the initiation of these activities during the late part of the breeding season (May 1st through August 31st inclusive). During this survey, the ornithologist/ biologist shall inspect all trees and other possible nesting habitats on-site and within 250 feet of the site for nests.

If an active nest is found within 250 feet of the project area to be disturbed by construction, the ornithologist/biologist, in consultation with the California Department of Fish and Wildlife, shall determine the extent of a construction free buffer zone to be established around the nest, (typically 250 feet for raptors and 100 feet for other birds), to ensure that raptor or migratory bird nests shall not be disturbed during project construction.

Prior to tree removal, or issuance of construction permits (whichever occurs first), the ornithologist/biologist shall submit a report indicating the results of the survey and designated buffer zones to the satisfaction of the City of Palo Alto.

BIO-3: Prior to the trimming or removal of trees, a bat survey shall be performed by a qualified biologist between March 1 and July 31. If bat roosts are identified, the bats shall be safely flushed from the sites where roosting habitat is planned to be removed prior to roosting season (typically May to August) and prior to the onset of construction activities. If maternity roosts are identified during the maternity roosting season (typically May to September) they shall remain undisturbed until a qualified biologist has determined the young bats are no longer roosting. If roosting is found to occur onsite, replacement roost habitat (e.g., bat boxes) shall be provided to offset roosting sites removed. If no bat roosts are detected, then no further action is required if the trees are removed prior to the next breeding season. If removal is delayed, an additional survey shall be conducted 30 days prior to removal to ensure that a new colony has not established itself.

If impacts to roosts cannot be avoided or activities may cause roost abandonment, the bats shall be excluded from the roosting site before the roost is removed/impacted. Exclusionary materials, including, but not limited to, expandable foam and steel wool, shall be applied selectively and as needed until bats have relocated. Bats shall be excluded from the directly affected work areas prior to April 15 of the construction year, and exclusionary devices shall be removed between August 31 and April 15. Exclusion shall occur at dusk to allow bats to exit during the darker hours.

Significance After Mitigation

With implementation of mitigation measures BIO-1, BIO-2, and BIO-3, impacts would be less than significant. These mitigation measures require the project applicant and its construction contractors to identify special-status species with potential to occur in construction areas and avoid them accordingly.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

The "riparian corridor" or "riparian zone" is the interface between upland areas and a river or creek. It is often dominated by plant and tree species that depend on the river or creek for water, and the habitat may be distinctly different than the adjoining upland areas. However, that is not always the case. In Palo Alto, several creeks also support woodland or grassland vegetation that does not differ markedly from the surrounding upland habitat (City of Palo Alto 2016; 2017). The major riparian corridors in Palo Alto are described below:

- San Francisquito Creek forms the northern border of the city adjacent to Menlo Park. The main tributaries to San Francisquito Creek are Corte Madera Creek (in Portola Valley and Stanford), Bear Creek (in Woodside and Menlo Park), and Los Trancos Creek (in Portola Valley and Stanford). Upstream of Highway 101 the creek and its tributaries are natural channels; downstream of Highway 101 to San Francisco Bay the creek channel is engineered and is lined with concrete.
- The Matadero Creek watershed includes Deer Creek, Arastradero Creek, Santa Rita Creek, the Stanford Channel, and Mayfield Slough. Except for the Stanford Channel located near Hanover Street and Page Mill Road, the watershed consists of natural channels upstream of El Camino Real. Downstream of El Camino Real to San Francisco Bay all of the creeks are paved engineered channels adjacent to residences.
- The Adobe Creek watershed drains south Palo Alto, Los Altos Hills, and Los Altos. Barron Creek is part of this watershed; it flows through south Palo Alto to meet Adobe Creek just before it enters the bay. Both Adobe Creek and Barron Creek are mostly natural channels upstream of El Camino Real and are in engineered, paved channels downstream of El Camino Real.

Other surface water bodies supporting riparian habitat in Palo Alto include ponds, lakes, and the San Francisco Bay. Ponds and lakes include Lagunita Reservoir on Stanford lands, Boronda Lake in Foothills Park, and Arastradero Lake and John Sobey Pond in the Pearson-Arastradero Preserve. A freshwater marsh with open water habitat also occurs in the Emily Renzel Marsh portion of the Baylands Preserve (City of Palo Alto 2016; 2017).

In addition to riparian habitat, Palo Alto also contains other sensitive natural communities. These communities include serpentine bunchgrass, arroyo willow riparian, wetland plant communities, and chamise chaparral (City of Palo Alto 2016). Serpentine bunchgrass occurs in small patches in the Pearson Arastradero Preserve. Arroyo willow riparian occurs along Los Trancos Creek, Arastradero Creek, Matadero Creek, and San Francisquito Creek. Wetland occurs in Pearson-Arastradero Preserve, at Boronda Lake in Foothills Park, and in the Baylands. Chamise Chaparral is usually found on dry south-facing slopes, generally in poor soil areas in the foothills of Palo Alto. Redwood forest, another sensitive natural community occurs in the wooded canyons of the Santa Cruz Mountains in

the western most areas of Palo Alto, away from the developed or urbanized areas (City of Palo Alto 2016).

The project would be constructed primarily within an urban setting and avoid greenfield development and natural areas where riparian zones and other sensitive natural communities occur in Palo Alto. However, the proposed project would also involve installing some fiber-optic cable west of the urbanized area of Palo Alto, in the Santa Cruz Mountains west of Interstate 280. This area supports riparian zones and other sensitive natural communities. The fiber-optic cable would be within existing or previously permitted underground conduit or attached to existing poles, including in areas west of Interstate 280 and short segments in Santa Clara County. Stream crossings would use existing structures or would use horizontal directional drilling to avoid riparian and stream habitat to the greatest extent feasible. The use of the horizontal directional drilling construction method is much less intrusive than the traditional open-cut trenching method, especially through sensitive communities.

While horizontal directional drilling is less intrusive on riparian zones and sensitive natural communities, drilling would include the potential for accidental release of bentonite mud lubrication. The release of bentonite mud is a concern when it occurs in or near streams and wetlands. The bentonite is non-toxic, but could potentially smother riparian and aquatic plants, benthic invertebrates, fish, and fish eggs if an excessive amount of the lubricant is discharged into riparian and aquatic habitats. This would have a potentially significant impact on riparian zones and sensitive natural communities that occur in association with water and wetlands. Implementation of Mitigation Measure BIO-4 is required. Implementation of Mitigation Measure BIO-4 would also prevent equipment from operating proximate to wildlife using riparian zones.

Operation of the project would not require work within riparian zones or other natural sensitive communities. Operations would involve activities on existing roads and structures. Operation of the project would have no impact on riparian zones or other natural sensitive communities.

Mitigation Measures

BIO-4: If a stream crossing cannot be avoided through colocation with existing infrastructure and requires the use of horizontal directional drilling, the following measures shall be incorporated into drilling procedures to avoid or reduce impacts to receiving waters from bentonite release. In addition, the project applicant shall obtain the necessary agency approvals for horizontal directional drilling activity, which may include additional controls/conditions.

1. Horizontal directional drilling staging areas and mud pits shall be located no closer than 20 feet to riparian zones, wetlands, creeks, and other surface waters.
2. A horizontal directional drilling foreman shall be present at all times during drilling operations, regardless of where the drilling occurs.
3. Geotechnical borings in the horizontal directional drilling affected areas shall be performed as part of the construction scope prior to the start of drilling operations. Geotechnical bore data shall provide information defining proper pipe depth as dictated by the soil strata characterization.
4. All horizontal directional drilling operations for the proposed project shall be guided by a tracking system consistent with best industry practices. The alignment shall be surveyed on foot by a team of personnel. Temporary surveyor stakes shall be placed

strategically along the alignment to anchor the tracker wires. The alignment shall be accessed throughout the drilling operation to monitor for bentonite mud loss.

5. The drill rig operator shall monitor the equipment for loss of drilling lubricant pressure and volume. Members of the drill crew shall also monitor the alignment of the drill and visually inspect for indications of mud loss.
6. The drill rig operator shall monitor the bore hole to keep it free from obstructions that would inhibit the return of drilling lubricant to the rig.
7. Unless drilling operations are within 1 hour of completion, drilling shall be limited to the operation times of dawn to 30 minutes prior to dusk.

Significance After Mitigation

Implementation of Mitigation Measure BIO-4 would locate bentonite mud pits away from riparian zones and other sensitive natural communities associated with wetlands and other surface waters. The mitigation measure would also prevent release or loss of bentonite mud. Accordingly, with implementation of Mitigation Measure BIO-4, impacts to riparian zones and other sensitive natural communities would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project 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?

The project would be constructed primarily within an urban setting and avoid greenfield development and natural areas where streams and wetlands occur in Palo Alto and Santa Clara County. For example, local aggregation sites would occur at Equinix or similar commercial building and at the existing Colorado Substation. Underground vaults and cabinets would be located adjacent to existing development, which precludes the existence of wetlands and streams in these areas. However, because the fiber-optic cable would extend throughout Palo Alto, some stream crossings would be unavoidable. Stream crossings could also require crossing wetlands that occur adjacent to the stream.

Stream crossings would use existing structures (e.g., bridge, poles) or would use horizontal directional drilling to avoid direct impacts to streams and wetlands, such as working within the waterway or wetland. As described in Item b., above, the use of the horizontal directional drilling construction method is much less intrusive than the traditional open-cut trenching method, but it includes the potential for loss of bentonite mud lubrication. Accidental release of bentonite mud into streams and wetlands could constitute filling a wetland. Release of bentonite mud could also interrupt the hydrology of a wetland or stream, such as creating a dam to the inflowing hydrology of the wetland. This would be a potentially significant impact, and implementation of Mitigation Measure BIO-4, above, is required.

Operation of the project would involve testing generators at an existing building and substation and inspecting the fiber-optic network. Inspections would be from trucks on existing roads. Operation of the project have no impact on wetlands or streams.

Mitigation Measures

Implementation of Mitigation Measure BIO-4 is required.

Significance After Mitigation

Impacts to wetlands and streams would be less than significant with implementation of Mitigation Measure BIO-4.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

d. Would the project 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?

The project would not substantially interfere with the movement of native resident or migratory fish or other wildlife species because it would be primarily constructed within existing, disturbed public right of way and utility easements. Wildlife movement corridors in Palo Alto generally coincide with the streams that connect the San Francisco Bay to the Santa Cruz Mountains. As described in Item b., above, the proposed project would use existing structures or horizontal directional drilling, avoiding disturbance with the riparian zones of streams, which serve as movement corridors. Project construction impacts would be less than significant.

Operation of the project would not involve activities within the streams and riparian zones that serve as wildlife movement corridors. Operation of the project would have no impact on migratory fish or wildlife species or with established native resident or migratory wildlife corridors.

LESS-THAN-SIGNIFICANT IMPACT

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

In Palo Alto protected trees are specific locally native tree species, trees of specific size and other tree categories identified in the City's Tree Protection Ordinance that are protected (Title 8, Palo Alto Municipal Code). Protected trees must be maintained in accordance with regulations and may require permits for pruning, removal or any activities that might impact them. Protected trees can fall under three broad categories; public trees, protected private trees, and designated trees.

The proposed project is designed to avoid trees and would occur largely within existing developed right of way, easements, and other disturbance, such as the existing Colorado Substation. However, the proposed project could result in limited tree trimming in circumstances throughout Palo Alto, including during project operations and maintenance. Because the project would occur largely in public rights-of-way and all trees in public right-of-way are protected trees, the project could impact protected trees.

Tree trimming would be required to be conducted in accordance with the City's Tree Protection Ordinance, which is Title 8 of the Palo Alto Municipal Code. Replacement of trees removed as a result of the project would be required, in accordance with all applicable laws, policies, programs, or guidelines, including:

- Palo Alto Municipal Code Title 8 (i.e., Tree Protection Ordinance);
- Palo Alto 2030 Comprehensive Plan Policy N-2.1, Program N2.1.1, Policy N-2.2, Policy N-2.9, Policy N.2-10, and Program N2.10.1; and
- Urban Forest Master Plan (City of Palo Alto 2019)

The project would also involve trenching, which could sever roots of trees and impact the health of the trees. However, pursuant to Section 8.04.020 of the Palo Alto Municipal Code, excavation within

10 feet of protected trees is prohibited without a City tree permit or other City approval. The tree permit is issued to authorize work only when the following conditions are met, pursuant to Section 8.04.040 of the Palo Alto Municipal Code:

1. Will not create, continue, or aggravate any hazardous condition, or public nuisance.
2. Will not prevent or interfere with the growth, location or planting of any approved public tree.
3. Is consistent with the planting plan being followed by the city.

Because these are requirements of the Palo Alto Municipal Code, compliance is mandatory for the proposed project. Accordingly, when or where project trenching is required proximate to trees, including their primary root zone, the project applicant must obtain a tree permit and demonstrate that trenching would not interfere with the tree growth.

In the event that the project requires complete removal of a protected tree, which would be only under rare circumstances, replacement of tree would be required pursuant to Section 8.10.055 of the Palo Alto Municipal Code. Section 8.10.055 states that mitigation for the removed protected tree, replacement tree ratio, in lieu fees, or a combination thereof shall be determined by the City's Urban Forester, based on factors including but not limited to the species, size, location, and specific reason for removal of the protected tree. Accordingly, the project applicant would replace removed protected trees in accordance with the City's tree ordinance, as required by the Palo Alto Municipal Code.

Project impacts related to conflicts with a tree protection policy or tree protection ordinance would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Habitat Conservation Plans and/or Natural Community Conservation Plans that overlap or are proximate to the City of Palo Alto include:

- Stanford University Habitat Conservation Plan (Stanford University 2013)
- Santa Clara Valley Habitat Plan (County of Santa Clara, et.al. 2012)

The Stanford University Habitat Conservation Plan identifies four management zones according to habitat value for the Covered Species. Zones 1-2 are important to the species covered in the plan and management of these lands is inherent to the success of the Habitat Conservation Plan. Zone 3 land does not support the covered species but may provide some indirect benefit. Zone 4 consists of developed land that has no value to the covered species (Stanford University 2013).

The proposed project would include installation of the fiber-optic network within the plan area of the Stanford University Habitat Conservation Plan. Specifically, conduit, cabinets, and underground vaults would be constructed with the plan area. These project components would be located within existing roadway rights-of-way within the plan area of the Stanford University Habitat Conservation Plan. These project components would also be entirely with Zone 4 of the Habitat Conservation Plan, which has no value to species covered by the Habitat Conservation Plan (see Page 4-2 of the Habitat Conservation Plan). Accordingly, the proposed project would not conflict with the Stanford University Habitat Conservation Plan.

Palo Alto is not in the plan area of the Santa Clara Valley Habitat Plan; however, some of the Baylands area of Palo Alto have been identified in the Santa Clara Valley Habitat Plan as suitable mitigation lands for impacts to the western burrowing owl caused by development in the plan area. The proposed project would include installing fiber-optic conduit and cable within the Baylands area of Palo Alto, but installation would be within existing roadway rights-of-way, which are paved and not suitable for burrowing owls. Accordingly, the proposed project would not conflict with the Santa Clara Valley Habitat Plan. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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5 Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	☐	☐	■	☐
b. Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	■	☐	☐
c. Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	■	☐

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

There are numerous historical resources within Palo Alto. For example, there are more than a dozen properties in Palo Alto that appear on the National Register of Historic Places (U.S. National Park Service 2023). The proposed project would involve locating the FTTP near historical resources in Palo Alto. The proposed activities would primarily consist of underground utility infrastructure that would have no impact on the context of historical resources in Palo Alto because the underground infrastructure would have no above-ground profile. Above-ground features would consist of pole attachments, utility cabinets, and up to approximately two local aggregation sites. One local aggregation site would be installed within the fence of an existing electrical substation and the other would be inside of a building. Accordingly, there would be no impact on historical resources resulting from the installation of these local aggregation sites in developed, urbanized areas of Palo Alto. Fiber-optic cable would be attached to existing poles and, while some amount of pole replacement would be necessary, no poles would be installed in entirely new locations as part of the project. If required, utility cabinets would be less than 3 feet high and would be sited in locations where existing utility cabinets already exist and are part of the existing viewshed. As a result, cabinets that are part of the project would not impact the visual or historic context that historical resources occur within. The proposed project would have less than significant impacts on historical resources.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Under the direction of the City of Palo Alto and Rincon Consultants, Duke Cultural Resources Management (Duke CRM) prepared a cultural resources records search for the proposed project. The methodology and results of the cultural resources records search, which covered the project area plus a buffer of 0.5 mile, is provided in a letter report dated January 26, 2024 (see Appendix C).

As described in Appendix C, Duke CRM submitted a request for a cultural records search to the Northwest Information Center on October 23, 2023. The records search identified 63 cultural resources, including 11 archaeological resources and 2 multicomponent resources, among various other historic-era resources (see checklist question *a.*, above). These archaeological and multicomponent resources are summarized in Table 5.

Table 5 Archaeological Resources Known to Occur in Project Area

Resource Number	Resource Type	Description	NRHP* Eligibility
P-43-000580	Prehistoric	Burial midden with shell, lithic, faunal	Unknown
P-43-000591	Prehistoric	Midden with shell, lithic, and human remains	Unknown
P-43-000593	Prehistoric	Human burial	Unknown
P-43-000611	Prehistoric	Midden with historic debris and lithics	Unknown
P-43-000617	Prehistoric	Fire affected rock	Unknown
P-43-000619	Prehistoric	Shell midden	Unknown
P-43-000627	Prehistoric	Shell midden	Unknown
P-43-000634	Prehistoric	Primary and secondary flakes	Unknown
P-43-000670	Prehistoric	Fire affected rock, shell, lithic	Unknown
P-43-002625	Prehistoric	Shell fragments	Unknown
P-43-002626	Prehistoric	Shell scatter	Unknown
P-41-002402/ P-43-003137	Multicomponent	Prehistoric deposit with white ceramic sherds and glass	Recommend eligible under Criterion D
P-43-000595/ P-43-000669	Multicomponent	Alma-Adobe site, shell midden, lithics sherds and faunal bone	Recommend eligible under Criterion D

*NRHP = National Register of Historic Places
Source: Duke CRM 2024 (see Appendix C)

Project construction would require ground disturbance and excavation, such as fiber optic trenching and installation of belowground vaults. Most construction activities would occur in roadway rights-of-way where existing disturbance or development already occurs, such as road substrate, asphalt pavement, and concrete sidewalks. Additionally, according to Appendix C, most of the project area has low potential for archaeological resources. This would reduce the potential for project construction activities to disturb or damage archaeological resources. However, according to Appendix C, construction of the proposed project would have potential to adversely impact several archaeological resources known to occur in the project area, including resource no. P-43-000595/P-43-000669, resource no. P-43-000591, and resource no. P-43-000593 (see Table 5 for a description of these resources). Disturbance to or destruction of these archaeological resources would be a potentially significant impact. Implementation of Mitigation Measure CUL-1 is required.

Mitigation Measures

CUL-1: An archaeological monitor having either a B.S. or B.A. in archaeology or related field with at least 1 year of field experience shall be present during ground disturbing within the work locations listed below. The monitor shall work under the direct supervision of a qualified archaeologist having either a M.S. or MB.A. in archaeology or related field with at least 10 years of experience and demonstrated competence in archaeological research, fieldwork, reporting, and curation. The qualified archaeologist shall be on-site at the pre-construction meeting to discuss monitoring protocols. The archaeological monitor shall be present full-time during ground disturbance within site locations listed below, including but not limited to grading, trenching, utilities, and off-site easements. If, after excavation begins, the qualified archaeologist determines that the sediments is not likely to produce archaeological resources, monitoring efforts shall be decreased. The monitor shall be empowered to temporarily halt or redirect grading efforts if paleontological resources are discovered. In the event of an archaeological discovery the monitor shall flag the area and notify the construction crew immediately. No further disturbance in the flagged area shall occur until the qualified archaeologist has cleared the area and announced that construction can resume. In consultation with the qualified archaeologist, the monitor shall quickly assess the nature and significance of the find. If the specimen is not significant it shall be quickly mapped, documented, removed, and the area cleared. If the discovery is potentially significant the qualified archaeologist shall notify the construction crew and City of Palo Alto immediately. In consultation with the City the qualified archaeologist shall develop a plan of mitigation which will likely include full-time monitoring, salvage excavation, scientific removal of the find, removal of sediment from around the specimen (in the laboratory), research to identify and categorize the find, curation of the find in a local qualified repository, and preparation of a report summarizing the find. A Native American representative registered with the Native American Heritage Commission for the City of Palo Alto and that is traditionally and culturally affiliated with the project area shall be invited to work alongside the qualified archaeologist and have the same powers as the qualified archaeologist.

The above mitigation activities shall be applied during construction in the following areas:

- Within the rights-of-ways and adjacent to the rights-of-ways of West Charleston Avenue and Park Boulevard between West Charleston Avenue and Edlee Avenue.
- The area between Oregon Expressway south to Moreno Avenue between Ross Road and Middlefield Road.
- Within the right-of-way and adjacent to the right-of-way of Bryant Street within one block north and south of its intersection with University Avenue.
- Within the right-of-way and adjacent to the right-of-way of University Avenue within one block east and west of its intersection with Bryant Street.

If cultural resources are uncovered during construction anywhere in the project area, work shall be halted until the qualified archaeologist can assess the significance of the find and then apply the actions described in this mitigation measure, as applicable.

CUL-2: Prior to the initiation of any site preparation and/or start of construction, the City of Palo Alto Public Works Utilities Division and/or its construction contractor(s) shall ensure that all project construction workers receive training overseen by a qualified archaeologist who is experienced in teaching nonspecialists, to ensure that forepersons and field supervisors can recognize archaeological resources in the event that any are discovered

during construction. The City of Palo Alto Public Works Utilities Division and/or its construction contractor(s) shall keep a log or register to document that all construction workers have received the training. If potential archaeological resources are observed or reported by construction workers, the actions described in Mitigation Measure CUL-1 shall be applied to the resource or resources, as applicable.

Significance After Mitigation

With implementation of Mitigation Measure CUL-1 and Mitigation Measure CUL-2, impacts would be less than significant. This mitigation measure requires the project construction workers to identify potential archaeologist resources that could be uncovered, and for the project applicant and its construction contractors to avoid known archaeological resources and previously unknown resources within the planned construction areas.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

No human remains or cemeteries are known to exist within the project area, and the majority of the project area consists of areas where construction activities have already occurred, such as existing roadways and electrical substations. This would reduce the potential for inadvertent discovery of human remains during construction of the project, but the discovery of human remains is always a possibility during ground disturbing activities. If human remains are found during project construction, the State of California Health and Safety Code Section 7050.5 states that no further disturbance may occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner would be notified immediately. If the human remains are determined to be prehistoric, the coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant. The most likely descendant will complete the inspection of the site within 48 hours of being granted access to the site. With adherence to existing regulations, impacts to human remains would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

6 Energy

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Result in a 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?	☐	☐	☐	■

a. Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction of the proposed project would result in short-term consumption of energy from the use of construction equipment and processes. Energy use during construction would be primarily from fuel consumption to operate heavy equipment, light-duty vehicles, and machinery. Energy use during construction would be temporary in nature, and construction equipment used would be typical, such as standard backhoes and dump trucks. It is reasonable to assume the project applicant and its contractors would avoid wasteful, inefficient, and unnecessary fuel consumption during construction to reduce construction costs. Construction of the project would comply with the California Air Resources Board's In-Use Off-Road Diesel-Fueled Fleets Regulation, which imposes limits on idling and restricts the use of older vehicles, which are typically less fuel efficient compared with newer vehicles and equipment. The CALGreen Building Standards Code, which are mandatory, includes specific requirements related to recycling, construction materials, and energy efficiency standards that would apply to construction of the proposed project to minimize wasteful, inefficient, and unnecessary energy consumption.

During operation the proposed project would require little energy because fiber-optic uses light signals and does not rely on electricity. Equipment at the two local aggregation sites would require energy and would be connected to the existing power grid in Palo Alto. The addition of two small aggregation sites would represent a negligible increase in energy consumption and would not be excessive or wasteful. Operational activities would also require monthly testing of the back-up generator that would be installed at the local aggregation site at Colorado Substation. As described in *Description of the Project*, monthly testing of the generator would occur for up to one hour, which would require negligible amounts of diesel that are not excessive.

Other operational energy use would include the use of transportation fuel used for inspecting the fiber-optic system. California requires that all motorists use California Reformulated Gasoline, a cleaner formulation of gasoline that results in lower emissions of ozone, CO and other air pollutants when burned. If maintenance activities are required during operation, the activities would require

the same types of equipment as construction, though fewer pieces. The regulations discussed above for project construction pertaining to diesel would apply to diesel equipment used for project maintenance and repair activities. Accordingly, both construction and operation of the project would result in less than significant impacts related to wasteful, inefficient, or unnecessary consumption of energy resources.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The proposed project would require little energy because fiber-optic uses light signals and does not rely on electricity. Equipment at the two local aggregation sites would require energy and would be connected to the existing power grid in Palo Alto. The addition of these two sites to the power grid would not conflict with or obstruct a state or local plan for renewable energy or efficiency. The proposed project would have no impact.

NO IMPACT

7 Geology and Soils

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. 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?	☐	☐	■	☐
2. Strong seismic ground shaking?	☐	☐	■	☐
3. Seismic-related ground failure, including liquefaction?	☐	☐	■	☐
4. 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), creating substantial direct or indirect risks to life or property?	☐	☐	■	☐
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	■

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	■	☐	☐

a.1. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving 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?

No structures for human habitation are proposed as part of the project; therefore, the restrictions of the Alquist-Priolo Earthquake Fault Zoning Act do not apply. Nonetheless, approximately 4,000 feet of fiber-optic cable would be installed within area mapped as part of the San Andreas Fault Zone (California Department of Conservation 2021). This segment of the fiber-optic cable would be attached to existing utility poles. This segment is also at the western end of the proposed fiber-optic network, and if it were damaged due to fault rupture, the remainder of the fiber-optic system would remain operational. Therefore, there would be no substantial risk of loss, injury, or death because of the project occurring partially within a fault zone. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.2. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking?

The Bay Area, including Palo Alto, contains both active and potentially active faults. The San Andreas Fault occurs within the western most areas of Palo Alto. Other major active faults in the Bay Area include Hayward Fault and Calaveras Fault. Given these and other active faults in the region, Palo Alto could be subjected to at least one moderate to severe earthquake that would cause strong seismic ground shaking.

Project construction would require trenching that could collapse during a period of strong seismic ground shaking. However, at most, trenches would be approximately 14 inches wide and up to 48 inches deep, which would not accommodate construction personnel within the trench. If a construction trench were to collapse, only construction equipment and fiber-optic components, such as conduit would be buried. Excavations for underground vaults would be up to approximately 32 inches wide by 78 inches long by 48 inches deep. Construction personnel could be in these excavations, but given the small size of the excavation the collapsed material would be minimal and unlikely to bury or injure personnel.

No structures for human habitation are proposed as part of the project; therefore, in the event of strong seismic ground shaking there would be little risk of injury or death as a result of project. Segments of the fiber-optic cable would be installed on existing utility poles. The cable could fall to the ground during an earthquake, however fiber cables are non-energized so would not represent a new substantial risk of injury or death as existing energized overhead utility wires already occur on the power poles.

The proposed huts at aggregation sites would comply with building code requirements for seismic safety. One of the local aggregation sites would be inside an existing commercial building, likely Equinix Data Center (529 Bryant Street). If the commercial building were to collapse, the equipment at the local aggregation site could be damaged. Likewise, strong seismic ground shaking could sever fiber-optic conduit. This damage would represent a risk of loss to the proposed fiber-optic system. However, damage to the fiber-optic system would not likely create substantial hazards to people or the environment, such as fires, beyond the seismic hazards already present in Palo Alto.

Because the project does not include habitable structures and would not introduce new substantial risks of loss, injury, or death during periods of strong seismic ground shaking in Palo Alto, impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.3. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction?

According to the California Department of Conservation, areas of Palo Alto are within liquefaction zones. Generally, most of the liquefaction zones in Palo Alto are near the Bay and the Highway 101 corridor. However, liquefaction zones also occur elsewhere in Palo Alto, including west of Interstate 280 into the Santa Cruz Mountains (California Department of Conservation 2022).

Because liquefaction zones occur throughout Palo Alto and the project would extend throughout Palo Alto, components of the proposed project would be located within liquefaction zone. For example, the proposed local aggregation site at the Colorado Substation would be in liquefaction zone, as would number underground vaults, above-ground cabinets, and segments of conduit and fiber-optic cable. However, these components of the project would not include or facilitate human habitation. Therefore, if liquefaction from seismic shaking were to occur, the project would not present a substantial risk of injury or death.

Liquefaction could damage the project components, such as fracturing conduit or severing fiber-optic cable. Therefore, there would be a risk of loss of project components. However, these components would be repaired to restore functionality of the fiber-optic system. The risk of loss would not be substantial. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.4. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving landslides?

Landslides require slopes and hills in order for gravity to pull dislodged earth downward. The majority of the proposed project would be constructed in the urbanized and developed area of Palo Alto which is generally not located on or adjacent to steep slopes. There would be no potential for landslides in these areas, including at both of the local aggregation sites. Portions of projects west of the urbanized area of Palo Alto, generally west of Junipero Serra Freeway, would be subject to risk of loss from landslides, as the topography of Palo Alto becomes sloped in association with the Santa Cruz Mountains. Components of the project that would be located in this area include fiber-optic cable in existing or previously permitted underground conduit, fiber-optic cable attached to existing utility poles, underground vaults, and potentially above-ground cabinets. No project components, including these components, are designed for human habitation. Therefore, if landslides were to occur, project components could be damaged, but there would not be a substantial risk of injury or death.

Project construction in the sloped areas of Palo Alto where landslides are possible would not involve grading or substantial movement of earth. Construction would utilize existing poles and conduit, as well as include small excavations of several feet for vaults. Therefore, construction of the project would not create unstable slopes that could result in a landslide. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project result in substantial soil erosion or the loss of topsoil?

Most of the project would occur in existing roadways or paved areas and earth disturbance due to construction would be temporary. All earth disturbance areas would be completed to match the existing grade, including temporary pits used for bentonite mud lubrication for horizontal directional drilling. Asphalt, concrete, or landscaped surfaces disturbed during construction would be restored to a condition of equal or better quality than the original condition. These construction practices would reduce the potential for soil erosion and loss of topsoil.

Pursuant to Section 16.28.080 of the Palo Alto Municipal Code, excavations for communications conduits and cables are exempted from the City's grading permit requirements. However, other excavations required for the project, such as excavations for underground vaults, would be subject to the City's grading permit requirements. Pursuant to Section 16.28.065, all land-disturbing, soil storage, and grading and fill activities, and all temporary construction-related groundwater dewatering, shall be undertaken in a manner designed to minimize surface runoff and erosion and is compliance with Palo Alto Municipal Code Section 16.28.155. Accordingly, mandatory compliance with the Palo Alto Municipal Code would reduce the potential for erosion and loss of topsoil. Construction within unincorporated Santa Clara County would be negligible, consisting of short segments of fiber-optic cable within conduit located in existing right-of-way.

Because the project must adhere to the Palo Alto Municipal Code as it pertains to erosion control and because most of the project would occur within existing roadways and other paved areas, the potential for erosion and loss of topsoil would be minimal. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project 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?

Most of the project area is located outside geologic hazard zones related to soil stability, with the exception of liquefaction zone. Portions of the project that would occur in the identified geologic and soil hazard areas are described in Item a.(1) through a.(4), above. The project would be located primarily within existing roadways or other asphalt pavement, which would prevent causing on- or off-site landslides, lateral spreading, subsidence, liquefaction, or collapse. The proposed project would not extract groundwater and cause subsidence. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

Most of the project would occur in existing roadways or paved areas where expansive soils would have been remediated prior to the construction of the roads. However, there are clay soils in Palo Alto that have potential for expansion, and the mudflats near the San Francisco Bay are known to be

expansive. Segments of fiber-optic conduit and cable, underground vaults, and above-ground cabinets could be damaged from expansive soil. However, these components would be replaced to restore functionality of the fiber-optic system and would not be a substantial loss of property. The proposed project does not include habitable structures. There would no substantial risk of life. Impacts of the project would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No sewer systems, septic tanks, or alternative wastewater disposal systems are proposed as part of this project. Therefore, the proposed project would result in no impact related to support of septic and alternative wastewater disposal systems.

NO IMPACT

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Under the direction of the City of Palo Alto and Rincon Consultants, Duke Cultural Resources Management (Duke CRM) assessed the sensitivity of the project area for paleontological resources (see Appendix C). According to Duke CRM, research and a review of paleontological literature did not identify paleontological resources within the project area. However, the paleontological sensitivity at depths of more than 5 feet below the ground surface is unknown. Construction of the proposed project would require excavation, such as trenching for fiber cable and burial of underground vaults. Excavation would occur to maximum depths of 36 inches. Therefore, project construction would not extend into underlying soils where paleontological resource sensitivity is unknown, which begins at approximately 5 feet (60 inches) below ground surface. Accordingly, project construction activities would have low potential to directly or indirectly destroy a unique paleontological resources. However, due to the unknown sensitivity for fossils at depths of 5 or more feet below ground surface, it is possible isolated paleontological resources could occur at shallow depths and be impacts by project construction. If present, these resources could be indirectly or directly destroyed by project construction, and impacts would be potentially significant. Implementation of Mitigation Measure GEO-1 is required.

Mitigation Measures

GEO-1: If vertebrate fossils are discovered during construction, all work within 50 feet of the site shall stop immediately and the construction contract shall immediately notify the City of Palo Alto. Before work resumes, a qualified professional paleontologist shall assess the nature and importance of the find and recommend appropriate treatment. Treatment may include, but is not limited to, preparation and recovery of fossil materials so that they can be housed in an appropriate museum or university collection and may also include preparation of a report for publication describing the finds. The project applicant shall be responsible for implementing the recommendations of the qualified paleontologist. A report of all findings shall be submitted to the City.

Significance After Mitigation

With implementation of Mitigation Measure GEO-1, impacts would be less than significant. These mitigation measures require the project applicant and its construction contractors to avoid known archaeological resources and previously unknown resources within the planned construction areas.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

8 Greenhouse Gas Emissions

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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?	☐	☐	■	☐

Greenhouse Gases

Gases that trap heat in the atmosphere, greenhouse gases (GHGs), regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. In GHG emission inventories, the weight of each gas is multiplied by its global warming potential (GWP) and is measured in units of CO_2 equivalents (CO_2e). The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents, but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and SF6 emissions are commonly created by industries such as aluminum production and semiconductor manufacturing.

An expanding body of scientific research supports the theory that global climate change is currently causing changes in weather patterns, average sea level, ocean acidification, chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California are adversely affected by the global warming trend. Increased precipitation and sea level rise will increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

California Environmental Quality Act

The 2022 BAAQMD *CEQA Thresholds for Evaluating the Significance of Climate Impacts From Land Use Projects and Plans* guidance document contains two approaches for determining significance of GHGs (BAAQMD 2022). The two approaches are as follows:

1. Projects must include, at a minimum, the following project design elements:

Buildings

- The project will not include natural gas appliances or natural gas plumbing (in both residential and nonresidential development).
- The project will not result in any wasteful, inefficient, or unnecessary energy usage as determined by the analysis required under CEQA Section 21100(b)(3) and Section 15126.2(b) of the State CEQA Guidelines.

Transportation

- Achieve a reduction in project-generated vehicle miles traveled (VMT) below the regional average consistent with the current version of the California Climate Change Scoping Plan (currently 15 percent) or meet a locally adopted Senate Bill 743 VMT target, reflecting the recommendations provided in the Governor's Office of Planning and Research's Technical Advisory on Evaluating Transportation Impacts in CEQA:
  - Residential projects: 15 percent below the existing VMT per capita
  - Office projects: 15 percent below the existing VMT per employee
  - Retail projects: no net increase in existing VMT
- Achieve compliance with off-street electric vehicle requirements in the most recently adopted version of CALGreen Tier

2. Projects must be consistent with a local GHG reduction strategy that meets the criteria under State CEQA Guidelines Section 15183.5(b).

The City of Palo Alto adopted its Sustainability and Climate Action Plan (S/CAP) in June 2023. The S/CAP sets forth the strategies needed for the City to meet its sustainability goals, including the goal of reducing GHG emissions 80 percent below 1990 levels by 2030 and the carbon neutral by 2030 goal. The adopted S/CAP meets the criteria under State CEQA Guidelines Section 15183.5(b). However, BAAQMD's CEQA Guideline's threshold Criterion 1 is used in this Initial Study.

Impact Assessment

a. Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?

The proposed project does not include construction of new buildings other than the proposed local aggregation site at the existing Colorado Substation, which would be inside a hut that is delivered to the site. The hut would not include natural gas connections. No other components of the project would require or use natural gas. The project would not result in the wasteful, inefficient, or unnecessary use of energy, as discussed in Section 6, *Energy*. Monthly testing of the back-up generator at the local aggregation site at Colorado Substation would consume negligible amounts of diesel fuel or propane fuel, but no natural gas.

During construction, equipment and the construction workers would travel throughout Palo Alto, generating temporary VMT. Following completion of construction, operation of the project would require minimal vehicle trips, such as travel to each local aggregation site monthly to test a back-up generator and inspecting the fiber-optic system annually. These activities would not generate substantial new VMT in Palo Alto or the greater Bay Area. Accordingly, the project would not generate GHG emissions that have a significant impact on the environment. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

The proposed project would consist of a fiber-optic system that relies on light signals instead of electricity. Therefore, the proposed project would not generate substantial GHG emissions that conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. Routine monthly testing of the proposed back-up generator at Colorado Substation and routine inspections and maintenance of the fiber-optic system would generate GHG emissions that are negligible because testing would be less than 1 hour per month and inspections would require one or two trucks. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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9 Hazards and Hazardous Materials

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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 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 0.25 mile of an existing or proposed school?	☐	■	☐	☐
d. Be located on a site that is included on a list of hazardous material 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 in 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?	☐	☐	■	☐

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

This criterion pertains to the routine transport, use, and disposal of hazardous materials. Project construction would be temporary and not routine. Therefore, project construction would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Operation of the project would not require the routine transport, use, and disposal of substantial quantities of hazardous materials. There would not be a significant hazard to the public or environment resulting from operation project, because project operation would not require hazardous materials. Impacts would be less than significant.

The proposed project would include new underground vaults. During periods of rainfall, stormwater runoff could enter the vaults. The project applicant or its operational contractors may, at times, need to pump water out of the vaults to access fiber-optic equipment. Discharge of water removed from the vaults could result in release of hazardous materials to the environment because urban runoff often carries hazardous pollutants like gasoline and heavy metals. However, in order from water from vaults to be discharged, the project applicant must obtain a discharge permit from the San Francisco Bay Regional Water Quality Control Board. The discharge permit establishes water quality standards that must be achieved in discharged water and monitoring requirements to ensure that discharged water meets these standards. Accordingly, mandatory compliance with the States regulations, including the discharge permit, would prevent periodic discharges of water removed from vaults from resulting in a significant hazard to the public or environment. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Project construction would involve the use of hazardous materials including fuels and lubricants that would be brought on the site periodically in accordance with standard construction practices. Transportation of fuel and lubricants would conform to state and federal requirements for hazardous materials transportation, such as the U.S. Department of Transportation Hazardous Materials Transport Act (49 Code of Federal Regulations). The Hazardous Materials Transport Act stipulates the types of containers, labeling, and other restrictions to be used in the movement of hazardous materials on interstate highways. Mandatory compliance with regulations would reduce hazards to the public or environment during transport of construction materials. Because construction would disturb land, the project applicant must develop and implement either a SWPPP (disturbance more than 1 acre) or a water pollution control plan (disturbance less than 1 acre). Either the SWPPP or water pollution control plan must be prepared and implemented pursuant to state regulations. The SWPPP or water pollution control plan must contain measures that are implemented at the site to prevent soil erosion and soil loss. The plans must also contain measures to implement in the event of a leak or spill of construction fluids, such as equipment diesel fuel. Horizontal directional drilling would require bentonite mud lubricant. However, bentonite is non-toxic and not a hazardous material. Compliance with existing regulations would reduce the risk of potential release of hazardous materials used during construction.

Construction of the project would involve trenching and other excavation in developed areas where existing utilities are present, such as electricity and natural gas. If project construction equipment were to breach subsurface utilities, this could result in hazardous conditions, including fire, explosion and/or releases of hazardous materials. To avoid this possibility, state law (California Government Code 4216 and Cal-OSHA Title 8, Section 1541) requires that entities conducting excavation activities contact Underground Service Alert for subsurface utility clearance prior to initiating activities that disturb the subsurface. Proper utility clearance using standard procedures, and avoidance of areas identified as having subsurface utilities would minimize the potential for hazards associated with existing subsurface utilities.

The potential for operation of the project to result in a significant hazard to the public or the environment from reasonably foreseeable upset and accident conditions involving the release of hazardous materials would be minimal. The risk would be minimal because operation of the project would not involve or require the use of substantial quantities of hazardous materials. Because operation would not involve hazardous materials, there would not be a significant hazard to the public or environment resulting from the project. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

d. Would the project be located on a site that is included on a list of hazardous material 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?

According to the State Water Resources Control Board, there are more than 100 properties in Palo Alto that are included on a list of hazardous material sites compiled pursuant to Government Code Section 95962.5, commonly known as the Cortese List (State Water Resources Control Board 2023). Most of the listed properties occur in the urbanized area of Palo Alto, east of Interstate 280. There are listed properties west of Interstate 280, but all cases of hazardous contamination west of Interstate 280 have been closed (State Water Resources Control Board 2023.) Cases of contamination east of Interstate 280 are a mix of closed cases and open cases still undergoing remediation or monitoring. For example, the existing Colorado Substation appears on the Cortese List due to a leaking underground storage tank, but the substation is listed as a closed case because the leaking tank has since been remediated (State Water Resources Control Board 2023).

The proposed project would require ground disturbance either on or near properties that are included on the Cortese List, such as construction of the local aggregation site at the Colorado Substation, which is a closed site on the Cortese List. Other project components, such a proposed horizontal direction drilling would occur proximate to open sites on the Cortese List, such as drilling to install fiber-optic conduit near the intersection of Page Mill Road and Hanover Street. Construction that involves ground disturbance, such as trenching, micro-trenching, excavation, and horizontal directional drilling could expose construction workers to soils contaminated with hazardous materials when on or proximate to properties on the Cortese List. If contaminated soils become airborne as dust during construction, the hazardous material could drift to other receptors, such as schools, which exist within 0.25 mile of properties on the Cortese List. For example, project construction activities at the Colorado Substation would occur within 0.25 mile of the HeadsUp Montessori Preschool, north of the Substation. If soils contaminated with hazardous materials were to be inhaled or ingested by people, including construction workers, school children, or otherwise,

impacts would be potentially significant. Accordingly, implementation of Mitigation Measure HAZ-1 is required.

Due to the shallow nature of the proposed excavations for the project (most excavations will have a maximum depth of 48 inches to 60 inches depending on the installation technique), groundwater would likely not be encountered. However, if project-related excavations are conducted during rainy periods, surface water could enter excavations and encounter impacted soils, thereby enhancing migration of contaminants. As described above in Item b., above, either a SWPPP or water pollution control plan must be prepared and BMPs implemented to reduce impacts of construction activities on water quality. Preparation and implementation of the mandatory SWPPP or water pollution control plan would adequately reduce the potential for surface water runoff into excavations as well as transportation of excavated materials by surface water runoff. The SWPPP or water pollution control plan would be reviewed and approved by the City of Palo Alto prior to construction start. Preparation and implementation of the SWPPP or water pollution control plan would reduce potential for stormwater to mobilize contaminated soils and discharge them to surface waters.

Naturally occurring asbestos are known to occur in certain soil and rock types present in the Bay Area. Excavation within these soils could expose construction works to asbestos, which present a substantial hazard to health. However, according to the California Department of Conservation, soils and rocks that contain naturally occurring asbestos do not occur in Palo Alto (California Department of Conservation 2000). Therefore, the proposed project would not expose construction workers or other people and the environment to asbestos.

Mitigation Measures

HAZ-1: A Soil Management and Transportation Plan (SMTP) shall be created for the project to assist construction workers in identifying potentially hazardous materials and guide the handling, storage, and transportation of materials excavated during fiber-optic infrastructure installation. The SMTP will detail the necessary actions to comply with applicable hazardous materials regulations, some of which include Health and Safety Code Section 25100 et seq. and Section 25163 et seq., 22 CCR 66263.10 et seq., 13 CCR 1160 et seq., California Vehicle Code Sections 12804 et seq., and 31300 et seq. The SMTP shall establish criteria for reuse of excavated materials or off-site transport for disposal at appropriate State-approved facilities. The SMTP shall be reviewed and approved by the City prior to the issuance of construction permits. Examples of the types of measures that the plan could include are:

- Requirements for field screening to identify potentially contaminated soil;
- Dust mitigation measures for earth moving activities that may include wetting and other forms of material stabilization;
- Procedures for stockpiling and stockpile management to isolate apparently contaminated materials and minimize migration of those materials from stockpile areas;
- Procedures for stockpile sampling and analysis to characterize the soil for appropriate transport and disposal; and
- Identification of appropriate disposal facilities.

Significance After Mitigation

Implementation of Mitigation Measure HAZ-1 would require the project applicant to develop and implement a Soil Management and Transportation Plan that demonstrates how the mobilization of contaminated soils would be prevented. Accordingly, with implementation of Mitigation Measure

HAZ-1, impacts related to hazardous emissions near schools and from sites on the Cortese List would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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?

The proposed project is within two miles of the Palo Alto Airport and within the plan area of the Comprehensive Land Use Plan, Santa Clara County, Palo Alto Airport (Santa Clara County Airport Land Use Commission 2008). There are no private airstrips in Palo Alto.

The project would require a crane for installation of the fiber hut at the local aggregation site proposed at existing Colorado Substation. The Colorado Substation is approximately 5,000 feet south of the Palo Alto Airport. The Colorado Substation is outside of height hazard areas shown in the Comprehensive Land Use Plan for the airport. Once installed, the fiber-optic hut would be approximately 10 feet in height above ground surface, which is lower than existing electric infrastructure at the substation. Accordingly, the construction crane and fiber optic hut would not create a safety hazard associated with the Palo Alto Airport.

The proposed project would include extending fiber-optic cable within Embarcadero Road to the Palo Alto Airport. However, in this area the fiber-optic cable would be located belowground, which would prevent it from interfering with aircraft operations. An above-ground cabinet would be installed along Embarcadero Road, proximate to the airport. However, the cabinet would be next to an existing building that is substantially taller than the proposed cabinet. Therefore, project components proximate to and within the plan area of the Comprehensive Land Use Plan for the airport would not create safety hazards.

According to the most recent noise monitoring report prepared by the City for the Palo Alto Airport (2022), project construction along Embarcadero Road would occur within areas having airport noise up to 70 dBA CNEL. This noise level would be below the noise level of most project construction equipment. Construction would be temporary, and construction within the 65 to 70 dBA area surrounding the airport would be a short segment of fiber-optic cable. Following construction, the FTTP would not generate noise within proximity to the airport noise contours because only fiber-optic cable is proposed within the noise contours of the airport. The project would not require workers or other people to work or reside in the noise contours of the airport during operation. Accordingly, the project would not result in excessive noise for people residing or working in the project area.

The project would not result in a safety hazard or excessive noise for people residing or working in the project area. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction of the project would involve routing fiber-optic cable across State highways, including Highway 101 and Interstate 280. However, existing infrastructure (e.g., freeway underpasses, existing utility conduit, etc.) or horizontal directional drilling would be used to route fiber-optic able

across State highways. This would prevent the need for road or lane closures on State highways, which are major thoroughfares for evacuation.

Although project construction would not interfere with traffic movement on State highways, construction of the project would require trenching, excavation, and overhead work in City streets. As such, construction of the project would have the potential to disrupt road travel and impact local emergency response and evacuation. Road disruption work would be temporary and performed in phases. In other words, construction would not occur on every road at once, but instead would progress along one to several streets, leaving other City streets unaffected by construction activities during that time.

Because the project would occur in City streets, the project applicant must obtain a Street Work Permit and abide with conditions of the permit. Pursuant to permit requirements, a traffic control plan meeting City requirements must be prepared and submitted by the project applicant. The traffic control plan must comply with all applicable federal, state, and local regulations for work in roadways and will allow access for emergency vehicles or will provide temporary alternate routes. As such, the project would not encumber large areas and prohibit emergency vehicle flow. Similarly, work within Caltrans right-of-way, such as right-of-way for U.S. 101, would require the applicant to obtain and comply with an encroachment permit. Additionally, work within Caltrans right-of-way would not require road or lane closures because horizontal direction drilling would be employed in these areas. With the incorporation of an approved traffic control plan that is followed throughout the project, project construction would result in a less than significant impact on emergency response and evacuation.

Operation of the project would not require modifications to roads or changes in traffic movement. Minor repairs or maintenance activities, such as tree trimming, could require temporary lane closures. These closures would be infrequent and would also be subject to a Street Work Permit or Encroachment Permit from the City, depending on the type of maintenance activity to be performed. Accordingly, operation of the project would result in a less than significant impact on emergency response and evacuation.

LESS-THAN-SIGNIFICANT IMPACT

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

Most of the project construction work would occur within the developed portions of Palo Alto. Within the project area, including areas near wildlands generally west of Junipero Serra Boulevard, work would primarily occur in existing roadways or immediately adjacent to existing roadways that are regularly trafficked by the public and near emergency response services, such as fire protection. The project would also utilize existing aerial structures or existing and previously permitted underground conduit in these same land use areas. The project would not require construction crews to traverse wildlands off of existing roadways or utility disturbance. The fiber-optic infrastructure would not require welding for installation or high-voltage electricity to operate. As such, the project would not require the use of ignition sources, except for the operation of the construction vehicles, which would generally occur on roads and disturbed areas lacking wildland fuels.

In addition, as discussed in Item b., above, fire and explosion could occur if construction equipment were to breach subsurface utilities. However, proper utility clearance using standard procedures, and avoidance of areas identified as having subsurface utilities would minimize the potential for fire

hazards associated with subsurface utilities. Impacts related to a significant risk of loss, injury, or death involving wildland fires would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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10 Hydrology and Water Quality

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water 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 erosion or siltation on- or off-site;	☐	☐	■	☐
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	☐	☐	■	☐
(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	☐	■	☐	☐

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
sustainable groundwater management plan?				

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The proposed project would involve temporary ground disturbance of more than 1 acre of currently impervious and pervious portions of Palo Alto to install the FTTP. The proposed activities would include:

- Trenching to install fiber-optic cable;
- Horizontal directional drilling to install fiber-optic cable under roads, railroads, streams, creeks, rivers, or existing utilities;
- Excavation to install concrete and metal vaults;
- Placement of concrete to install fiber-optic cabinets at grade, if cabinets are required; and
- Installation of a concrete foundations for the permanent placement of a prefabricated fiber hut at the existing Colorado Substation.

While these construction activities are occurring, there would be potential for disturbed soils to become mobilized from precipitation and wind and discharge into surface waters. When eroded soil is discharged into surface water it is called siltation and has adverse impacts on water quality. Because construction would disturb land, the project applicant must develop and implement either a SWPPP or water pollution control plan, pursuant to state regulations, depending on the total land area that would be disturbed. The SWPPP or water pollution control plan must contain measures that are implemented at the site to prevent soil erosion and soil loss. The SWPPP or water pollution control plan must also contain measures to implement in the event of a leak or spill of construction fluids, such as equipment diesel fuel, which could also impact water quality.

Pursuant to Section 16.28.080 of the Palo Alto Municipal Code, excavations for communications conduits and cables are exempted from the City's grading permit requirements. However, other excavations required for the project, such as excavations for underground vaults would be subject to the City's grading permit requirements. Additionally, pursuant to Section 16.28.065 of the Palo Alto Municipal Code, all land-disturbing, land-filling, soil storage, and grading activities, and all temporary construction-related groundwater dewatering, shall be undertaken in a manner designed to minimize surface runoff and erosion. Accordingly, mandatory compliance with the SWPPP requirements and the Palo Alto Municipal Code would reduce the potential for erosion and siltation of surface waters.

Horizontal directional drilling or existing infrastructure (e.g., utility poles, bridges) would be used to span creeks and other surface waters, avoiding direct impacts to the waterway. Horizontal directional drilling would require bentonite mud lubricant. The bentonite is non-toxic, but could potentially smother riparian and aquatic plants, benthic invertebrates, fish, and fish eggs if an excessive amount of the lubricant is discharged into riparian and aquatic habitats. This would be a potential violation of water quality standards, because standards include providing fish and wildlife habitat in surface waters. This would be a potentially significant impact, and implementation of

Mitigation Measure BIO-4 is required. Mitigation Measure BIO-4 appears in Section 4, *Biological Resources*, of this IS-MND. Mitigation Measure BIO-4 requires horizontal drilling staging areas to be located away from riparian zones, creeks, wetlands, and other surface waters to prevent release of bentonite mud into surface waters, and continuous monitoring during drilling to ensure bentonite is not leaking into surface waters.

While the project would be constructed in existing road and utility rights-of-way and would have a low potential to introduce new substantial impervious surfaces, the project would include installation of an impervious concrete foundation at the Colorado Substation for the proposed fiber-optic hut. Installation of utility cabinets would also create areas of impervious surface, but these areas would generally be small with cabinets being up to 33 inches long by 17 inches wide, or smaller. Utility cabinets would be installed next to roadways and existing disturbance or development, such as other existing utility cabinets. Pervious surface, typically landscaping, occurs next to these areas. Runoff from cabinets would flow onto these pervious surfaces and infiltrate the ground surface, where soils act as natural filter to remove pollutants.

The proposed project would include new underground vaults. During periods of rainfall, stormwater runoff could enter the vaults. The project applicant or its operational contractors may, at times, need to pump water out of the vaults to access fiber-optic equipment. Discharge of water removed from the vaults could result in release of hazardous materials to surface waters because urban runoff often carries hazardous pollutants like gasoline and heavy metals. However, in order for water from vaults to be discharged to the surface, the project applicant must obtain a discharge permit from the San Francisco Bay Regional Water Quality Control Board. The discharge permit establishes water quality standards that must be achieved in discharged water and monitoring requirements to ensure that discharged water meets these standards. Accordingly, mandatory compliance with the States regulations, including the discharge permit, would prevent periodic discharges of water removed from vaults from resulting in a water quality or discharge violation. Impacts would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure BIO-4 is required.

Significance After Mitigation

Impacts to water quality would be less than significant with implementation of Mitigation Measure BIO-4.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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

Construction of the project would require water, such as water applied to exposed soils to control dust. Construction water would be sourced from the local municipal supply. The City's water supply consists almost entirely of Sierra Nevada snowmelt delivered through the Hetch Hetchy water distribution system (City of Palo Alto 2023). Accordingly, project construction would not require groundwater pumping or impede sustainable groundwater management of the basin.

Installation of the prefabricated fiber hut would require construction of an impervious concrete foundation at the existing Colorado Substation. However, the foundation would be surrounded by

pervious surfaces on all sides, allowing precipitation to runoff of the foundation and hut and onto pervious ground surface where it then can infiltrate the ground and contribute to groundwater recharge. Installation of utility cabinets would also create areas of impervious surface, but these areas would generally be small with cabinets being up to 33 inches long by 17 inches wide, or smaller. Utility cabinets would be installed next to roadways and existing disturbance or development, such as other existing utility cabinets. Pervious surface, typically landscaping, occurs next to these areas. Runoff from cabinets would flow onto these pervious surfaces and infiltrate the ground surface. Other components of the project would be below ground or attached to existing infrastructure, resulting in no changes to groundwater recharge. Accordingly, operation of the project would not interfere with groundwater recharge or impede sustainable groundwater management of the basin. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c.(i) Would the project 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 erosion or siltation on- or off-site?

c.(ii) Would the project 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 off-site?

No project activities are proposed to occur within the beds of streams, creeks, rivers, or wetlands. These areas would be avoided using horizontal directional drilling. Accordingly, the proposed project would not alter the course of a stream or river.

Installation of the prefabricated fiber hut would require construction of an impervious concrete foundation at existing Colorado Substation. However, the foundation would be surrounded by pervious surfaces on all sides, allowing precipitation to runoff of the foundation and hut and onto pervious ground surface where it then can infiltrate the ground. By infiltrating the ground, runoff would not reach quantities or velocity to result in substantial erosion of soils.

Installation of utility cabinets would also create areas of impervious surface, but these areas would generally be small with cabinets being up to 33 inches long by 17 inches wide, or smaller. Utility cabinets would be installed next to roadways and existing disturbance or development, such as other existing utility cabinets. Pervious surface, typically landscaping, occurs next to these areas. Runoff from cabinets would flow onto these pervious surfaces and infiltrate the ground surface, reducing the potential for runoff to mobilize soils and cause erosion. Other components of the project would be below ground or attached to existing infrastructure.

Because of the negligible amount of impervious surface that would result from the project, and because runoff from these surfaces would generally infiltrate the surrounding area, the project would not substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

Project impacts related to substantial erosion or flooding due to changes in drainage patterns would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c.(iii) Would the project 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 that would 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?

No project activities are proposed to occur within the beds of streams, creeks, rivers, or wetlands. These areas would be avoided using horizontal directional drilling. Accordingly, the proposed project would not alter the course of a stream or river.

While the project would be constructed in existing road and utility rights-of-way and would have a low potential to introduce new substantial impervious surfaces, the project would include installation of an impervious concrete foundation at the Colorado Substation for the proposed fiber-optic hut. Installation of utility cabinets would also create areas of impervious surface, but these areas would generally be small with cabinets being up to 33 inches long by 17 inches wide, or smaller. Utility cabinets would be installed next to roadways and existing disturbance or development, such as other existing utility cabinets. Pervious surface, typically landscaping, occurs next to these areas. Runoff from cabinets would flow onto these pervious surfaces and infiltrate the ground surface, where soils act as natural filter to remove pollutants.

The proposed project would include new underground vaults. During periods of rainfall, stormwater runoff could enter the vaults. The project applicant or its operational contractors may, at times, need to pump water out of the vaults to access fiber-optic equipment. Discharge of water removed from the vaults could result in release of hazardous materials to surface waters because urban runoff often carries hazardous pollutants like gasoline and heavy metals. However, in order for water from vaults to be discharged to the surface, the project applicant must obtain a discharge permit from the San Francisco Bay Regional Water Quality Control Board. The discharge permit establishes water quality standards that must be achieved in discharged water and monitoring requirements to ensure that discharged water meets these standards. Accordingly, mandatory compliance with State regulations, including the discharge permit, would prevent periodic discharges of water removed from vaults from contributing substantial sources of polluted runoff to surface and groundwater. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c.(iv) Would the project 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 impede or redirect flood flows?

The Federal Emergency Management Agency (FEMA) has mapped the special flood hazard areas in Palo Alto on its Flood Insurance Rate Maps (FEMA 2009). The Flood Insurance Rate Map panels that are applicable to Palo Alto, and thus the project area, include:

- 06085C0195H
- 06085C0180H
- 06085C0185H
- 06085C0015H
- 06085C0016H
- 06085C0017H
- 06085C0018H
- 06085C0019K

- 06085C0036H
- 06085C0038H
- 06085C0010H
- 06085C0030H

According to these FEMA map panels, components of the proposed project would be constructed within the special flood hazard area, including within 100-year flood plain. These components would include subsurface fiber-optic cable and conduit, subsurface and at-grade fiber-optic infrastructure, aerial fiber-optic cable. Due to the lack of footprint of underground components and the small footprint of above-ground components, such as cabinets, flood flows would not be substantially impeded or redirected. Additionally, most of the project would be located outside of special flood hazard areas. Project impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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

As discussed in Item c.(iv), above, parts of the project area are subject to flooding. Additionally, eastern areas of Palo Alto area subject to inundation from a tsunami and in areas directly along the shoreline of the San Francisco Bay, subject to seiche (California Department of Conservation 2023).

Construction of the proposed project would involve diesel, motor oil, and other potential pollutants necessary to power construction equipment. If these materials are stored or staged in a special flood hazard zone or within an area subject to inundation from tsunami, the flood waters could mobilize the materials and result in release of pollutants to surface waters. Accordingly, impacts would be potentially significant, and implementation of Mitigation Measures HYD-1 is required.

During project operation, components of the project that would be located within areas subject to inundation from a flood or tsunami would include subsurface fiber-optic cable and conduit, subsurface and at-grade fiber-optic infrastructure, and aerial fiber-optic cable. These project components do not contain substances or materials that would be pollutants when inundated.

Mitigation Measures

HYD-1: Fuels and other fluids used for the operation of construction equipment, shall not be staged or stored within areas that the Federal Emergency Management Agency have mapped as special flood hazard areas. Likewise, equipment staging and storage shall not occur within areas subject to inundation from tsunami or seiche, as mapped by the California Department of Conservation. Bentonite mud and mud pits used for horizontal directional drilling shall be exempt from this mitigation measure because bentonite is non-toxic. Permanent project features containing fluids, such as the proposed fiber hut at Colorado Substation, but be raised such that they are above inundation elevations.

Significance After Mitigation

The potential release of pollutants from project inundation would be less than significant with implementation of Mitigation Measure HYD-1.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Regional Water Quality Control Plan's master water quality control planning document. The Basin Plan provides both beneficial uses of water in the San Francisco Bay and water quality objectives for those same waters. Examples of some of the beneficial uses established for surface waters include: cold freshwater habitat; estuarine habitat; fish migration; municipal supply; wildlife habitat; and recreation. Examples of some of the water quality objectives established in the Basin Plan include: standards for bacteria levels; dissolved oxygen content; pH; salinity; sediment; and temperature.

As described in criterion a., above, while these construction activities are occurring, there would be potential for disturbed soils to become mobilized from precipitation and wind and discharge into surface waters. When eroded soil is discharged into surface water it is called siltation and has adverse impacts on water quality, a potential violation of Basin Plan water quality objectives. Because construction would disturb more than 1 acre of land, the project applicant must develop and implement a SWPPP, pursuant to state regulations. The SWPPP must contain measures that are implemented at the site to prevent soil erosion and soil loss. The SWPPP must also contain measures to implement in the event of a leak or spill of construction fluids, such as equipment diesel fuel, which could also impact water quality and violate objectives of the Basin Plan

Horizontal directional drilling would require bentonite mud lubricant. The bentonite is non-toxic, but could potentially smother riparian and aquatic plants, benthic invertebrates, fish, and fish eggs if an excessive amount of the lubricant is discharged into riparian and aquatic habitats. This would be a potential violation of beneficial water uses of the Basin Plan, such as fish migration and wildlife habitat uses. Additionally, the addition of bentonite mud could violate water quality objectives, such as increasing suspended solids or reducing dissolved oxygen content. These violations would be a potentially significant impact, and implementation of Mitigation Measure BIO-4 is required. Mitigation Measure BIO-4 appears in Section 4, *Biological Resources*, of this IS-MND.

The sustainable groundwater management plan for Palo Alto is the *Groundwater Management Plan for the Santa Clara and Llagas Subbasins* (Valley Water 2021). The proposed project would not interfere with or obstruct the implementation of this plan because the project would not require groundwater pumping or withdrawal. New impervious surfaces constructed as part of the project, such as above-ground cabinets and the foundation for the fiber hut at the Colorado substation would create minimal new impervious surface area. Additionally, precipitation falling on these components would generally runoff to pervious surfaces that surround these components. Because precipitation would be able to infiltrate the ground surface, the precipitation would continue to contribute to groundwater recharge consistent with existing conditions. Accordingly, project impacts related to interference or obstruction of sustainable groundwater management plans would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure BIO-4 is required.

Significance After Mitigation

Project impacts related to potential conflicts with a water quality control plan or sustainable groundwater management plan would be less than significant with implementation of Mitigation Measure BIO-4.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

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11 Land Use and Planning

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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?	☐	☐	■	☐

a. Would the project physically divide an established community?

The proposed project consists of the installation of fiber-optic cable within mostly existing and disturbed rights-of-way and developed commercial and public property. Project construction would be generally limited to existing disturbed rights of way and developed land. Project components would consist either of belowground fiber-optic cable, above-ground fiber-optic cable attached to poles and existing infrastructure, underground vaults, cabinets, and local aggregation sites. None of these components would physically divide an established community. There would be no impact.

NO IMPACT

b. Would the project 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?

The project has been designed to comply with applicable policies and guidelines adopted by the City of Palo Alto for utility infrastructure development. The FTTP would consist of small-scale changes distributed across the entirety of the City of Palo Alto's built environment and more rural areas west of Interstate 280 and would have negligible impact on land use in any one location. While the project is designed to be consistent with applicable utility zoning requirements, its construction and operation would result in environmental impacts, as discussed throughout this IS-MND. An analysis of project consistency with applicable policies of the City's 2030 Comprehensive Plan is provided in Table 6.

Table 6 Project Consistency Analysis with Comprehensive Plan Policies

Policy	Policy Description	Project Consistency Analysis
Policy L-9.1	Recognize Sand Hill Road, University Avenue between Middlefield Road and San Francisquito Creek, Embarcadero Road, Page Mill Road, Oregon Expressway, Interstate 280,	**Consistent**. The project would involve placing fiber-optic cable and related infrastructure such as cabinets on several of these roads, such as Embarcadero Road, Arastradero Road, and Page Mill Road. Fiber-optic cables would be either be attached to existing utility poles in these areas or placed within conduit and located underground, out of sight. Above-ground cabinets would be

	Arastradero Road (west of Foothill Expressway), Junipero Serra Boulevard/Foothill Expressway and Skyline Boulevard as scenic routes and preserve their scenic qualities.	installed along these roads, potentially. However, cabinets would be sited based on visual shading and preferential placement away from where they could be seen by people. If utilized, the aboveground cabinets would be less than 3 feet high, which is generally less than surrounding vegetation and development.
Policy N-5.3	Reduce emissions of particulates from, manufacturing, dry cleaning, construction activity, grading, wood burning, landscape maintenance, including leaf blowers and other sources.	**Consistent**. As described in Section 3, *Air Quality*, emissions from project construction would not exceed regulatory thresholds with compliance with the City's Comprehensive Plan mitigation requirements for development project (Mitigation Measure AIR-2a)..
Policy N-5.5	Support the BAAQMD in its efforts to achieve compliance with existing air quality regulations by continuing to require development applicants to comply with BAAQMD construction emissions control measures and health risk assessment requirements.	**Consistent**. As described in Section 3, *Air Quality*, emissions from project construction would not exceed regulatory thresholds. Compliance with the mitigation requirement for development projects as part of the City's Comprehensive Plan would ensure that BAAQMD construction emissions control measures for fugitive dust are implemented.
Policy N-1.4	Protect special-status species and plant communities, including those listed by State and federal agencies and recognized organizations from the impacts of development and incompatible activities.	**Consistent.** As described in Section 4, *Biological Resources*, the proposed project could impact special-status plan and wildlife species. For example, construction of cabinets could impact special-status plant species, especially in areas west of Interstate 280. However, with implementation of Mitigation Measures BIO-1 through BIO-3, impacts to special-status species would be avoided and reduced to less than significant.
Policy N-2.9	Minimize removal of, and damage to, trees due to construction-related activities such as trenching, excavation, soil compacting and release of toxins.	**Consistent**. The project would also involve trenching, which could sever roots of trees and impact the health of the trees. However, pursuant to Section 8.04.020 of the Palo Alto Municipal Code, excavation within 10 feet of protected trees is prohibited without a City tree permit or other City approval. Accordingly, when or where project trenching is required proximate to trees, including their primary root zone, the project applicant must obtain a tree permit and demonstrate that trenching would not interfere with the tree growth.
Policy N-2.10	Preserve and protect Regulated Trees, such as native oaks and other significant trees, on public and private property, including landscape trees approved as part of a development review process and consider strategies for expanding tree protection in Palo Alto.	**Consistent**. The proposed project is designed to avoid trees and would occur largely within existing developed right of way, easements, and other disturbance, such as the existing Colorado Substation. In the event that the project requires complete removal of a protected tree, replacement of tree would be required pursuant to Section 8.10.055 of the Palo Alto Municipal Code. Section 8.10.055 states that mitigation for the removed protected tree, replacement tree ratio, in lieu fees, or a combination thereof shall be determined by the City's Urban Forester.
Policy L-7.15	Protect Palo Alto's archaeological resources, including natural land formations, sacred sites, the historical landscape, historic habitats and remains of settlements here before the founding of Palo Alto in the 19th century	**Consistent**. The proposed project would not require modifying historic buildings or structures. There would be potential for archaeological resources to be disturbed from project construction activities. However, as described in Section 5, *Cultural Resources*, implementation of Mitigation Measure CUL-1 would reduce the potential for impacts to archaeological resources. Mandatory compliance with existing regulations would protect human remains, if any.

Policy S-2.5	Minimize exposure of people and structures to geologic hazards, including slope stability, subsidence and expansive soils, and to seismic hazards including groundshaking, fault rupture, liquefaction and landslides.	**Consistent.** As described in Section 7, *Geology and Soils*, the proposed project The proposed fiber hut would be within a secured electrical substation were people are not regularly present. Trenching and excavation required during construction would be shallow and not create collapse hazards for construction workers.
Policy N-4.10	Reduce pollution in urban runoff from residential, commercial, industrial, municipal, and transportation land uses and activities.	**Consistent.** The proposed project would not create new sources of urban pollution. For example, the project does not include new asphalt parking surfaces where vehicle pollutants would accumulate and become mobilizes in stormwater runoff.
Policy N-4.12	Promote sustainable low water and pesticide landscaping practices on both public and private property.	**Consistent.** The proposed project would require negligible quantities of water for construction. Following construction, the proposed project would not require or consume water. The proposed project does not include new landscaping.
Policy N-4.13	Encourage LID measures to limit the amount of pavement and impervious surface in new development and increase the retention, treatment and infiltration of urban stormwater runoff. Include LID measures in major remodels, public projects and recreation projects where practical.	**Consistent**. The proposed project would convert only minimal areas of pervious surface into impervious surface. Areas of new impervious surface would include the foundation for the fiber optic hut at existing Colorado Substation and above-ground cabinets throughout the City. Each cabinet would be up to 17 inches long by 33 inches wide and generally in disturbed areas or landscaping. Accordingly, given the small amount of impervious surface created by the project and that most of it would be surrounded by pervious surface allowing runoff to infiltrate the ground, the project would be consistent with this policy.
Policy L-7.16	Continue to consult with tribes as required by California Government Code Section 65352.3. In doing so, use appropriate procedures to accommodate tribal concerns when a tribe has a religious prohibition against revealing precise information about the location or previous practice at a particular sacred site.	**Consistent.** The City of Palo Alto consulted with the applicable tribe(s) on the proposed project as required by California Government Code Section 65352.3 (see Section 18, *Tribal Cultural Resources*).
Policy N-4.1	Maintain a safe, clean and reliable long-term supply of water for Palo Alto.	**Consistent**. The majority of water supply in Palo Alto is from snowmelt in the Sierra Nevada. The proposed project would not alter runoff in the Sierra Nevada or include activities upstream of the Hetch Hetchy Reservoir in the Sierra Nevada. Minor quantities of water would be needed for construction of project, such as for controlling dust. Construction water would be negligible. Operation of the project would not require water.
Policy N-4.1	Ensure regulation of groundwater use to protect it as a natural resource and to preserve it as a potential water supply in the event of water scarcity.	**Consistent.** The proposed project would not require groundwater withdrawal or pumping. Given the shallow depths of proposed excavation for the project, groundwater dewatering would not be required.

Source: City of Palo Alto 2017: 2030 Comprehensive Plan

As shown in Table 6, the project would be consistent with policies of the 2030 Comprehensive Plan that pertain to avoiding or mitigating environmental impacts. The project would also be consistent with the Palo Alto Municipal Code, including sections pertaining directly or indirectly to the

protection of environmental resources. For example, the project must comply with the City's Tree Ordinance, which is Title 8 of the Palo Alto Municipal Code. Accordingly, project impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

12 Mineral Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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?	☐	☐	☐	■

a. Would the project 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?

There are no known mineral resources that would be of value to the region or residents of the state in Palo Alto (California Department of Conservation 1996). Therefore, mineral deposits of local state significance do not occur in the project area. The proposed project would have no impact on mineral deposits of regional or state significance.

NO IMPACT

b. Would the project 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?

According to the 2030 Comprehensive Plan, there are no mineral deposits of local regional significance in Palo Alto (City of Palo Alto 2017). Therefore, mineral deposits of local regional significance do not occur in the project area. The proposed project would have no impact on mineral deposits of local significance.

NO IMPACT

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13 Noise

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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 applicable standards of other agencies?	☐	☐	■	☐
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?	☐	☐	■	☐

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction of the proposed project is expected to last approximately 6 years in phases, but construction activities at any one location would in most cases be no more than several days to a couple of weeks because the project is linear and primarily along roadways. The exception is construction of local aggregation sites, which could last up to approximately 60 days at each of the two sites. One site would be inside of a building and not affect nearby receptors. The other site would be at Colorado Substation, which is near residential receptors. As a result, construction activities from the proposed project would temporarily increase noise levels at different locations throughout the city. Actual noise levels would vary throughout the day, depending on the type of construction equipment involved, activities being implemented, and distance between the source of the noise and receptors. For example, at 50 feet from peak use of rock-sawing or trenching, noise levels could reach 85 to 88 dBA DNL. Given that the project would be located primarily in developed areas of Palo Alto, construction equipment could be operated as close as approximately 25 feet from residences, schools, and other sensitive receptors.

Title 9, Chapter 9.10, Noise, of the Palo Alto Municipal Code addresses noise levels from stationary sources, as well as construction noise for adjacent residential properties. Construction of the project must comply with the Palo Alto Municipal Code, specifically Section 9.10.060.b., pertaining to construction noise. Section 9.10.060 (b) prohibits construction between 6:00 PM and 8:00 AM on

Monday through Friday and between 6:00 PM and 9:00 AM on Saturday. Construction is prohibited on Sundays, as well as holidays. Additionally, Section 9.10.060(b) requires that construction activities produce noise no louder than 110 dBA at a distance of 25 feet.

Mandatory compliance with Title 9, Chapter 9.10, Noise, of the Palo Alto Municipal Code would prevent project construction from occurring during nighttime hours when most people are at home and asleep. Additionally, construction would not occur on Sundays or holidays, which are also times when people are more likely to be at home. No construction equipment producing noise of 110 dBA or greater is proposed or allowable by the Palo Alto Municipal Code. For these reasons, noise resulting from project construction would be less than significant.

Once construction of the project is complete, noise would be periodically generated by occasional maintenance activities using pickup trucks and landscaping equipment, consistent with noise levels from existing activities throughout the City. At the local aggregation site at the Colorado Substation noise would be generated by an external air conditioner attached to the fiber hut and monthly testing of a small backup emergency generator. The noise generated from these activities would be consistent with ambient noise levels in the area because there are already small structures with air conditioning units and generators at the Colorado Substation. Additionally, residences near the Colorado Substation also have air conditioning units. The addition of the proposed back-up generator combined with how infrequent the generator would be operated, would not substantially increase or change ambient noise levels at sensitive receptors, such as residences near Colorado Substation. For these reasons, noise resulting from project operation would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project result in generation of excessive groundborne vibration or groundborne noise levels?

Vibration amplitudes are usually expressed in peak particle velocity (PPV) or root mean square (RMS) vibration velocity. Particle velocity is the velocity at which the ground moves. The PPV and RMS velocity are normally described in inches per second (in/sec). PPV is defined as the greatest magnitude of particle velocity associated with a vibration event. PPV is often used in monitoring of blasting vibration because it is related to the stresses that are experienced by buildings (Caltrans 2020).

Vibration limits used in this analysis to determine a potential impact to local land uses from construction activities, such as, vibratory compaction or excavation, are based on information contained in the 2018 Federal Transit Administration's (FTA) *Transit Noise and Vibration Impact Assessment Manual*. As shown in Table 7, limiting vibration levels to below 0.2 in/sec PPV at residential and other non-engineered structures typical of Palo Alto would prevent architectural damage.

Table 7 Groundborne Vibration Architectural Damage Criteria

Building Category	PPV (in/sec)
Reinforced concrete, steel, or timber (no plaster)	0.5
Engineered concrete and masonry (no plaster)	0.3

Building Category	PPV (in/sec)
Non-engineered timber and masonry buildings	0.2
Buildings extremely susceptible to vibration damage	0.12

Source: FTA 2018

Construction of the project would require the use of heavy construction equipment, such as backhoes, dump trucks, and drill rigs. This equipment would generate groundborne vibration. Table 8 shows typical vibration levels for various pieces of construction equipment used in the assessment of construction vibration (FTA 2018).

Table 8 Vibration Levels Measured during Construction Activities

Equipment	PPV at 25 ft. (in./sec.)
Large Bulldozer	0.089
Loaded Trucks	0.076
Small Bulldozer	0.003

Source: FTA 2018

The greatest vibratory source during project construction would be a large bulldozer. Neither blasting nor pile driving would be required for construction of the proposed project because the project does not go through bedrock or include pile foundations. As shown in Table 8, a large bulldozer can create vibration levels measuring 0.089 in/sec PPV at 25 feet away from the dozer. A vibration level of 0.089 in/sec PPV is below 0.2 in/sec PPV, the threshold for architectural damage to residential and other non-engineered structures typical of Palo Alto. Additionally, vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. Variability in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020). Additionally, as described above in Item 'a.', mandatory compliance with Title 9, Chapter 9.10, Noise, of the Palo Alto Municipal Code would prevent project construction from occurring during nighttime hours when most people are at home and asleep and could be most sensitive to vibration. Additionally, construction would not occur on Sundays or holidays, which are also times when people are more likely to be at home and not at work. For these reasons, vibration resulting from project construction would be less than significant.

Operation of the project would not regularly generate groundborne vibration. Maintenance and repair of the project during operation could require heavy equipment similar to construction equipment. However, the duration of equipment operation would be less than construction and involve fewer pieces of equipment. Accordingly, groundborne vibration impacts of the project would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

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?

The proposed project is within two miles of the Palo Alto Airport and within the plan area of the Comprehensive Land Use Plan, Santa Clara County, Palo Alto Airport (Santa Clara County Airport Land Use Commission 2008). There are no private airstrips in Palo Alto.

The proposed project would include extending fiber-optic cable within Embarcadero Road to the Palo Alto Airport. According to the most recent noise monitoring report prepared by the City for the Palo Alto Airport (2022), project construction along Embarcadero Road would occur within areas having airport noise up to 70 dBA CNEL. This noise level would be below the noise level of most project construction equipment. Construction would be temporary, and construction within the 65 to 70 dBA area surrounding the airport would be a short segment of fiber-optic cable. Following construction, the proposed FTTP would not generate noise within proximity to the airport noise contours because only fiber-optic cable is proposed within the noise contours of the airport. Accordingly, the project would not result in excessive noise for people residing or working in the project area.

The project would not result in excessive noise for people residing or working in the project area. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

14 Population and Housing

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Induce substantial unplanned population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	■	☐
b. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	■

a. Would the project 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)?

The proposed project does not include the construction of new habitable structures, such as single-family or multi-family residences. The proposed project would also not create substantial numbers of new employment opportunities. The project construction crews would likely be comprised of the workforce already residing in the Bay Area given that project construction would consist of a small crew moving along a linear project and would be constructed in phases. Likewise, operation and maintenance of the project would require small crews of personnel. Therefore, the proposed project would not directly induce substantial unplanned population growth. The project would not adversely affect the job-to-housing ratio in the area because it would not create substantial new permanent employment opportunities or require the demolition of houses.

The proposed project would extend fiber-optic service throughout Palo Alto, providing current and future residents the opportunity to connect to the proposed FTTP for internet and communication services. However, internet and communications utilities are already available to residents of Palo Alto. The provision of fiber-optic services would therefore not induce substantial population growth. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The proposed project does not involve the demolition or repurposing of residential structures. No people or housing would be displaced as a result of the project. The proposed project would have no impact related to displacement.

NO IMPACT

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15 Public Services

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
a.	Would the project 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:				
	1 Fire protection?	☐	☐	■	☐
	2 Police protection?	☐	☐	■	☐
	3 Schools?	☐	☐	☐	■
	4 Parks?	☐	☐	■	☐
	5 Other public facilities?	☐	☐	☐	■

a.1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered fire protection facilities, or the need for new or physically altered fire protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

Fire service in Palo Alto is provided by the Palo Alto Fire Department. The Palo Alto Fire Department is located at City Hall at 250 Hamilton Avenue, and there are six full-time fire stations located throughout the City. The Palo Alto Fire Department has a first-due response time goal of six minutes and 30 seconds 90 percent of the time for priority calls in an urban zone and a first-due response time goal of 20 minutes 90 percent of the time for priority calls in a rural zone (Palo Alto Fire Department 2018).

The proposed project would not expand the service area of the Palo Alto Fire Department because the project would coincide with existing roadways and development in Palo Alto. The proposed project would also not include new structures that require fire protection other than the prefabricated fiber hut that would be installed at the local aggregation site at the existing Colorado Substation. The Colorado Substation is already a site for which the Palo Alto Fire Department provides fire protection services. Accordingly, the proposed project would not require new or physically altered fire protection facilities. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.2. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities, or the need for new or physically altered police protection facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The Palo Alto Police Department provides law enforcement services within the City limits. The offices for the Palo Alto Police Department are located adjacent to City Hall at 275 Forest Avenue.

The proposed project would not expand the service area of the Palo Alto Police Department because the project would coincide with existing roadways and development in Palo Alto. The proposed project would also not include new structures that require police protection as fiber-optic cable would be below ground or attached to poles. The local aggregation sites that would be located at the existing Colorado Substation would be within the secured fence of the substation, reducing the potential for vandalism or other crime requiring police response. The other proposed local aggregation site would be located inside of an existing commercial building, likely Equinix. Existing commercial buildings in Palo Alto are already served by the Palo Alto Police Department. Accordingly, the proposed project would not result in substantial adverse physical impacts associated with the provision of new or physically altered police protection facilities. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.3. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered schools, or the need for new or physically altered schools, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

As discussed in Section 14, *Population and Housing*, the proposed project would not include population growth. As a result, the proposed project would also not generate increased enrollment at local schools in Palo Alto. The proposed project would have no impacts associated with the provision of new or physically altered schools.

NO IMPACT

a.4. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered parks, or the need for new or physically altered parks, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios or other performance objectives?

The proposed project would involve construction of the FTTP throughout many of the existing roadways in Palo Alto, especially in the urbanized area of Palo Alto. Accordingly, fiber-optic cable would be installed near and often adjacent to many of the City's parks, such as Mitchell Park, Ramos Park, Hoover Park, and Greer Park, among others. However, because the fiber-optic cable would be located within the rights-of-way of existing roadways and development, the project would not result in a loss of park space.

The proposed project would involve constructing the FTTP through designated open space areas on the west side of Palo Alto, such as Foothills Nature Preserve. In areas west of Interstate 280, including the open space areas, the fiber-optic cable would be located on existing utility poles or within below-ground conduit that is either existing or previously permitted. Much of the fiber-optic cable through open space areas would also be within existing roadways and their rights-of-way,

such as existing Page Mill Road. The placement of the fiber-optic cable within existing utility infrastructure would prevent encumbrance or loss of open space area to the proposed project. Accordingly, the proposed project would not result in loss of open space, which can be used for recreation, resulting in the need for new or physically altered parks. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

a.5. Would the project result in substantial adverse physical impacts associated with the provision of other new or physically altered public facilities, or the need for other new or physically altered public facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives?

The project would not induce population growth. Therefore, there would be no increased use of or demand for other public facilities, such as libraries. The proposed project would have no impact.

NO IMPACT

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16 Recreation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
a. Would the project 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. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	■

a. Would the project 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?

The City of Palo Alto has almost 4,000 acres of open space, including 162 acres of developed urban parks throughout the City (City of Palo Alto 2023b).

As described in Section 14, *Population and Housing*, the proposed project would not induce population growth in Palo Alto. The proposed project does not include the construction of habitable structures that could locate people closer to a particular park, increasing its use. Accordingly, the proposed project would have no impact related to increased use of parks.

NO IMPACT

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The proposed project includes no recreational facilities. The proposed project would not require the construction of expansion of recreational facilities. The proposed project would have no impact.

NO IMPACT

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17 Transportation

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
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 use (e.g., farm equipment)?	☐	☐	☐	■
d. Result in inadequate emergency access?	☐	☐	■	☐

a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Roadways and Transit

During project construction, construction crews would commute to the active work site or sites in Palo Alto, generating vehicle trips. These trips would be distributed throughout Palo Alto on a given construction day, and trips could occur on parts of the entire roadway network in Palo Alto. While construction is ongoing, any given neighborhood in Palo Alto would likely see only one construction crew working at any given time, with aerial installation, rock-sawing, trenching/micro-trenching, horizontal directional drilling, and vault installation. Multiple crews could be occurring at the same time in a given neighborhood and could use a portion of the roadway network simultaneously but would likely be staggered in constructing in the same neighborhood on the same day.

During project construction, vehicles and equipment used on roadways would include utility trucks, flatbed trucks, bucket trucks, cranes, concrete mixing trucks, excavators, boring rigs, trenchers, cable trailers, dump trucks, and backhoes, depending on the nature of the work. Trips would also be generated through the transportation of staff, equipment, and materials to the work locations, but this would amount to approximately 15 trips per day at a single site based on the typical size of crews. These increases in construction traffic would not roadway facilities because the number of trips passing through any given intersection would be negligible given a total of 15 trips.

Project construction would involve trenching across or within many of the roadways in Palo Alto, which could result in temporary travel lane or road closures. As described above in *Description of the Project*, following trenching and other ground disturbance, the disturbance area would be restored to pre-existing conditions. This would prevent delays on roadways, including to transit,

following completion of construction. To minimize disturbances to traffic during construction of the project, including public transit traffic, construction activity would employ standard traffic control measures in accordance with the Caltrans Manual of Traffic Controls for Construction and Maintenance Work Zones. However, during construction, temporary roadway or lane closures could block access to residences and businesses despite implementing traffic control measures. Additionally, as described above in *Description of the Project*, the project applicant proposes locating staging areas within public right-of-way, which could also result in blocking roadway access to residences and businesses in Palo Alto. Blocking access would be a potentially significant impact related to conflict with a program, plan, ordinance or policy addressing the circulation system as it pertains to roadways. Implementation of Mitigation Measure TRA-1 is required.

Throughout the operation of the proposed project, the increased access to high-speed internet that would be provided by the FTTP would support the objective of transportation demand management identified in the Santa Clara County Congestion Management Program (VTA 2021). As part of the plan, the strategies used to manage transportation demand are the use of telecommuting and new working arrangements. When telecommuting and new work arrangements are available, they reduce VMT and increase accessibility.

Maintenance for the proposed project would involve periodic inspection by project applicant or contractor staff in a pickup truck. The maintenance work would not increase roadway volumes substantially. Maintenance may require isolated repair but would not require widespread trenching activities closing multiple roads or travel lanes across Palo Alto. Operational impacts of the project related to roadways and public transit would be less than significant.

Bicycle and Pedestrian

Similar to roadways, construction of the proposed project would require trenching through bicycle lanes and sidewalks in Palo Alto to install fiber-optic conduit. Likewise, construction of underground vaults and aboveground cabinets would often occur adjacent or proximate to sidewalks, which could require closure of the sidewalk for safety. Therefore, temporary sidewalk closures and bicycle detours would be required in active project construction areas. Given that the majority of the FTTP would be installed in the developed and urbanized areas of Palo Alto, there are readily available pedestrian and bicycle detours available to avoid temporary closures of bicycle and pedestrian facilities during construction of the project. As described above in *Description of the Project*, project construction trenches and other construction disturbance would be restored to a condition of equal quality as the pre-construction condition, including bicycle lanes and sidewalks. Accordingly, project impacts related to conflicts with plans, programs, and policies related to bicycle and pedestrian circulation would be less than significant.

Mitigation Measures

TRA-1: Prior to project construction, the project applicant or its construction contractors shall coordinate with the applicable traffic regulatory agency (City of Palo Alto, County of Santa Clara, and Caltrans) regarding planned improvements near the fiber-optic facility to limit interference with the implementation of roadway improvements or trenching in nearly completed facilities. At a minimum, coordination shall include the following:

- Circulation and detour plans shall be developed by the applicant to minimize impacts to local street circulation, including the use of signage and flagging to guide vehicles through and/or around the construction zone. Circulation and detour plans must be approved by the City prior to construction.

- To minimize disturbances to traffic, throughout project construction, the construction staging areas shall be provided by the applicant and its contractors in locations that are not within travel lanes or paved shoulders of existing public roads. Construction staging areas shall not be located at transit stops or facilities.
- A traffic plan shall be prepared by the applicant that incorporates all of the above measures and any additional measures required by the City of Palo Alto. The project applicant shall provide the traffic plan to the City for review as part of the construction permit submittal. Both parties shall ensure that revisions are agreed upon and the final traffic plan is approved by both the applicant and the City of Palo Alto prior to the issuance of construction permits and the start of construction activities.

Significance After Mitigation

Implementation of Mitigation Measure TRA-1 would require the project applicant to develop and implement a traffic plan that minimizes disruptions to circulation on roadways, including disruptions to public transit on roadways. Accordingly, with implementation of Mitigation Measure TRA-1, impacts related to conflicts with plans, programs, and policies related to transportation circulation would be less than significant.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

b. Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

Construction of the proposed project would require delivery of materials, such as fiber-optic cable and the pre-constructed fiber hut that would be placed at Colorado Substation, for example. These deliveries would generate VMT, as would daily commutes of project construction workers. However, the VMT resulting from project construction would be temporary and would stop after construction is complete. Therefore, construction of the proposed project would not result in a permanent increase in VMT in Palo Alto or the greater San Francisco Bay Area.

Following construction, operation of the project would generate very few VMT. Daily operations would not require vehicles. Occasionally maintenance and inspections of the FTTP would be required. The inspections would be conducted with a pick-up truck and generally travel only within Palo Alto, because Palo Alto would be the extent of the FTTP. A truck operating locally and only once or twice annually would not generate substantial vehicle miles traveled. Additionally, according to the Governor's Office of Planning and Research, projects that generate less than 110 vehicle trips per day may be assumed to have less than significant transportation impact (Governor's Office of Planning and Research 2018). Therefore, the proposed project would not conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b), pertaining to VMT and Senate Bill 743. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

The proposed project would use existing roadways and utility rights of way; therefore, there would be no changes to the alignment of roadways. Where construction occurs, the surfaces of the roadways would be returned to the prior condition or better ensuring there are no new design features or redesign of intersections and curves. Project operation would require inspections using a

standard pick-up truck, which is consistent and compatible with vehicle types already using roadways in Palo Alto. Maintenance and repair of the project could require other equipment, such as a cherry picker mounted on a truck, which would be located generally off of travel lanes or coordinated with the City (or County) if lane closures are required. The proposed project would have no impact related to roadway hazards.

NO IMPACT

d. Would the project result in inadequate emergency access?

As described in Item 'a.', above, construction of the proposed project could result in temporary closures or partial closures of roadways. When closed, emergency response vehicles could experience response delays. However, emergency access would not be inadequate because construction of the project would not prohibit access to any areas of Palo Alto where emergency response could be required. The project would mostly be located in the urbanized and developed areas of Palo Alto where there is a robust roadway network that provides multiple routes to arriving at a given destination.

The fiber-optic cable would be attached to existing poles and infrastructure, such as bridges, or placed within existing or previously permitted conduit in more rural parts of the project area, such as west of Interstate 280. Utilizing existing infrastructure would prevent road closures that could otherwise result in inadequate emergency access. Additionally, the project applicant must implement Mitigation Measure TRA-1, which requires a detour plan for street or lane closures. Regardless of the implementation of Mitigation Measure TRA-1, project impacts related to inadequate emergency access would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

18 Tribal Cultural Resources

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in a Public Resources Code Section 21074 as either a site, feature, place, or 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	■	☐	☐

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is 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. Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074 that is 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?

On March 28, 2024, the City, pursuant to Public Resources 21080.3.1, Assembly Bill 52, and California Government Code Section 65352.3, sent via certified mail notification letters to seven California Native American Tribes that are traditionally and culturally affiliated with the project area. The letters were sent to representatives of the Amah Mutsun Tribal Band, the Amah Mutsun Tribal

Band of Mission San Juan Bautista, Indian Canyon Mutsun Band of Costanoan, Muwekma Ohlone Indian Tribe of the SF Bay Area, the Ohlone Indian Tribe, Wuksache Indian Tribe/Eshom Valley Band, and Tamien Nation. Copies of the consultation letters are provided as Appendix D to this Initial Study.

Assembly Bill 52 and other tribal consultation windows have closed with no response from the Tribes contacted. No tribal cultural resources have been identified within the project area. However, there is potential to uncover buried archaeological and tribal cultural resources during ground disturbing activities, which could potentially be considered tribal cultural resources eligible for listing in the CRHR or a local register or be considered tribal cultural resources. Should project construction activities unexpectedly encounter and damage or destroy a tribal cultural resource or resources, impacts would be potentially significant. Therefore, mitigation is required.

Mitigation Measures

TCR-1: In the event that cultural resources of Native American origin are identified during implementation of the proposed project, all earth-disturbing work within 50 feet of the find shall be temporarily suspended or redirected until an archaeologist and culturally affiliated Native American representative have evaluated the nature and significance of the find. If the City, in consultation with local Native Americans, determines that the resource is a tribal cultural resource and thus significant under CEQA, a mitigation plan shall be prepared and implemented in accordance with state guidelines and in consultation with local Native American group(s). The plan shall include avoidance of the resource or, if avoidance of the resource is infeasible, the plan shall outline the appropriate treatment of the resource in coordination with the culturally affiliated local Native American tribal representative and, if applicable, a qualified archaeologist. Examples of appropriate mitigation for tribal cultural resources include, but are not limited to, protecting the cultural character and integrity of the resource, protecting traditional use of the resource, protecting the confidentiality of the resource, or heritage recovery. Regardless of the plan developed, the City of Palo Alto shall maintain the confidentially of the resource.

Significance After Mitigation

With implementation of Mitigation Measure TCR-1, as well as implementation of Mitigation Measure CUL-2, impacts would be less than significant. This mitigation measure requires the project applicant and its construction contractors to avoid resources of Native American origin until they are appropriately evaluated and a plan for avoidance or treatment of the resource is developed and implemented. Mitigation Measure CUL-2 requires construction workers to be trained on identifying archaeological resources that could be encountered during project construction.

LESS THAN SIGNIFICANT WITH MITIGATION INCORPORATED

19 Utilities and Service Systems

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Would the project:				
a. Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	☐	☐	■	☐
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 which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	■	☐
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?	☐	☐	■	☐

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The proposed project would not require the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, or natural gas facilities. The proposed back-up generator at Colorado Substation would connect to electricity that is already available at the substation. The proposed project would also not require the construction of new telecommunication facilities, however, the project as proposed requests discretionary approval to construct a new FTTP, which is effectively a telecommunications facility. As described throughout

this IS-MND, construction of proposed project, as well as operation, would not result in significant environmental impacts. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Construction of the proposed project would require negligible amounts of water, mostly minor amounts to control dust when equipment operates on exposed or bare soils. Horizontal directional drilling would also require water to mix with bentonite to make a mud lubricant. Because construction would be temporary and require negligible amounts of water, there would be sufficient water supplies for construction. Operation of the project would not require water. Accordingly, there would be sufficient water supplies available for the project regardless of hydrologic conditions. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The proposed project would not generate substantial quantities of wastewater. During construction minor amounts of wastewater could be generated from horizontal directional drilling, specifically the bentonite mud lubricant. However, construction would be temporary and not result in a permanent increase in wastewater or demand for wastewater treatment. Additionally, the volume of wastewater generated by horizontal directional drilling would be negligible. Operation of the project would not generate wastewater or increase the demand for wastewater treatment. Accordingly, the proposed project would not exceed the capacity of wastewater treatment facilities. Impacts would be less than significant.

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d. Would the project 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. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

During project construction activities, solid wastes associated with the project would include spools and other packaging material associated with the fiber-optic conduit and cable. Spools and other packaging for conduit and cable would be taken away for reuse, recycling, or disposal at a landfill. The construction contractor would be responsible for ensuring that construction-related waste is disposed of properly and would coordinate with local landfills to ensure adequate capacity is available. Furthermore, the proposed Project must comply with all federal, state, and local statutes and regulations related to solid waste. For example, the project must divert at least 50 percent of solid waste and recyclables as required by Assembly Bill 939. Operation of the project would not generate solid waste. Impacts would be less than significant.

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20 Wildfire

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	☐	☐	■	☐
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 or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	☐	☐	■	☐
d. Expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	☐	☐	■	☐

a. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The majority of the project would be located in the urbanized and developed area of Palo Alto, and generally along the Highway 101 corridor and east of Junipero Serra Boulevard. This area of Palo Alto is not within or near State responsibility areas or lands classified as very high fire hazard severity zones (California Department of Forestry and Fire Protection 2023).

While nearly all of the proposed project would be constructed outside of and away from State responsibility areas or lands classified as very high fire hazard severity zones, the western most extent of the project would be located proximate to very high fire hazard severity zone, generally along Page Mill Road in the area of Foothills Nature Preserve (California Department of Forestry and Fire Protection 2023). Page Mill Road is one of the few through-roads connecting the urban areas of Palo Alto to the rural areas in the Santa Cruz Mountains. Therefore, during emergency evacuations,

Page Mill Road would likely be used by people evacuating areas of Palo Alto west of Interstate 280, as well as other rural areas of the Santa Cruz Mountains.

Because Page Mill Road is a City street, the project applicant must obtain a Street Work Permit and abide with conditions of the permit. Pursuant to permit requirements, a traffic control plan meeting City requirements must be supplied by the project applicant. The traffic control plan must comply with all applicable federal, state, and local regulations for work in roadways and will allow access for emergency vehicles or will provide temporary alternate routes. As such, the project would not encumber large areas and prohibit emergency vehicle flow during emergency evacuations of wildfire areas. With the incorporation of an approved traffic control plan that is followed throughout the project, project construction would result in a less than significant impact on emergency response and evacuation.

Operation of the project would not require modifications to roads or changes in traffic movement. Minor repairs or maintenance activities, such as tree trimming, could require temporary lane closures. These closures would be infrequent and would also be subject to a Street Work Permit or Encroachment Permit from the City, depending on the type of maintenance activity to be performed. Accordingly, operation of the project would result in a less than significant impact on emergency response and evacuation.

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b. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project, 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?

Most of the project construction work would occur within the developed portions of Palo Alto which are not near state responsibility areas or lands classified as very high fire hazard severity zones (California Department of Forestry and Fire Protection 2023). Within the project area, including areas near wildlands generally west of Junipero Serra Boulevard, work would primarily occur in existing roadways or immediately adjacent to existing roadways that are regularly trafficked by the public and near emergency response services, such as fire protection. The project would also utilize existing aerial structures or existing and previously permitted underground conduit in these same land use areas. The project would not require construction crews to traverse wildlands off of existing roadways or utility disturbance. The fiber-optic infrastructure would not require welding for installation or high-voltage electricity to operate. As such, the project would not require the use of ignition sources, except for the operation of the construction vehicles, which would generally occur on roads and disturbed areas lacking wildland fuels.

In addition, fire and explosion could occur if construction equipment were to breach subsurface utilities. However, proper utility clearance using standard procedures, and avoidance of areas identified as having subsurface utilities would minimize the potential for fire hazards associated with subsurface utilities. Impacts related to a significant risk of loss, injury, or death involving exacerbated wildland fires would be less than significant.

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c. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project require the installation or maintenance of associated infrastructure

(such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

Construction and operation of the proposed project would not require the construction of new roads. Existing roads would be used for project construction, and in most areas, the rights-of-way for existing roads would comprise the project area. Existing roads would also be used to inspect and maintain the FTTP during operations. Accordingly, the proposed project would not exacerbate fire risk from new roads, such as extending a road into an area containing substantial amounts of wildland fuels.

Construction of the proposed project would require minor amounts of water, mostly for bentonite mud lubricant required for horizontal directional drilling (see Section 19, *Utilities and Service Systems*). However, the construction water would be from regular municipal supplies or otherwise purchased by the project applicant or its construction contractors. The proposed project would not utilize emergency water supplies or block access to emergency water sources, such as fire hydrants. Operation of the project would not require water use or block access to water sources.

The proposed project would install new linear utility in the form of fiber-optic cable. However, the fiber-optic cable would utilize existing utility poles, existing underground conduit and other infrastructure, or new belowground conduit. The proposed project would not result in new power lines or other linear clearings. Likewise, fiber-optic utilize light signals instead of electricity, eliminating the need to construct new power lines and introduce electric sparks to wildland fuel areas. Accordingly, while the project would consist of utility infrastructure, it would not exacerbate fire risk, as detailed in criterion b, that may result in temporary or ongoing impacts to the environment. Impacts would be less than significant.

LESS-THAN-SIGNIFICANT IMPACT

d. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project expose people or structures to significant risks, including downslopes or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The proposed project, including portions in or near State responsibility areas or lands classified as very high fire hazard severity zones, would be located on existing infrastructure, such a utility poles or previously permitted belowground conduit. Aboveground cabinets and belowground vaults could also be located in or proximate to very high fire hazard severity zones. However, cabinets and vaults would result in negligible ground disturbance, typically measuring less than several square feet. Accordingly, the proposed project would not substantially change drainage patterns or result in large areas of vegetation removal which would create susceptibility to landslides and slope instability. Impacts would be less than significant.

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21 Mandatory Findings of Significance

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than - Significant Impact	No Impact
Does the project:				
a. 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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	■	☐	☐
b. 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. Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	■	☐

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 a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

As described in Section 4, *Biological Resources*, project construction is proposed mostly within developed urban areas and within existing public roadway and utility rights-of-way and easements. Generally, these urbanized and developed areas do not provide habitat supportive of special status plant and wildlife species. Where construction activities would occur in areas capable of supporting special status species, implementation of mitigation measures listed in Section 4, *Biological Resources*, would reduce impacts to less than significant. For example, implementation of Mitigation Measure BIO-1 requires pre-construction surveys to identify and then avoid special status plant species during construction activities outside of developed and urbanized areas of Palo Alto.

Implementation of Mitigation Measure BIO-4 requires the protection of streams and riparian areas, which would prevent substantial loss of fish habitat, as well as habitat for other plants and animals. Due to the developed conditions across most of the project area and required implementation of mitigation measures, the proposed project would not 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 a rare or endangered plant or animal.

As described in Section 5, *Cultural Resources*, the proposed project would not alter, modify, or otherwise change historical resources, including the visual and historic context in which these resources occur. Although the project would be proximate to numerous historical resources in Palo Alto, the project components would be underground or attached to existing utility poles, resulting in no substantial changes to nearby historical resources. Construction of the project would have potential to impact several archaeological resources known to occur in the project area, as well as previously unknown or unidentified archaeological resources. As described in Section 5, *Cultural Resources*, implementation of Mitigation Measure CUL-1 would be required, which requires avoidance of known archeological resources and procedures to stop work and evaluate resources discovered during construction. Project impacts to archaeological resources would be less than significant with implementation of Mitigation Measure CUL-1. Implementation of Mitigation Measure TCR-1 would reduce impacts archaeological resources of Native American origin to less than significant.

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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)?

The proposed project would extend across much of Palo Alto, especially within the urbanized and developed areas of Palo Alto. Because the project would occur throughout Palo Alto, it would occur proximate to numerous other current and probable future projects, as well as past (now existing) development. For example, the proposed project would involve constructing a local aggregation site at the existing Colorado Substation, which is also where a separate project involving a wireless communication facility is also currently proposed by a telecommunications company.

Where the proposed project is proximate to ongoing and probably future projects, the impacts of the project and those other nearby projects could combine to have cumulative impacts. However, the individual impacts of the proposed project would largely be temporary for the duration of construction. For example, the project would generate air pollutant and noise emissions during construction, but these emissions would largely go away following completion of project construction. For this reason, most of the project impacts would be short-term and not combine in a cumulatively considerable way with the longer-term operational impacts of other past, current, and probably future projects. Other project construction impacts that could be long-term, such as loss of wildlife and wildlife habitat, would be minimized through the implementation of mitigation measures described in this document. For example, implementation of Mitigation Measure BIO-3 listed in Section 4, *Biological Resources*, would require the project applicant to avoid impacts to bats. While other current and probably future impacts could impact bats, the project would avoid these impacts thereby preventing the project impacts from being cumulatively considerable.

Operation of the project would have negligible environmental impacts, as discussed throughout this document. Project operation would have negligible environmental impacts because operation of the FTTP would not involve new ground disturbance or generate substantial amounts of vehicle trips, noise or emissions. Accordingly, operation of the project would result in impacts that are not cumulatively considerable. Overall, cumulative impacts of the proposed project would be less than significant.

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c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

In general, impacts to human beings are associated with aesthetics, air quality, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, and wildfire impacts. As discussed in Section 1, *Aesthetics*, the project would not have significant aesthetic impacts. The project would largely be underground or attached to existing utility poles, resulting in minimal changes to the appearance of Palo Alto. As discussed in Section 3, *Air Quality,* the project would not have significant air quality impacts on humans. Implementation of required mitigation would prevent temporary construction dust from having significant adverse air quality impacts. The project would also not have significant impacts on humans related to geology and soils or greenhouse gas emissions, as discussed in Section 7, *Geology and Soils*, and Section 8, *Greenhouse Gas Emissions*, respectively. Wildfire impacts would also be less than significant (see Section 20, *Wildfire*). As discussed in Section 9, *Hazards and Hazardous Materials*, impacts related to the release of or exposure to hazardous materials would be less than significant. Likewise, the potential noise and vibration impacts of the project, as discussed in Section 13, *Noise*, would be less than significant. Accordingly, the proposed project would not have environmental effects that cause substantial adverse effects on human beings, either directly or indirectly.

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List of Preparers

Rincon Consultants, Inc. prepared this IS-MND under direction of the City of Palo Alto. Persons involved in data gathering analysis, project management, and quality control are listed below.

Rincon Consultants, Inc.

George Dix, Project Manager
Abe Leider, Principal-in-Charge
Karly Kaufman, MESM, Quality Control and Assurance
Michael Stewart, PE, Air Quality Specialist
Bryan Valladares, GIS Analyst

Appendix A

Proposed Project Alignment Figures

Appendix B

Air Quality Modeling Data

Appendix C

Cultural Resources Assessment

Appendix D

Tribal Consultation