March 26, 2025 VIA EMAIL

Dustin Joseph
LS Power Grid California LLC
6701 Kroll Center Parkway, Suite 250
Pleasanton, CA 94566

Re: CPUC Review of Amended Application and Proponent's Environmental Assessment for LS Power's Power the South Bay Project (Application 24-05-014)

Dear Mr. Joseph:

On November 12, 2024, the California Independent System Operator (CAISO) approved a modified version of the LS Power Grid California LLC (LS Power) Power the South Bay Project (project), which was originally identified in the CAISO's 2021-2022 transmission plan as the Newark-Northern Receiving Station (NRS) High-Voltage Direct Current (HVDC) Project. These modifications necessitated an amendment to LS Power's certificate of public convenience and necessity (CPCN) Application 24-05-014 filed May 17, 2024 (original application). LS Power filed this First Amended Application for a Certificate of Public Convenience and Necessity Authorizing Construction of the Power the South Bay Project (amended application) on February 28, 2025.

The California Public Utilities Commission (CPUC) Energy Division CEQA and Energy Permitting Unit has reviewed the amended application, which includes updated versions of the Proponent's Environmental Assessment (PEA) and other attachments. Based on this review, the Energy Division finds that the amended application contains sufficient information to satisfy the requirements of the Commission's Information and Criteria List, and therefore deems the amended application complete.

We acknowledge that, following the CAISO's approved project modifications but prior to the submittal of the amended application, LS Power submitted responses to several data requests issued by the Energy Division which further developed certain details of the project description (i.e., Response 1 to Data Request 2 on December 20, 2024 and Response 1 to Data Request 3 on January 14, 2025). These refinements are not reflected in the amended application, but are considered part of the project pursuant to the California Environmental Quality Act (CEQA). Accordingly, the data request responses are appended to this letter as Attachments D and E. Additionally, in the time between the CPUC's completeness determination for the original application (on June 13, 2024) and the CAISO's approval of the new project changes on November 12, 2024, LS Power provided two responses to the CPUC's Data Request 1 clarifying the project details provided in the original application (i.e., Response 1 to Data Request 1 on June 28, 2024, and Response 2 to Data Request 1 on July 10, 2024). These responses are appended to this letter as Attachments B and C to provide additional background. All the data requests and responses are accessible to the public on the CPUC's project webpage, and the project refinements will be incorporated into the Commission's draft CEQA document prepared for the project. The information filed with the amended application, as supplemented separately in the data request responses, is sufficient to support the Commission's CEQA review.

Finally, as the CPUC continues the environmental review for the proposed project, we acknowledge that the First Amended and Restated Approved Project Sponsor Agreement (APSA), identified as Appendix I to the amended

application, has not yet been finalized, as noted in the filed amended application. As soon as the final, executed First Amended and Restated APSA is available, please provide the information requested in the attached Data Request 4 in electronic format to the CPUC and to our consultant, Environmental Science Associates (ESA).

Please do not hesitate to call me at (213) 266-4748 if you have any questions.

Sincerely,

Tommy Alexander
Project Manager for the Power the South Bay Project
CPUC Energy Division

cc: Michelle Wilson, CPUC Energy Division
David D. Davis, AICP, ESA
Michael Manka, ESA

Attachments:

A. Data Request 4
B. LSPGC Response 1 to Data Request 1
C. LSPGC Response 2 to Data Request 1
D. LSPGC Response 1 to Data Request 2
E. LSPGC Response 1 to Data Request 3

Attachment A

Power the South Bay Project Data Request 4

Power the South Bay Project
Data Request 4

- As part of LS Power's First Amended Application, filed February 28, 2025, Appendix I, First Amended and Restated Approved Project Sponsor Agreement (APSA), includes a statement that "LS Power will submit the final, executed First Amended and Restated APSA in a supplemental filing as soon as it is available". Please provide this document when it is available.

Attachment B

LSPGC Response 1 to Data Request 1

June 28, 2024

VIA EMAIL

Mr. Tommy Alexander
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

RE: Response No. 1 to Data Request No. 1 for LS Power Grid California, LLC's Power the South Bay Project (Application 24-05-014)

Dear Mr. Alexander:

As requested by the California Public Utilities Commission (CPUC), LS Power Grid California, LLC (LS Power) has collected and provided the additional information that is needed to adequately conduct the California Environmental Quality Act (CEQA) review for the Power the South Bay Project (Proposed Project). This letter includes the following enclosures:

- Data Request Response Table providing the additional information requested in the Power the South Bay Project Data Request 1, received June 13, 2024.
  - Attachment A – Preliminary Design Drawings for Project Features
  - Attachment B – Revised PEA Figure 5.4-9
  - Attachment C – VMT Assumptions and Calculations
  - Attachment D – Copies of Correspondence with Native American Tribes (CONFIDENTIAL)
  - Attachment E – Updated PEA Table 5.18-2
  - Attachment F – Archaeologist Contact Information (CONFIDENTIAL)
  - Attachment G – GIS Shapefiles

Please contact me at (925) 808-0291 or djoseph@lspower.com with any questions regarding this information.

Sincerely,

Dustin Joseph

Dustin Joseph
Director of Environmental Permitting

Enclosures

cc: Lucy Marton (LS Power)
Casey Carroll (LS Power)
Jacob Diermann (LS Power)
David Wilson (LS Power)
Josh Taylor (KPE)
Michelle Wilson (CPUC)
Dave Davis (ESA)
Michael Manka (ESA)

LS Power - Power the South Bay Project (A. 24-04-017) CPCN and PEA Data Request 1

RESPONSE OVERVIEW

Review of the Certificate of Public Convenience and Necessity (CPCN) Application and Proponent's Environmental Assessment (PEA) for the Power the South Bay Project (Application 24-05-014) was based on the California Public Utilities Commission's (CPUC) Guidelines for Energy Project Applications Requiring California Environmental Quality Act (CEQA) Compliance: Pre-filing and Proponent's Environmental Assessments (November 2019). Based on these criteria, the Energy Division found that the PEA contains sufficient information to satisfy the requirements of the Commission's Information and Criteria List, and therefore deemed Application 24-05-014 complete. The following additional information is provided in response to the Power the South Bay Project Data Request No. 1, which identified further details and evaluation that is needed to adequately conduct the California Environmental Quality Act review.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
3.0 – Project Description		
3.3.1	Please provide preliminary design drawings for project features. • Figures 3-8 to 3-15 provide good information. The CPUC requests additional profile drawings for the substations and terminals which should show the expected facility including the security walls, poles, A-frames, etc. with dimensions showing the height. Provide drawings, including overhead and profile views, showing the excavation dimensions for typical splice vault and duct banks.	Available Preliminary Design Drawings for the duct bank excavation dimensions have been included as **Attachment A** to this Data Request (DR) Response No. 1. The information provided for the other project components in Figures 3-8 to 3-15 show the available information based upon the current stage of design and engineering. PG&E's Scope of Work will include the following: Substation components within substation perimeter: - Height of new structures will range up to approximately 65 feet above grade. The height of existing structures range up to 65 feet above grade. - The existing 12-foot-high substation security wall will not be modified. - 1-bay of existing 230kV lattice structure will be demolished for new line connection. Transmission components outside substation perimeter, within PG&E property: - Height of new structures will range up to approximately 150 feet above grade. - Height of existing structures are up to 160 feet above grade.

[1] Where edits were made to text from the PEA, added text is shown in underline and removed text is shown in ~~strikethrough~~.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		Distribution components outside substation perimeter, within PG&E property: - Removal or relocation to be determined during detailed design. For security reasons, PG&E prefers not to identify specific equipment or provide detailed information on location of substation facilities. General information is not yet available on the design layout. LS Power is currently reviewing information provided by Silicon Valley Power (SVP) in response to this data request. LS Power will submit the information to CPUC under separate cover following completion of review.
3.3.4	Provide diagrams with dimensions of existing facilities. • See Section 3.3.1 above.	See DR Response No. 1 above. LS Power is currently reviewing information provided by SVP in response to this data request. LS Power will submit the information to CPUC under separate cover following completion of review.
3.5.5.2	Provide a diagram of the general sequencing and equipment that would be used. • This will be used as a figure in the Project Description.	See DR Response No. 1 and **Attachment A**.
3.5.6.1	Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants that could be exposed from trenching operations. • The PEA Project Description and Section 5.9, Hazards, Hazardous Materials, and Public Safety, were reviewed for this information; no such description was found.	As discussed in PEA **Section 3.5.6.2**, in the event that soils or groundwater suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during trenching operations, the excavated soils or groundwater would be tested, and, if contaminated above hazardous waste levels, the soils would be contained and disposed of at a licensed hazardous waste facility. All hazardous materials and hazardous wastes would be tested, handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. See PEA **Section 3.5.11** for more discussion on hazardous materials and management. As discussed in PEA **Section 5.10.4**, Groundwater encountered during underground construction would be pumped into water trucks for haul off or directly into containment tanks (e.g., Baker tanks) that allow acceptable de-sedimentation prior to discharge and testing for turbidity and pH, and other required parameters. When groundwater is encountered during construction, measures in **APM WQ-1** would be implemented to ensure

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		avoidance or minimization of potential impacts. Stormwater runoff would be managed according to the Stormwater Pollution Prevention Plan (SWPPP) to comply with any general construction permits and approved by the San Francisco Bay Regional Water Quality Control Board (RWQCB). Additionally, as discussed in **APM HAZ-2**, a Hazardous Materials Management Plan (HMMP) would be prepared that will set forth the protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination and sampling by an OSHA-trained individual and testing at a certified laboratory.
3.5.6.2	Please provide the following information regarding trenchless construction techniques. • Describe the process for safe handling of drilling mud and bore lubricants.	Horizontal direction drilling (HDD) drilling mud/lubricant contains a combination of water and bentonite slurry (naturally occurring clay), that is considered non-hazardous. The mud is prepared in a tank and pumped through the drill pipe to the cutters. The mud acts as a coolant/lubricant during the drilling, while removing the cuttings and stabilizing the bore hole. Cuttings are returned to the entry pit (to later be disposed at an approved facility) while the mud is cleaned and recycled. When not in use, drilling mud would be stored in watertight containers. Official drilling mud and bore lubricant control, monitoring, and containment measures would be established prior to trenchless construction activities commencing and remain in place until after trenchless construction activities are completed, these measures will include but are not limited to: • All sediment and erosion control measures will be installed, including but not limited to, storm drain protection and wattles/silt fences. • The site will be evaluated for areas that are prone to inadvertent release of fluids (typically dry/cracked soils), and proper equipment/materials will be on site to deal with these issues. • Containment areas will be set up for equipment, drilling mud/lubricants, and cuttings storage. Containment areas typically consist of a pit formed by plastic sheathing and straw wattles.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		• HDD equipment containing drilling mud would be set up in the sending and receiving pits to contain any potential spills. • As discussed in **APM HAZ-1**, a site-specific Spill Prevention, Control, and Countermeasure Plan (SPCCP) shall be prepared prior to the initiation of storage of hazardous liquids on the Proposed Project site in excess of the appropriate regulatory thresholds. In addition to the above measures that will be established prior to HDD operations commencing, the following measures would be taken during HDD operations: • An emergency spill kit and fracturing-out kit would be on hand for immediate spill response. • Equipment within 100 feet of any drainage or water resource would be placed in a double containment area. • Monitoring of fluid pressure, bore paths, and water bodies will continue through the HDD operation by a qualified person. • A vacuum truck with sufficient hoses will be staged on site prior to and during drilling operations for emergency response. A pump will be available to assist the vacuum truck. • Spoils would be stored at least 25 feet from any body of water and contained by a sediment barrier and plastic sheeting where practical, and drilling fluid would be stored in watertight containers when not in use. • In the event of an accidental spill, the Proposed Project shall be equipped with secondary containment that meets SPCCP Guidelines.
3.5.6.2	• Describe the process for avoiding contact between drilling mud/lubricants and stream beds.	As discussed in PEA **Section 3.5.6.2**, Geotechnical and topographical survey data would be used to design an HDD path that is adequately beneath the stream bed to minimize the likelihood of fracturing-out. During construction, drilling conditions would be inspected during drilling activities to ensure adequate conditions. Additionally, drilling fluid return volume would be continuously monitored. HDD equipment containing drilling mud would be operated from the sending and receiving pits to contain any potential spills. Spoils would be stored at least 25 feet

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		from any body of water and contained by a sediment barrier and plastic sheeting where practical, and drilling fluid would be stored in watertight containers when not in use. Erosion and turbidity control measures would be implemented in accordance with permit requirements. Methods may include, but are not limited to, the immediate placement of turbidity containment devices such as turbidity screen, silt containment fence, hay bales, and/or earthen berms to contain the drilling mud. All HDD operations will be monitored by a qualified monitor who would continually monitor drilling mud pressures and returns. The monitor would immediately shut down drilling operations during any loss of fluid over 2%. The monitor would also visually inspect the bore path at the completion of each joint and also 100 feet up and downstream along the bore alignment. In the event of an inadvertent release of drilling fluids, all construction activities contributing to the release would be ceased immediately and all applicable regulatory authorities will be notified of the release. Cleanup of the release would be coordinated with the applicable agencies and done in accordance with their guidance and work would not resume in the vicinity of the inadvertent release until approval from the applicable agencies is received. Once the HDD is complete, the monitor would continue to monitor for frac-outs for 48 hours after the drilling is complete.
3.5.6.2	• If engineered fill would be used as backfill, indicate the type of engineered backfill and the amount that would be typically used (e.g., the top two feet would be filled with thermal-select backfill).	The trenchless crossings would be filled from end to end with a low strength fluidized backfill (e.g., thermal grout or bentonite slurry) to ensure consistent thermal contact between the conduits and the earth to promote heat dissipation. When located within roads, the sending and receiving pits would be backfilled with a fluidized backfill following the trenchless construction and duct bank tie-in. A road base backfill, flowable backfill, or slurry concrete cap would be installed, and the road surface would be restored in compliance with local requirements. In non-roadway areas, a fluidized backfill would typically be used following the trenchless construction and duct bank tie-in. The flowable backfill would typically be stopped approximately one foot from the top of finish grade and native soils would be used for the remainder of the backfill.
3.5.6.2	• Describe the process for testing excavated soil or groundwater for the presence of pre-existing environmental contaminants. Describe the process of	As discussed in PEA **Section 3.5.6.2**, in the event that soils or groundwater suspected of being contaminated (on the basis of visual, olfactory, or other evidence) are removed during trenching operations, the excavated soils or groundwater would be tested, and, if contaminated above

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
	disposing of any pre-existing hazardous waste that is encountered during excavation.	hazardous waste levels, the soils would be contained and disposed of at a licensed hazardous waste facility. All hazardous materials and hazardous wastes would be handled, stored, and disposed of in accordance with all applicable regulations, by personnel qualified to handle hazardous materials. See PEA **Section 3.5.11** for more discussion on hazardous materials and management. As discussed in PEA **Section 5.10.4**, groundwater encountered during underground construction would be pumped into water trucks for haul off or directly into containment tanks (e.g., Baker tanks) that allow acceptable de-sedimentation prior to discharge and testing for turbidity and pH, and other required parameters. When groundwater is encountered during construction, measures in **APM WQ-1** would be implemented to ensure avoidance or minimization of potential impacts. Stormwater runoff would be managed according to the Stormwater Pollution Prevention Plan (SWPPP) to comply with any general construction permits and approved by the local RWQCB. Additionally, as discussed in **APM HAZ-2**, a Hazardous Materials Management Plan (HMMP) would be prepared that will set forth the protocols for the management, testing, reporting, and disposal of potentially contaminated soils or groundwater observed or discovered during construction. This would include termination of work within the area of suspected contamination sampling by an OSHA-trained individual and testing at a certified laboratory.
3.5.7.2	Describe the process and equipment required to construct any slope stabilization, drainage, retention basins, and spill containment required for the facility. • This information is necessary to consider the impacts of all project components, including those that provide mitigation.	As discussed in PEA **Section 3.5.4.5**, temporary work areas, terminal sites, and substation upgrade areas, including drainage and detention basins and access roads, would be stabilized during construction with BMPs that would be outlined in the Proposed Project's SWPPP, as discussed in more detail in PEA **Section 5.10**, *Hydrology and Water Quality*. The SWPPP BMPs would remain in place and would be maintained until new vegetation is established or sites are otherwise stabilized. As discussed in PEA **Section 3.5.4.6**, Construction of the Proposed Project and associated improvements would require earthmoving activities at the two terminal sites. However, the proposed HVDC terminal sites were chosen with avoidance of major site grading in mind. While earthmoving activities would be required for the proposed terminal sites and underground transmission lines, this is unlikely to be considered a substantial grading activity. Additionally,

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		during earthwork, soils and other surficial deposits that do not possess sufficient strength and stability to support structures would be removed from the work area. Removal would typically extend to competent materials with high mechanical strength and resistant to erosion and deformation. Material that requires processing would be mechanically processed on-site for placement as fill. Additionally, PEA **Appendix 3-A** outlines the construction equipment by work activity which includes site preparation, below grade construction, and above grade construction which includes the required equipment for slope stabilization, drainage, retention basins, and spill containment.
3.5.15.1	Describe fire prevention and response procedures that would be implemented during construction. • While the analysis of wildfire in Section 5.20 turns on whether a project is located in a State Responsibility Area and/or a Very High Fire Hazard Safety Zone, the analysis of wildfire risk in Section 5.9 does not.	As stated in PEA **Section 3.0** and described further in **Section 5.20**, the Proposed Project is located within a low fire threat area, as identified by California Department of Forestry and Fire Protection ("CAL FIRE") or the CPUC. Impacts are not anticipated to occur, and no mitigation would be required. Construction activities that result in elevated fire risk would implement additional fire prevention measures, as described below and within the PEA. During construction activities that are considered "hot work" (e.g., welding, grinding, or any other activity that creates hot sparks), LS Power would implement a ten-foot buffer around that activity, and vegetation would be cleared to ensure sparks do not create a fire hazard. For activities that do not produce sparks but still have potential to produce a fire hazard, LS Power would implement a five-foot buffer to be cleared of vegetation. Under Section 35 of GO 95, the CPUC regulates all aspects of design, construction, and O&M of electrical power lines and fire safety hazards for utilities subject to their jurisdiction (CPUC, 2020). In addition, Fire Prevention Standards for Electric Utilities (California Code of Regulations [CCR] Title 14, sections 1250-1258) provide definitions, maps, specifications, and clearance standards for projects under the jurisdiction of California Public Resources Code (PRC) sections 4292 and 4293 in State Responsibility Areas (SRAs). LS Power would design and construct the Proposed Project in accordance with all applicable state and federal regulations. In addition, PG&E would implement construction field protocol (FP) **FP-09**, which states:

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		During fire season in designated State Responsibility Areas, equip all motorized equipment with federally approved or state-approved spark arrestors. Use a backpack pump filled with water and a shovel and fire-resistant mats and/or windscreens when welding. During fire "red flag" conditions as determined by Cal Fire, curtail welding. Each fuel truck will carry a large fire extinguisher with a minimum rating of 40 B:C. Clear parking and storage areas of all flammable materials.
5.3 – Air Quality		
5.3.4.1 & 5.3.4.4	The filed PEA qualitatively evaluates staging areas and worker receptors, but two items for health risk remain outstanding. Please update the Health Risk Assessment (HRA) to include: • Annual average PM2.5 concentration (including fugitive dust); and	PM2.5 modeling is in progress and will be submitted under separate cover.
5.3.4.1 & 5.3.4.4	• Cumulative HRA utilizing Bay Area Air Quality Management District (BAAQMD) tools (the filed PEA qualitatively discusses other construction projects that could be nearby, but not existing sources in the BAAQMD tools such as stationary or mobile).	Cumulative HRA is in progress and will be submitted under separate cover.
5.3.4.2	Appendix 5.3-A is provided, but it only includes model output with no Excel spreadsheets. Please provide Excel spreadsheets as they will be required to adequately estimate average daily emissions. • For context, Section 5.3.4.3, Appendix 5.3-A indicates that average daily emissions are underestimated. As an example, 2026 emissions are based on total emissions for the calendar year, divided by 365 days; however, construction in 2026 starts in June, and would occur six days a week, so the actual average daily emissions could	Emissions modeling in PEA **Appendix 5.3-A** are based on the equipment spreadsheets included as PEA **Appendix 3-A**.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
	be close to twice as much as reported. The BAAQMD recommends that average daily emissions be estimated based on the number of construction days for the year, not the total days in the year.	
5.4 – Biological Resources		
5.4.1.4	Wetland Delineation Report. Aquatic resources are generally mapped in Figure 5.4-3 for the entire project from National Wetland Inventory (NWI) GIS files and in Figure 5.4-4, but only two short sections have been formally delineated. Please provide the wetland delineation report for formally delineated areas at Cushing Parkway. If access to certain areas of the Project alignment remains limited, please advise and provide this information as access is granted.	The formally delineated wetland areas are shown on pages 2 and 5 on **Figure 5.4-4** of the PEA. The wetland delineation data is presented within PEA **Appendix 5.4-A**. **Section 2.3.1** of **Appendix 5.4-A** (*Biological Resources Technical Report*) outlines the methodology for jurisdictional waters mapping surveys. **Section 4.7** of **Appendix 5.4-A** discusses the delineated aquatic resource features and **Figure 10** depicts the locations of these features. All Proposed Project Areas were surveyed for water features and potential jurisdictional wetlands. Where potential jurisdictional waters or wetlands occurred within Proposed Project impact areas (i.e., temporary construction areas or permanent Project features), formal wetland delineations were conducted, where access was granted. Additional information pertaining to preliminary and formal delineations are provided below. Two areas within the project study area that have the potential to consist of jurisdictional features were not formally delineated. The potential wetland identified west of structure AC-4 (refer to page 9 of **Figure 5.4-4**) is within Caltrans jurisdiction and access to this site has not yet been granted. Potential vernal pools were identified near the Newark to Albrae 230 kV and Newark substation as shown as yellow polygons on page 1 of **Figure 5.4-4**. However, these potential vernal pools were not formally delineated LS Power. These potential vernal pools are within PG&E work areas, located on PG&E-owned property, and are associated with Project components that would be owned and operated by PG&E. PG&E would implement construction BMPs to avoid or reduce impacts associated with vernal pools. As discussed above and in **Appendix 5.4-A**, a full formal wetland delineation and mapping was conducted for the potentially jurisdictional water features or wetlands that had the potential to be directly impacted by the Proposed Project. This included two areas that had been granted access permission at the time of the surveys: the area along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara Regional Wastewater Facility (RWF) (i.e.,

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		from the southern side of McCarthy Boulevard bridge to the proposed overhead Structure DC-3), and both north and south sides of Cushing Parkway bridge, within the Cushing Parkway operation and maintenance easement. The wetland surveys were conducted on December 12, 2023 for the Coyote Creek area and March 15, 2024 for the Cushing Parkway bridge area. The two jurisdictional water features that were formally delineated are further described below. <u>Coyote Creek near McCarthy Boulevard</u> Coyote Creek is a perennial stream that flows north through the Survey Area. The channel has been modified on both banks, having been graded and in some places hardened, to protect adjacent infrastructure with a paved access road on the west and a trail to the east. The creek appeared to be flowing higher than normal during surveys in December 2023 as riparian vegetation was partially submerged. High-water conditions slightly affected the ability to delineate the ordinary high water marks (OHWMs) of the creek and its adjacent wetlands. The east side of the creek has been modified more than the west side, creating a more abrupt transition from the channel to the floodplain, leading to the uplands. This allowed for the delineation of the OHWM on the east bank and the CDFW jurisdictional extent based on the limit of riparian vegetation. A cattail- and bull rush-dominated wetland (*Typha angustifolia*, OBL and *Schoenoplectus* spp., OBL) lines the bank, partially below the OHWM. The west bank of the creek has been modified as well, but the transition from the creek to the uplands is more gradual and the fringe wetlands more extensive. It was not possible to fully investigate the west-bank OHWM because of the high water; however, the western extent of wetlands and the CDFW-jurisdictional extent was delineated. The proportion of wetland that is submerged channel vegetation versus fringe wetlands was undetermined. Regardless, the area below the CDFW line encompasses both aquatic resource types (emergent wetland and open-water channel). <u>Cushing Parkway</u> Cushing Parkway crosses a wide marsh with a 3,400-foot bridge. The marsh supports numerous shallow open-water ponds surrounded by marshlands; no main channel (i.e., river or creek) is present. Flow is generally to the southeast, eventually reaching the salt flats north of Coyote Creek. The ground level has been raised several feet and levelled, effectively creating a 30-foot

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		shoulder adjacent to both sides of the bridge. Barbed wire fence separates the shoulders from the adjacent marsh. Eight corrugated metal pipe culverts, ranging from 24- to 40-inch diameters, are distributed along the bridge to convey water beneath the bridge. A low water crossing allows for vehicle access midway across the bridge to the north side of the bridge and serves as a high-water conveyance. All culvert inlets are outside the fenced north shoulder and carry water under the shoulder and outlet under the bridge. Flows continue about 80 feet under the bridge in open concrete canals to another culvert inlet. The second culvert flows beneath the south shoulder and outlet beyond the fence to marsh beyond. Extending 800 feet from both ends of the bridge, the shoulders are steeper roadsides with some shrubs. The central section is nearly all short brome on flat ground built a few feet above the adjacent surface waters. Soils were moist, but not hydric, and no wetland hydrology was observed. The numerous culverts appear to adequately convey flow through the bridge. One wetland was located on the south side of the bridge about 900 feet from the western end. The wetland is 2,265 square feet (0.05 acre) within the Survey Area boundary (the fence) and the wetland extends beyond the fence connecting to a larger pond. Dominant vegetation was not identifiable (emerging grasses); however, hydrology and soils were strong which consisted of vegetation. It should be noted that the bridge is supported on numerous piles, and the ground directly beneath the bridge is exposed mud. The underside of the deck is low, less than 10 feet mostly, and no vegetation is present due to the shading.
5.4.1.8	Portions of the Don Edwards San Francisco Bay National Wildlife Refuge (NWR) near the project are only generically described – specifically, both sides of Cushing Parkway and to the north of Los Esteros Road, west of the San José-Santa Clara Regional Wastewater Facility (RWF). Please quantify and map the project areas within this biological resource management area. If access to certain areas of the Project alignment remains limited, please advise and provide this information as access is granted.	As discussed in PEA **Section 5.4**, *Biological Resources*, portions of the Proposed Project would be located adjacent to the Don Edwards San Francisco Bay NWR. The Don Edwards San Francisco Bay NWR Comprehensive Conservation Plan (CCP) does not provide regulations or take authorization for private development or utility infrastructure projects. **Figure 5.1-1** *Scenic Resources* shows the boundaries of the Don Edwards San Francisco Bay National Wildlife Refuge (NWR) relative to the Proposed Project. Additionally, Figure **5.11-3,** *BCDC Jurisdiction and Priority Use Areas* which is also included as **Figure 15** of the BRTR shows the boundaries of the Don Edwards San Francisco Bay NWR.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		Based on field conditions and documentation received from the City of Fremont, LS Power understands that the Cushing Parkway bridge and associated O&M easement are not located within the Don Edwards NWR. As such, the Proposed Project is adjacent to, but does not fall within, the Don Edwards NWR. LS Power has reached out to the USFWS to introduce the Project and its vicinity to the Don Edwards NWR. The Proposed Project would only be located within the O&M ROW that is maintained by the City of Fremont along the Cushing Parkway bridge. This area is fenced in, maintained, mowed, and raised, separating it from the Don Edwards San Francisco Bay NWR to the north and south of the ROW. The portions of the Don Edwards San Francisco Bay NWR that are located on both sides of the Cushing Parkway bridge ROW includes a floodplain area that supports a combination of marsh and annual grassland habitats with numerous shallow open-water ponds. Additionally, a main channel (i.e., river or creek) is not present. Flow is generally to the southeast, eventually reaching the salt flats north of Coyote Creek. The Don Edwards San Francisco Bay NWR is used for cattle grazing on both sides of Cushing Parkway. Additionally, the Proposed Project crosses over the Don Edwards San Francisco Bay NWR jurisdiction along Coyote Creek under Fremont Boulevard. The Proposed Project's crossing of Coyote Creek would be an HDD crossing under the Creek and would not impact Coyote Creek or the Don Edwards San Francisco Bay NWR in this area. This portion of Coyote Creek includes riparian vegetation along the banks (cattails and bulrush). The Proposed Project is in close proximity to the Don Edwards San Francisco Bay NWR at Laguna Creek near Cushing Parkway just west of the Cushing Parkway and Fremont Blvd intersection. However, the Proposed Project is not within the NWR in this area. The area surrounding this portion of the Don Edwards San Francisco Bay NWR and Laguna Creek is very disturbed and developed. The creek includes some riparian vegetation along the banks (cattails and bulrush) but appears to be frequently disturbed or dredged. As shown in PEA **Figure 5.11-3**, the Proposed Project is within approximately 500 feet of the Don Edwards San Francisco Bay NWR along Los Esteros Road northwest of the Baylands Terminal site. This area includes brackish estuarine areas and salt marsh habitats and is in the vicinity of the Don Edwards San Francisco Bay NWR Environmental Education Center. Additionally, brackish estuarine areas and salt marshes are located to the north of Los Esteros

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		Road from the Baylands Terminal site to the merging of Los Esteros Road and Grand Boulevard. These areas appear to have been disturbed in the past and now are frequently inundated and support some riparian and salt marsh vegetation.
5.4.2.2	Please confirm if the proposed Project is covered by the Santa Clara Valley Habitat Plan.	The Proposed Project is located within the permit area for the Santa Clara Valley HCP, and the HCP covers public and private utility activities within the planning limits of urban growth (as defined by the HCP) including the activities associated with the Proposed Project. In addition, a majority of the Proposed Project occurs within the planning limits of urban growth and may be included as covered activities under this HCP. The Santa Clara Valley HCP provides incidental take coverage for project-specific impacts on Santa Clara Valley HCP-listed species and removes the need to obtain incidental take permits from the wildlife agencies and reduces the number and scope of required biological studies. The Santa Clara Valley HCP allows for Public or quasi-public entities to request coverage under the HCP for activities that are within the permit area through their Participating Special Entity Application Process. If it is determined that Santa Clara Valley HCP-listed species would be impacted by the Proposed Project, LS Power would consult with the appropriate HCP stakeholders to opt into and be covered by the HCP as a Participating Special Entity. However, if It is determined that the Proposed Project would not impact Santa Clara Valley HCP listed species, LS Power would not utilize the HCP.
5.4.4.3	Please quantify and map listed species habitat that will be impacted by the proposed Project. Vernal pool tadpole shrimp and California tiger salamander are known from habitats immediately adjacent to Cushing Parkway. If access to certain areas of the Project alignment remains limited, please advise and provide this information as access is granted.	As discussed in PEA **Section 5.4**, *Biological Resources*, there is USFWS-designated critical habitat for the Contra Costa goldfields, western snowy plover, and vernal pool tadpole shrimp located within the Don Edwards San Francisco Bay NWR in the northern portion of the Survey Area and extending into the Proposed Project impact area along Cushing Parkway (USFWS, 2023; **Figure 5.4-6**, *Critical Habitat Map*). There is also NMFS-designated critical habitat for the Central California Coast distinct population segment (DPS) of steelhead and for the Southern DPS of green sturgeon. The critical habitat for steelhead occurs along Coyote Creek and the Guadalupe River within the Proposed Project area. The critical habitat for the green sturgeon occurs within the Proposed Project area along Coyote Creek, San Tomas Aquino Creek, Guadalupe River, near Coyote Creek Lagoon in a drainage that passes under Fremont Boulevard, and along a tributary to Coyote Creek that passes under Cushing Parkway just east

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		of the Fremont Boulevard and Cushing Parkway intersection. Additionally, some critical habitat for green sturgeon occurs within estuary areas associated with the San Francisco Bay (NMFS, 2024; **Figure 5.4-6**). Additionally, **Figure 5.4-9** indicates potentially impacted species habitat. **Figure 5.4-9** has been revised and included as **Attachment B** to this data request response to clearly indicate the locations of the listed species habitat. Impacted species habitat is quantified by species on pages 5.4-31 through 5.4-42 and lists applicable APMs. As discussed on page 5.4-34, there would be up to 0.31 acre of temporary impacts and no permanent impacts to suitable nesting or foraging habitat for the California Ridgway's Rail and California Black Rail. As discussed on page 5.4-35, the Proposed Project would result in up to approximately 82.51 acres of temporary impacts to potentially suitable nesting and foraging habitat and permanent loss of up to approximately 8.65 acres of potentially suitable nesting and foraging habitat (native and nonnative grassland habitat) for burrowing owl. As discussed on page 5.4-36, the Proposed Project would result in up to approximately 82.51 acres of temporary impacts to foraging habitat and a permanent loss of approximately 8.65 acres of foraging habitat (native and nonnative grassland habitat) for golden eagle and other raptors. The Proposed Project would result in up to approximately 7.01 acres of temporary impact to potentially suitable nesting and foraging habitat and permanent loss of approximately 0.02 acre of potentially suitable nesting and foraging habitat for the tri-colored blackbird. Direct impacts to the special-status invertebrate species (Monarch butterfly, large marble butterfly, Crotch's bumblebee, Western bumblebee [grassland and disturbed grassland habitat], vernal pool tadpole shrimp, and vernal pool fairy shrimp) could include potential vehicle strikes or crushing during construction and operation, removal of suitable flowering vegetation for butterflies and bees during construction and vegetation clearing activities, and permanent loss of approximately 8.63 acres of potentially suitable habitat (annual grassland) (**Figure 5.4-9**). Temporary impacts to special status invertebrate species could occur due to disturbance of approximately 88.53 acres of annual grassland, riparian, and wetland habitat types. As discussed on page 5.4-41, direct impacts to the special-status amphibian and reptile species, such as California red-legged frog (CRLF) (vicinity of Coyote Creek and associated lakes and ponds) (**Figure 5.4-9**), western pond turtle (WPT) (open water habitats exist along Coyote Creek, Agua Caliente Creek, Guadalupe River, and numerous ponds and lakes; brackish estuarine areas exist in the vicinity of Don Edwards

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		San Francisco Bay NWR and the San Francisco Bay) (**Figure 5.4-9**), and California tiger salamander (CTS) could include potential direct mortality due to vehicle strikes during Proposed Project construction and operation, removal of vegetation that could be used for breeding and cover during construction and vegetation clearing activities, and temporary loss of approximately 88.65 acres and permanent loss of approximately 8.66 acres of potentially suitable breeding and upland dispersal habitat (annual grassland, wastewater treatment ponds, riparian, and wetland habitat types; see **Table 5.4-4** for impacts to each habitat type).
5.4.4.4	A wetland identification table was not provided because the delineation is not complete. Construction methods are not discussed in detail. Please provide details on both. Please confirm if California Department of Fish and Wildlife (CDFW), Regional Water Quality Control Board (RWQCB),and/or U.S. Army Corps of Engineers (USACE) permitting is needed for the "no impact" horizontal directional drilling (HDD) crossings.	As discussed in PEA **Section 5.4**, *Biological Resources*, a full formal wetland delineation and mapping was conducted for the jurisdictional water features with the potential to be impacted by the Proposed Project at two locations where access was granted: the area along Coyote Creek in the vicinity of McCarthy Boulevard and the San José-Santa Clara RWF (i.e., from the southern side of McCarthy Boulevard bridge to the proposed overhead structure DC-3), and both north and south sides of Cushing Parkway bridge. The impacts to CDFW and RWQCB/USACE for work areas associated with proposed overhead transmission line structures DC-1 and DC-2 are shown in **Table 5.4-6.** Construction of DC-1 and DC-2 would potentially impact a delineated wetland as shown on page 5 of **Figure 5.4-4**. Typical methods that would be used for construction of overhead transmission line structures DC-1 and DC-2 are outlined in **Section 3.5**, *Construction.* **Section 3.5.6.2** outlines the HDD construction techniques. Additionally, **APM BIO-1** outlines restoration steps to restore temporary disturbance to natural vegetation areas inclusive of annual grassland, annual grassland/wetland, riparian, wetland, and vernal pools. **APM BIO-4** outlines how to clearly mark sensitive biological areas prior to construction. **APM BIO-17** outlines construction timing restrictions in the vicinity of waterways, wetlands, and vernal pools. Jurisdictional waters permits are not required for HDD borings that do not result in impacts to the jurisdictional feature. The proposed HDD boring pits would be placed outside of CDFW, RWQCB and/or USACE jurisdictional areas. One would be located on either side of the jurisdictional area that would utilize the borings. In general, HDD borings are drilled at an angle to a depth that is sufficient to cross under the jurisdictional feature without impacting the feature. At the determined depth, the bore flattens out horizontally, traveling underneath the jurisdictional area, then returns gradually to the surface at the second bore pit. HDD boings do not result in

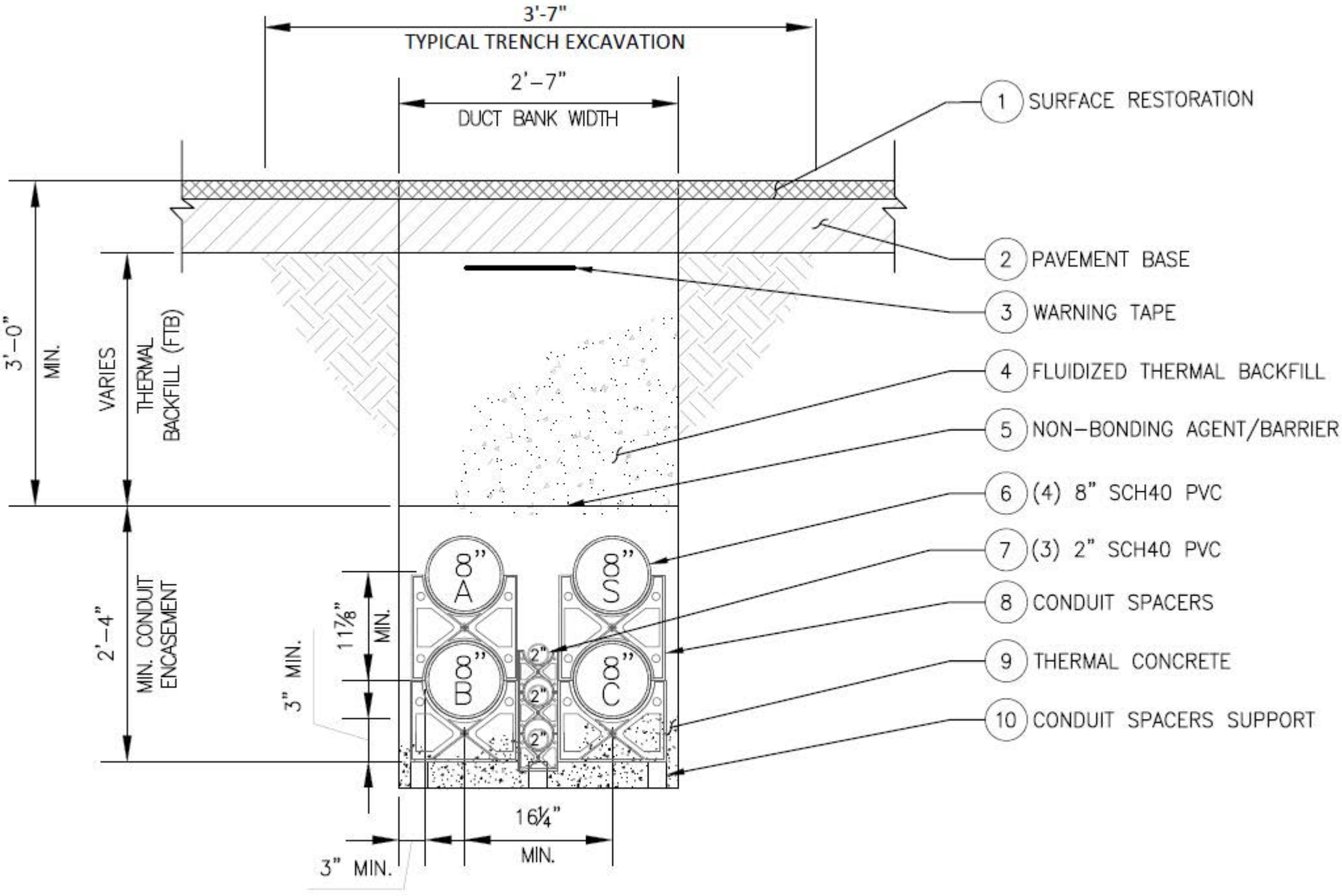
LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		impacts to the jurisdictional feature at the surface, and no permits (LSAA, WDR, or USACE) are required.
5.17 – Transportation		
5.17.4.2	Please provide an Excel spreadsheet with vehicle miles traveled (VMT) assumptions and model calculations.	An Excel spreadsheet with VMT assumptions and calculations is provided as **Attachment C.**
5.17.4.3	Please provide a traffic impact study or explain why such a study is not necessary.	The CPUC *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-filing and Proponent's Environmental Assessments* require that, if necessary, a traffic impact study should be prepared in accordance with guidance from the relevant local jurisdiction or Caltrans, where appropriate. As described in PEA **Section 5.17.2.1**, *Transportation Regulatory Setting*, the City of Fremont Transportation Impact Analysis (TIA) Handbook, City of Milpitas Transportation Analysis (TA) Guidelines, and City of San José TA Handbook provide guidelines for significance criteria, screening criteria, and thresholds of significance for environmental clearance for development projects. The Santa Clara Valley Transportation Authority (VTA) TIA Guidelines (October 2014) also provide a trip threshold for when a TIA must be completed. Each of the relevant local guidelines do not address or account for transmission lines or regional public utility infrastructure, and the screening criteria focus on operational impacts of specific local-serving land use projects, such as residential infill, office and industrial, or roadway expansions and improvements. The Santa Clara VTA trip threshold, for example, states that a TIA must be prepared when a project is expected to generate 100 or more net new weekday (AM or PM peak hour) or weekend peak hour trips, including both inbound and outbound trips. Trip-reduction measures in each of the plans are specific to operational trips following project construction, which do not apply to the Proposed Project. The Proposed Project would result in a negligible number of additional vehicle trips during operation because the new facilities would be unstaffed and remotely monitored. If equipment malfunctions, O&M personnel would be dispatched to the site to investigate the problem and take appropriate corrective action. Therefore, the Proposed Project would not meet the relevant local thresholds for preparing a TIA or TA for operational impacts. Construction trips and VMT

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		would be short-term and temporary in nature and would represent a small percentage of existing VMT and average annual daily traffic (AADT) on regional roadways that could serve as Proposed Project access routes. As stated in PEA **Section 5.17.4.1**, *Transportation Impact Analysis,* the maximum daily vehicle trips during construction of the Proposed Project (500 per day) would represent approximately 0.26 percent of the AADT at the junction of I-880 and SR-262 and 0.32 percent of the AADT at the junction of I-880 and SR-237. **Table 5.17-1**, *Existing Roadways Summary*, provides the existing daily traffic volume for local roadways that would provide vehicle access to the Project site. Proposed Project vehicles would be travelling along a variety of routes depending on their purpose and destination (e.g., deliveries, spoils haul-off, tailboard meetings, traffic control, etc.) during various construction phases and would, therefore, be expected to account for a much smaller percentage of AADT and daily traffic volume at each of these junctions and local roadways. The Proposed Project does not meet any established thresholds of the City of Fremont TIA Handbook, City of Milpitas TA Guidelines, City of San José TA Handbook, or Santa Clara VTA TIA Guidelines to prepare a CEQA VMT analysis, a Transportation Demand Management (TDM) Plan, TIA, or a Local TA for long-term operations due to the negligible trips and VMT required for O&M of the Proposed Project. Therefore, the Cities of Fremont, Milpitas, and San José and Santa Clara VTA guidelines related to preparation of a TIA, TOA, or TA for operational impacts are not applicable to the Proposed Project. Further, **Section 5.17** of the PEA provides a consistency analysis with existing transportation-related plans, and concludes that construction and O&M of the Proposed Project would not conflict with the Alameda Countywide Transportation Plan; Alameda Countywide Transit Plan; City of Fremont General Plan; City of Fremont Bicycle Master Plan; Santa Clara VTP 2040; Santa Clara Countywide Bicycle Plan; City of Milpitas General Plan; City of Milpitas Trail, Pedestrian, and Bicycle Master Plan; City of San José General Plan; City of San José Better Bike Plan; City of San José Vision Zero campaign; City of Santa Clara General Plan; or the City of Santa Clara Bicycle Plan. Proposed Project-generated traffic would be temporary, periodic, and managed with the implementation of a Traffic Control Plan (**APM TRA-1**), which would further reduce impacts to traffic congestion. Therefore, preparation of a traffic study in accordance with local relevant guidelines is not necessary for the Proposed Project.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
5.18 – Tribal Cultural Resources		
5.18.1.1	Please provide copies of all correspondence between PanGIS/LS Power and tribes.	Copies of all correspondence between PanGIS/LS Power and tribes have been included as **Attachment D** (CONFIDENTIAL).
5.18.1.2	Two isolates were observed in the proposed Project area during surveys. Please provide an evaluation of these two isolates.	As discussed in PEA **Section 5.18**, *Tribal Cultural Resources*, Resource CP-Iso-01 is a potential groundstone artifact with unifacial wear, and resource SA10-Iso-02 is a small green chert core with evidence of flake removal; both are isolated finds in disturbed context. **Table 5.18-2** has been updated as **Attachment E** to this data request response to indicate that the two resources are not eligible for the National Register of Historic Places (NRHP) or California Register of Historic Resources (CRHR). As discussed in PEA **Section 5.5**, *Cultural Resources*, two new prehistoric archaeological resources were located during the surface survey, as shown in **Table 5.5-3**, *Archaeological Survey Results*. Resource CP-Iso-01 is a potential groundstone artifact with unifacial wear, and resource SA-10-Iso-02 is a small green chert core with evidence of flake removal; both are isolated finds in a disturbed context and, therefore, do not qualify as historical resources as defined in Section 15064.5. No additional archaeological resources or TCRs, as defined in Section 15064.5, were located during the surface survey. Detailed survey methods and results are described in the *Cultural Resource Technical Report for the Power the South Bay Project, Santa Clara County, California* (Mengers et al., 2024), which is included as PEA **Appendix 5.5-A**.
GIS Data Review		
GIS	Please provide GIS shapefiles for the California Historical Resources Information System (CHRIS) record search and cultural survey results/newly recorded resources, per the confidential Appendix F of the cultural resources report (Figure 6, “Previously Recorded Resources” and Figure 7, “Survey Results”).	Due to the confidentiality of the CHRIS record search GIS data, the CPUC’s archaeologist can coordinate directly with the Project archaeologist to obtain the requested data. Project Archaeologist contact information is provided as **Attachment F** (CONFIDENTIAL).

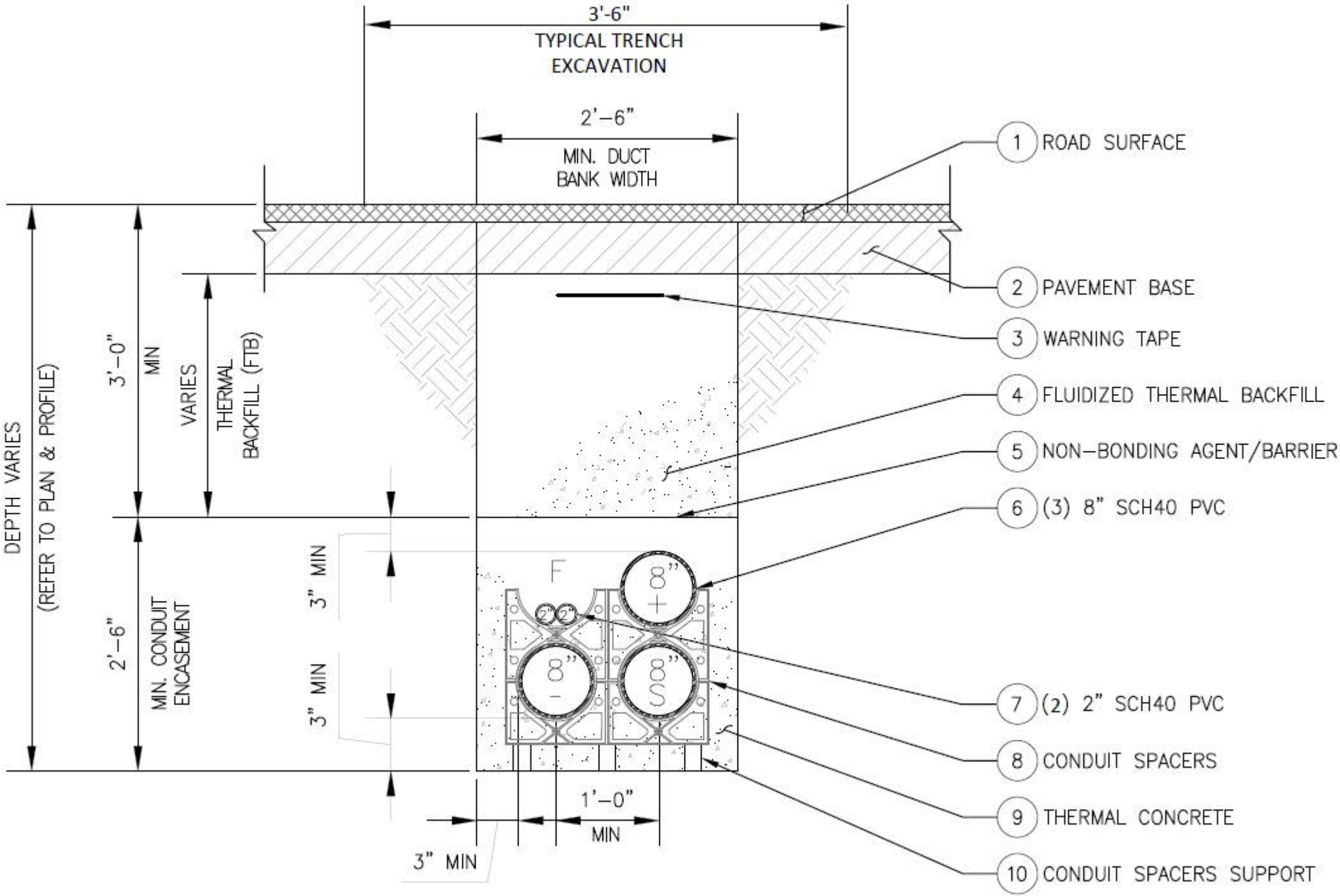
LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
GIS	Please provide GIS shapefiles for access road type (e.g., overland vs. dirt vs. existing access).	GIS shapefiles with access road types have been included as **Attachment G** to this Data Request Response. Existing access roads for the Proposed Project are discussed in PEA **Section 3.5.1.1** and **Table 3-2** of **Section 3.0**, *Project Description*. Existing access roads for the Proposed Project provide access to the overhead portion of the Albrae to Baylands 320 kV DC transmission line and are shown on pages 5 through 7 of **Figure 3-4**. As shown in **Figure 3-4**, the existing access road begins at the southern boundary of Staging Area 4, off McCarthy Boulevard, at the location of overhead structure DC-1 and ends at Zanker Road. As discussed on page 3-23, the existing and primary access to the proposed Albrae terminal site for both construction and O&M would be from Weber Road. The existing and primary access to the proposed Baylands terminal site for both construction and O&M would be from Los Esteros Road. The Proposed Project includes underground transmission lines that are sited almost exclusively within existing public roads. Therefore, the roads where the Proposed Project is located and adjoining roads would be utilized for construction and operations access. Additionally, **Section 3.5.1.2** of the PEA discusses new access roads and **Table 3-3** provides additional details on the new access roads.
GIS	Please provide GIS shapefiles for new or modified rights-of-way or easements.	The Proposed Project would utilize a combination of existing property, existing ROW/easement, franchise rights within existing public roadways, and new ROW. GIS data (.shp files) for the areas where new ROW is required has been included as **Attachment G** to this Data Request Response. Additionally, PEA **Section 3.4.3** discusses ROWs and easements. Specifically, the proposed HVDC terminals would be sited on land owned or leased by LS Power and would not require a new or modified ROW or easement. As discussed on page 3-21 of **Section 3.0**, the proposed Newark to Albrae 230 kV transmission line, Albrae to Baylands 320 kV DC transmission line, and Baylands to NRS 230 kV transmission lines, duct banks, and splice boxes would require new ROWs/easements or franchise agreements. The overhead portion of the proposed Baylands to NRS 230 kV transmission line would require a ROW width of 110 feet, and the ROW width for the underground transmission is generally approximately 10 feet. As discussed on page 3-22 of **Section 3.0**, the ROW for all underground portions of the proposed Newark to

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE[1]**
		Albrae 230 kV transmission line, Albrae to Baylands 320 kV DC transmission line, and Baylands to NRS 230 kV transmission line would be expanded at vault locations. The specific width of necessary easements, ROWs, or franchise agreements along the Proposed Project transmission line alignments would be refined during the final engineering process. A portion of the new permanent easement/ROWs would be acquired by LS Power through negotiations with private landowners, SVP, PG&E, and municipal-, state-, and regional agency-owned lands discussed in above in **Section 3.4.1**. New permanent ROWs or licenses would also be acquired from each applicable public agency through that agency's designated process. As discussed in **Section 3.4.3.2** and **3.4.3.3**, PG&E owns the parcel the existing Newark substation is located on, and no additional ROWs or easements would be required. The City of Santa Clara owns the parcel the existing NRS substation is located on, and no additional ROWs or easements would be required.



SECTION A–A

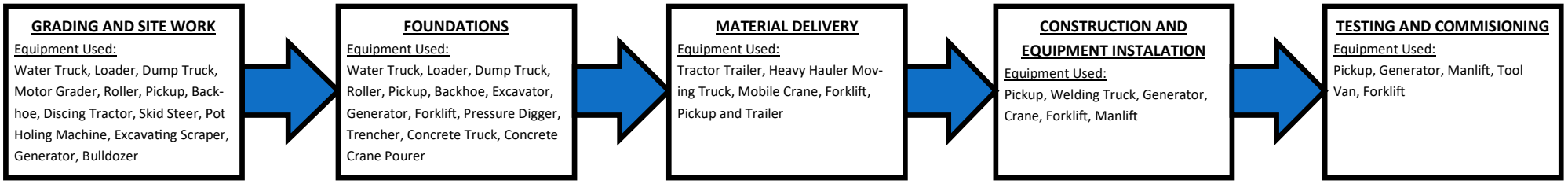
TYPICAL CONFIGURATION



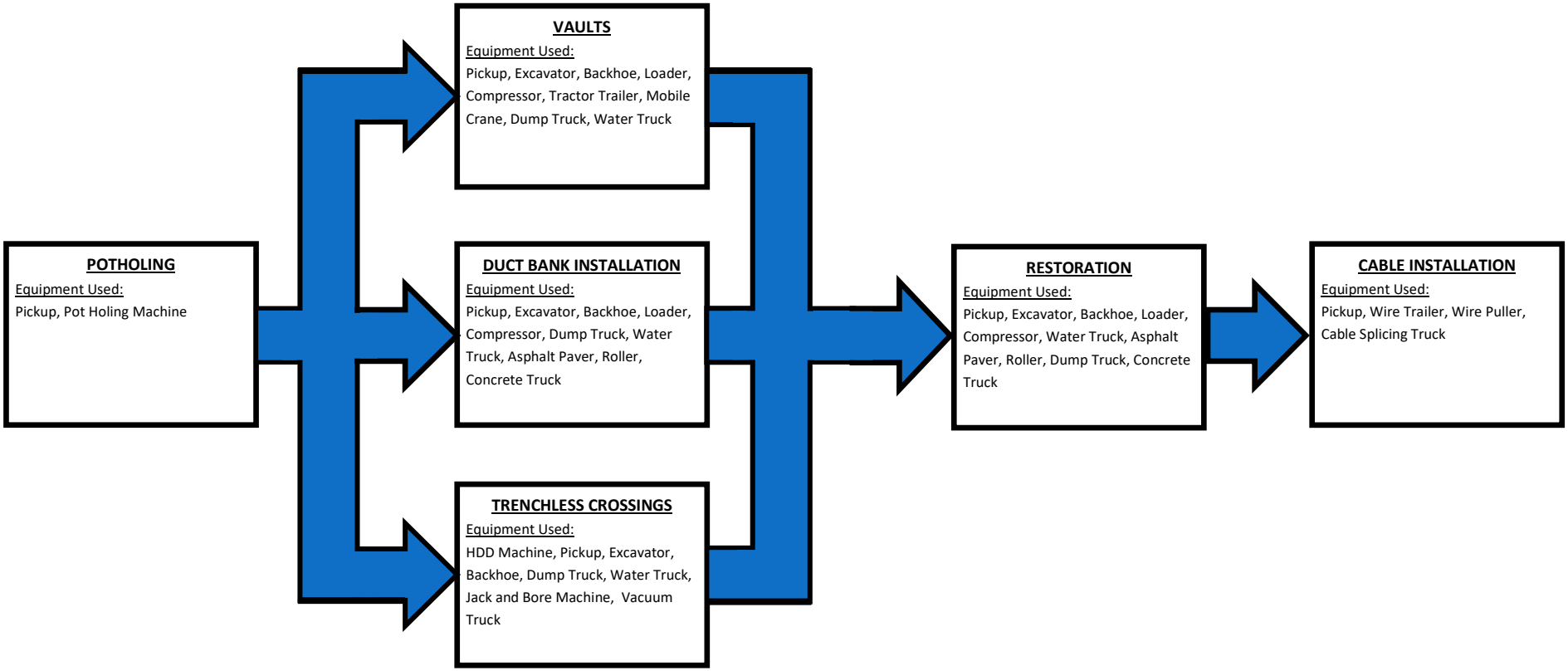
SECTION A-A

TYPICAL CONFIGURATION

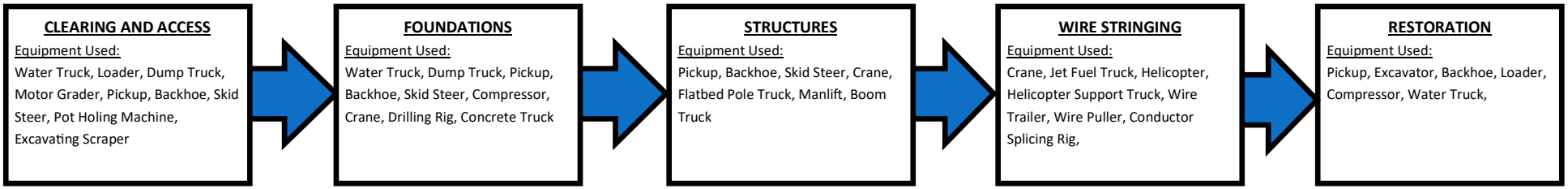
Terminal Construction Sequencing



Underground Transmission Line Construction Sequencing



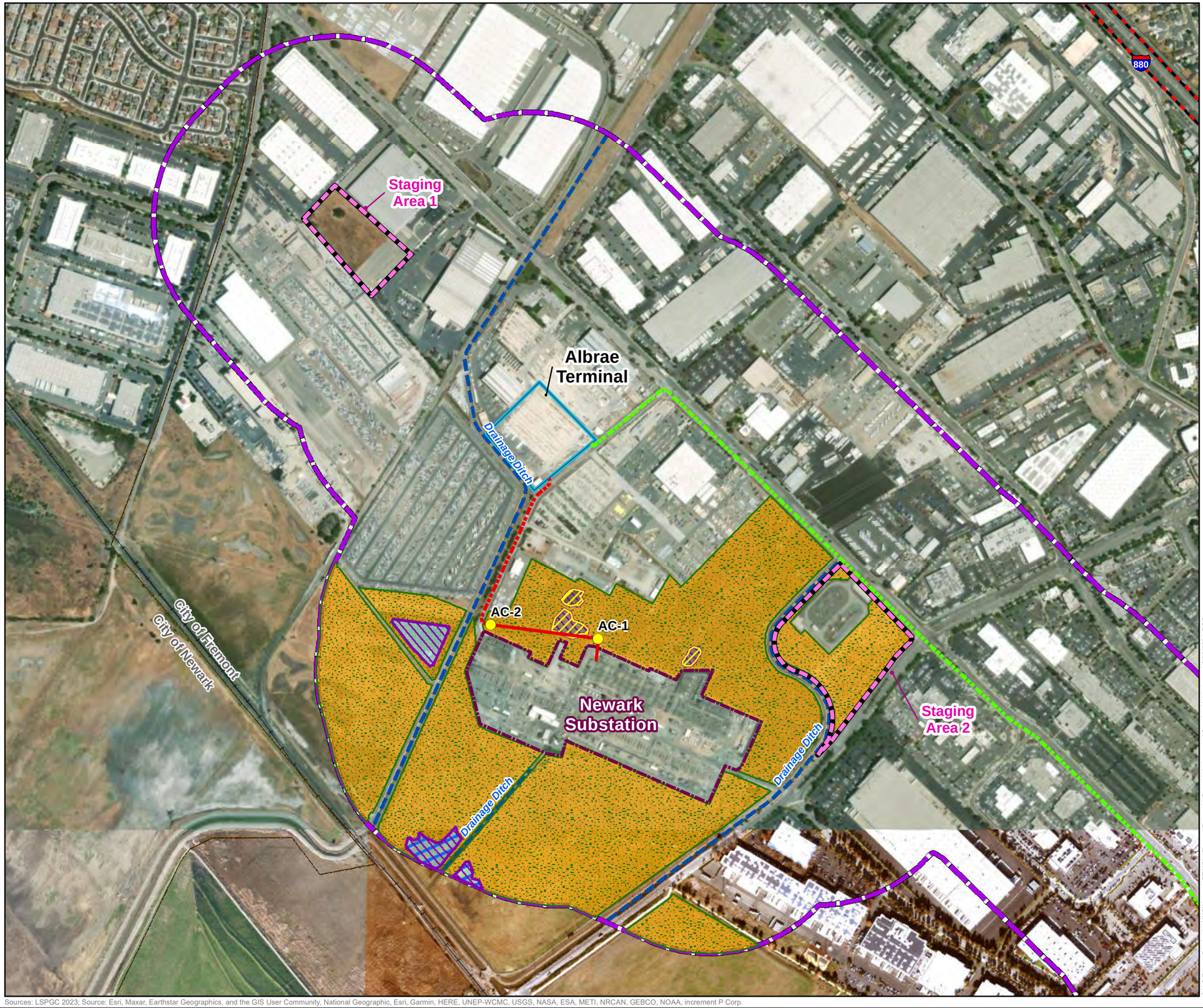
Overhead Transmission Line Construction Sequencing



POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

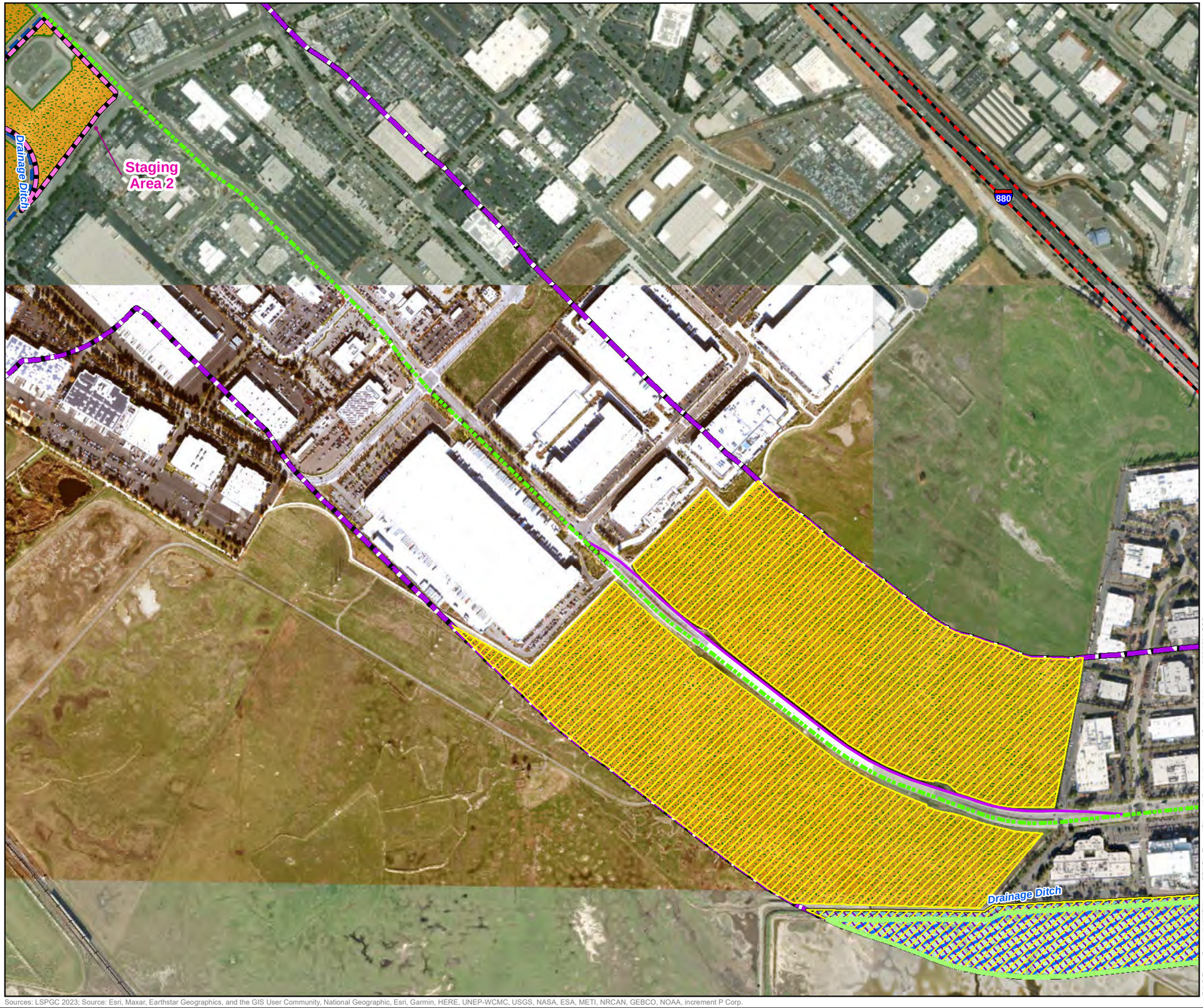
- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000
Feet

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000
Feet

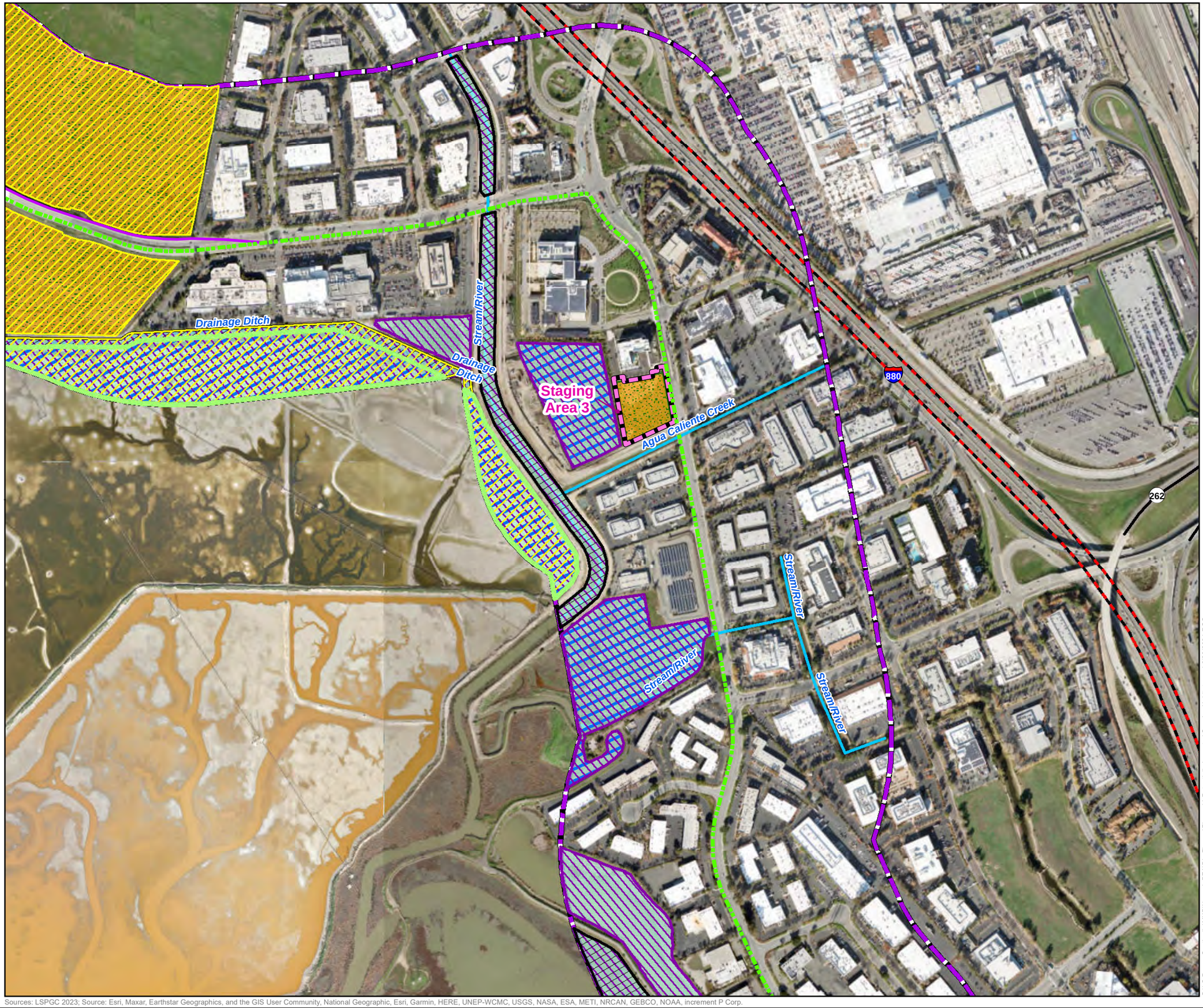
Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

G:\LS Power Central\NAD\Newark PEA\Bio Figures\Figure 5.4 Potentially Impacted Species Habitats mxd 6/20/2024 RCQ

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000

Feet

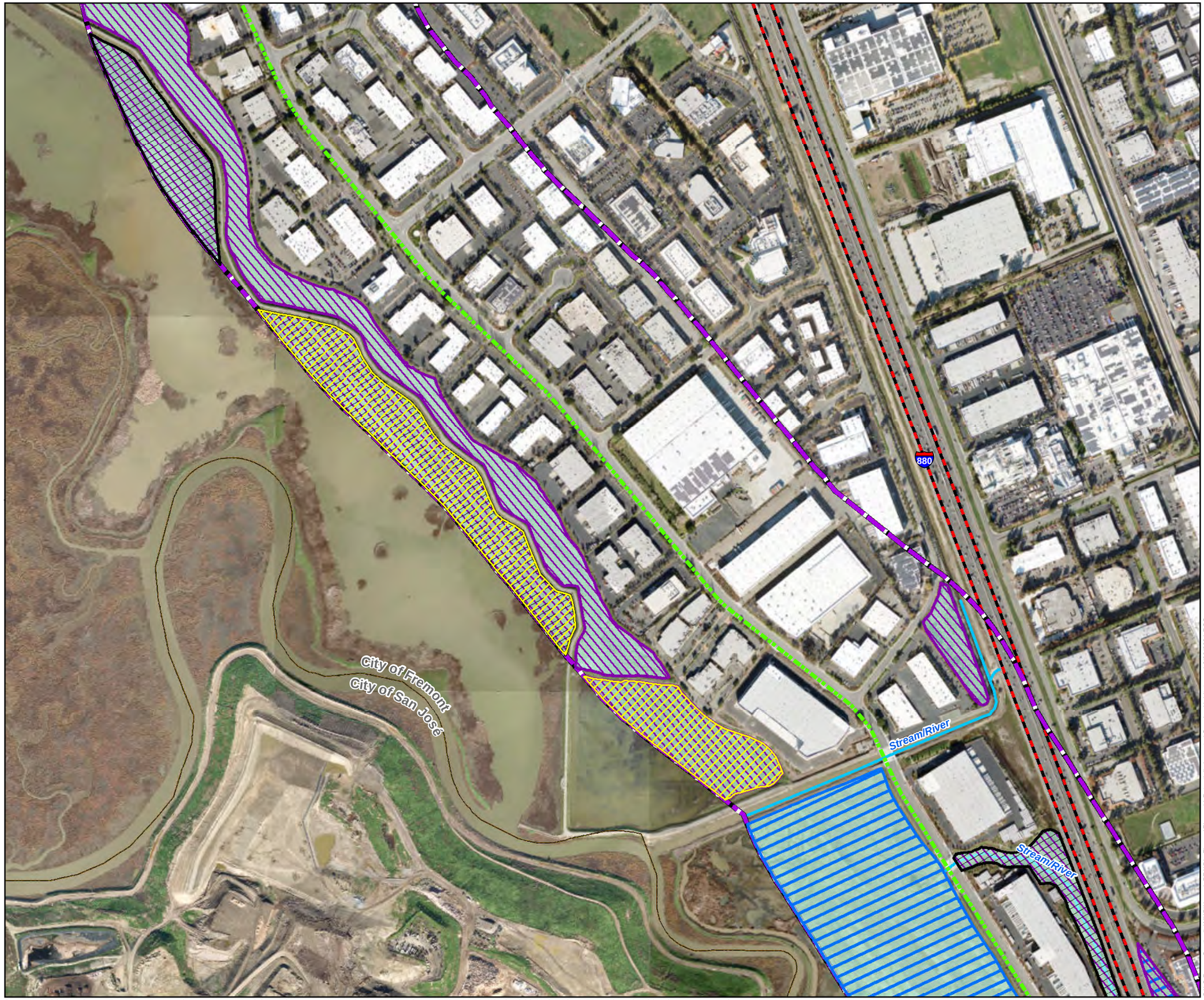
Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

G:\LS Power Centennial\NAD\Newark PEA\Src Figures\Figure 14 Potentially Impacted Species Habitats mxd 6/28/2024 RCQ

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000

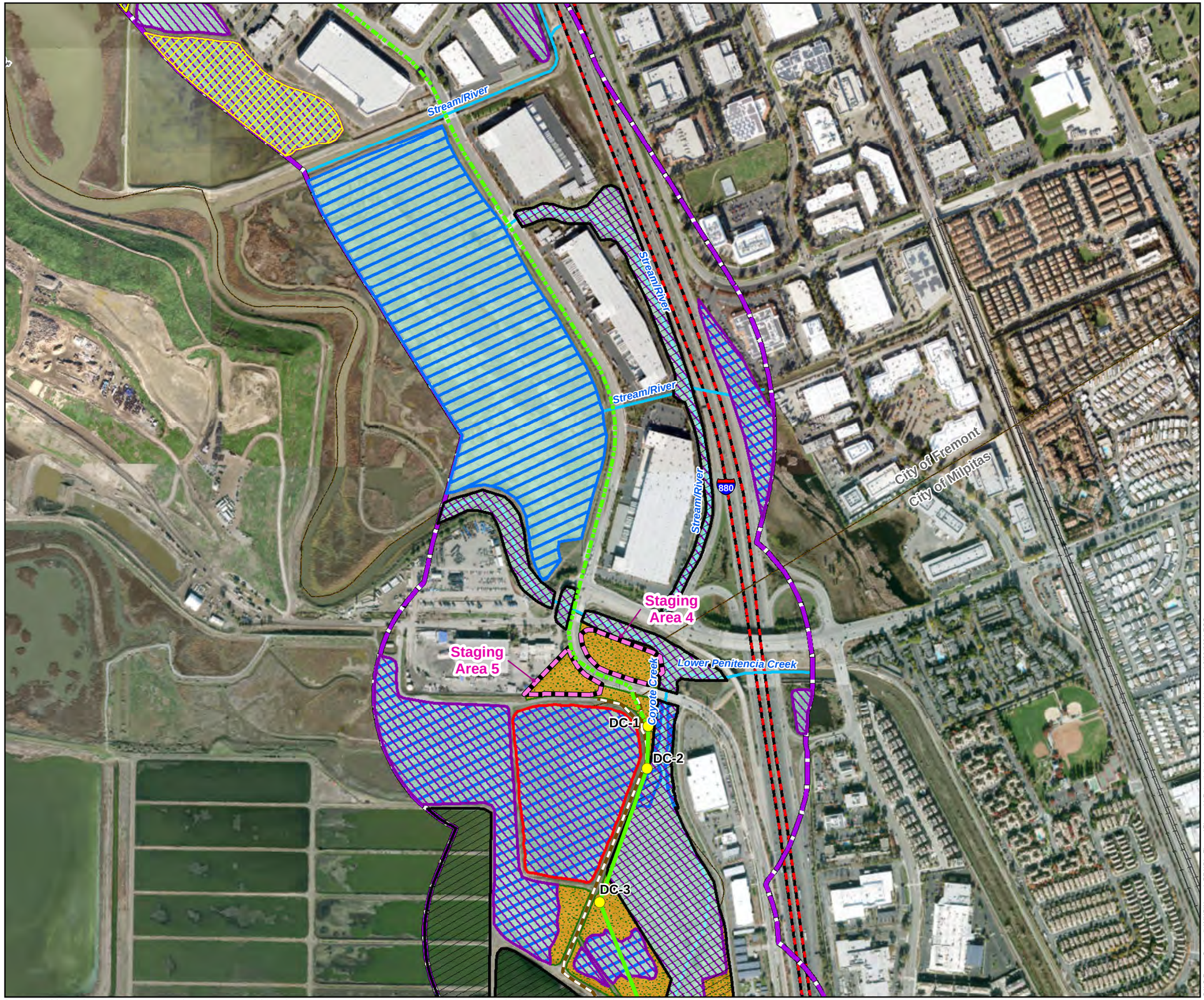
Feet

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000
Feet

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

GIS Power Corridor\MXD\Newark PEA\Bio Figures\Figure 14 Potentially Impacted Species Habitats (mxd 6/28/2024 RCo

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA

LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000
Feet

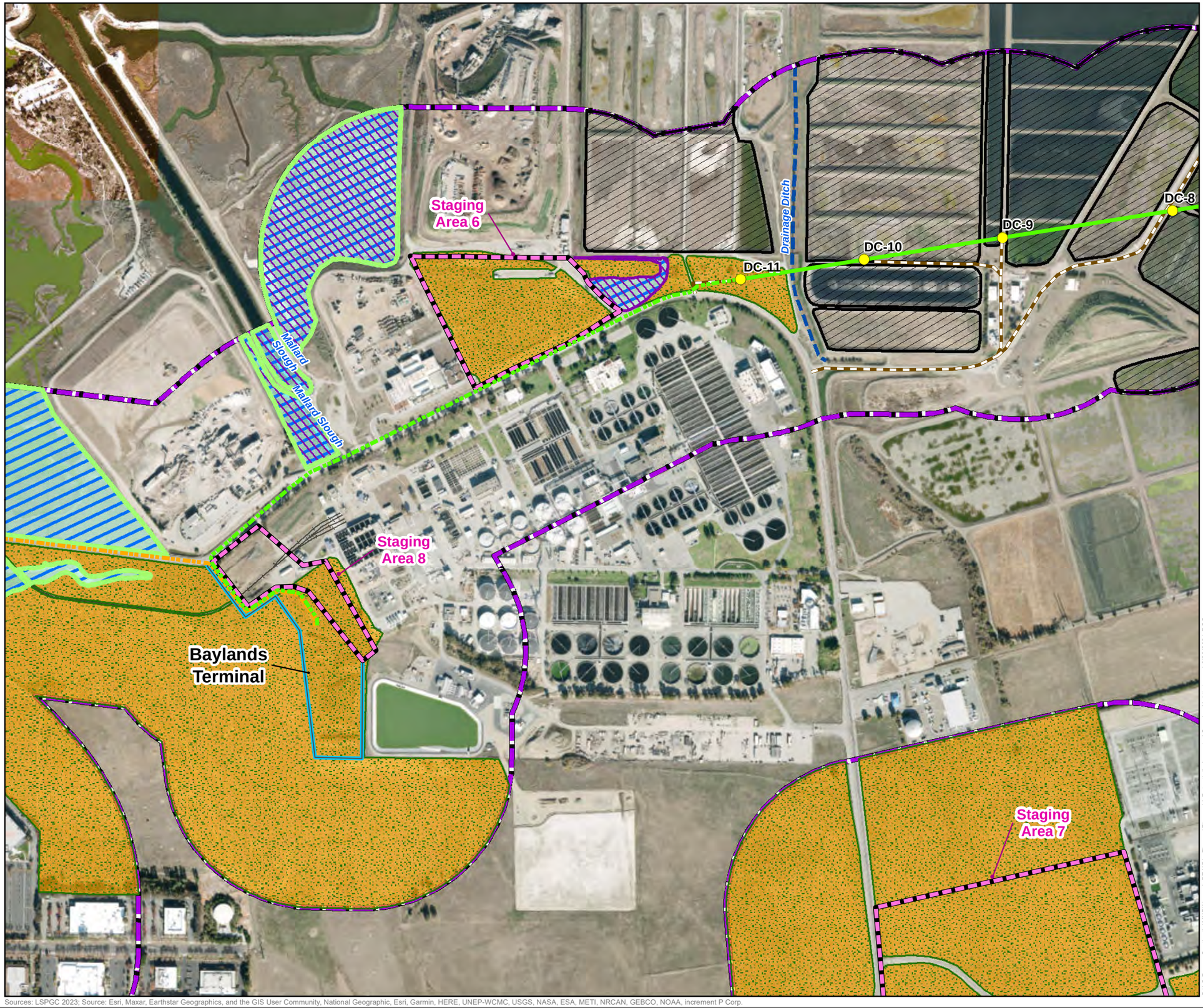
GLS Power Centrella/MXD/Newark PEA/Bio Figures/Figure 14 Potentially Impacted Species Habitats.mxd 6/28/2024 RCG

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000
Feet

G:\LS Power Continental\MXD\Newark PEA\Bio Figures\Figure 5.4 Potentially Impacted Species Habitats mxd 6/28/2024 RCQ

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA

LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000
Feet

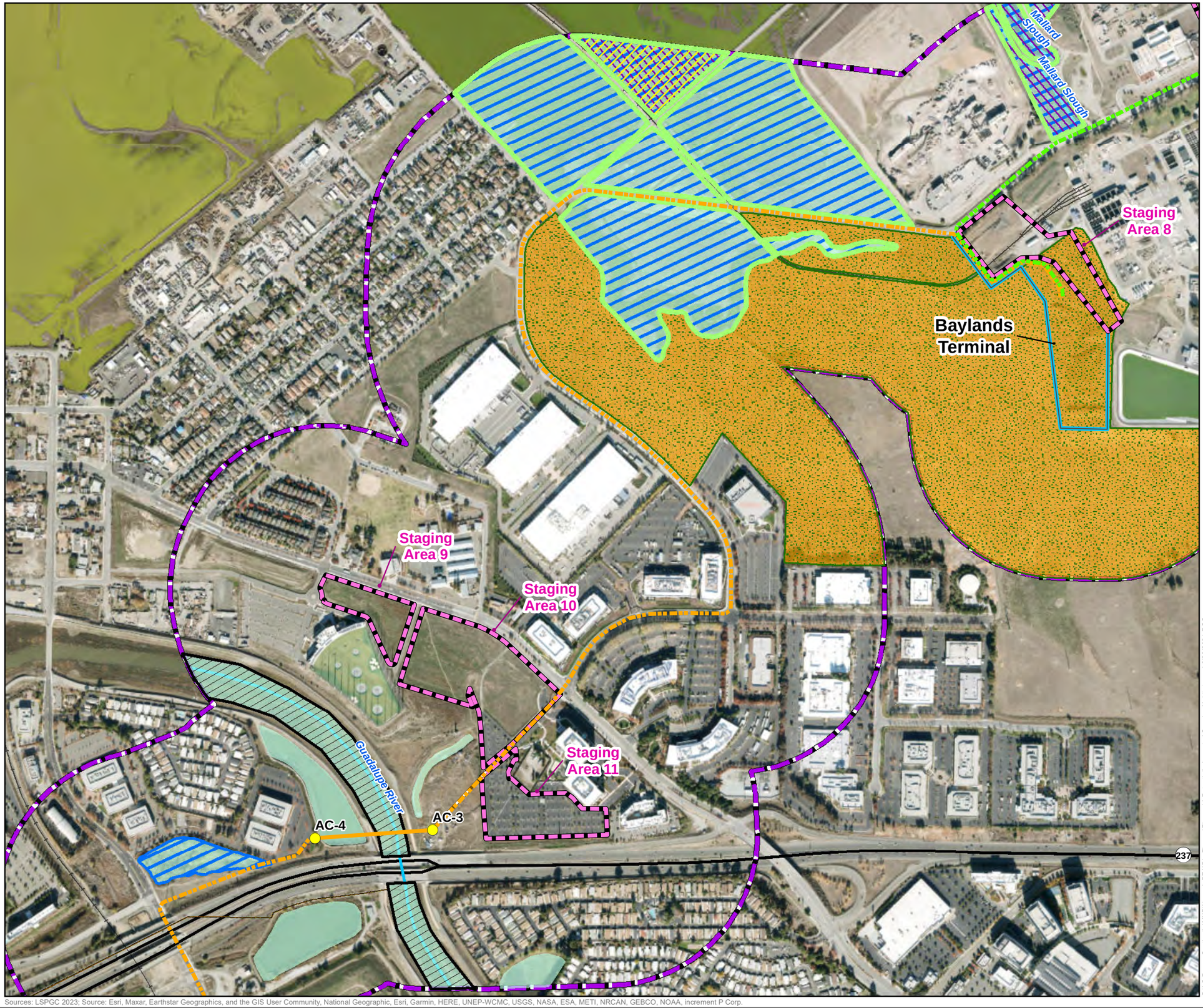
G:\LS Power Centralia\MXD\Newark PEA\Bio Figures\Figure 14 Potentially Impacted Species Habitats mxd 6/28/2024 RCQ

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000

Feet

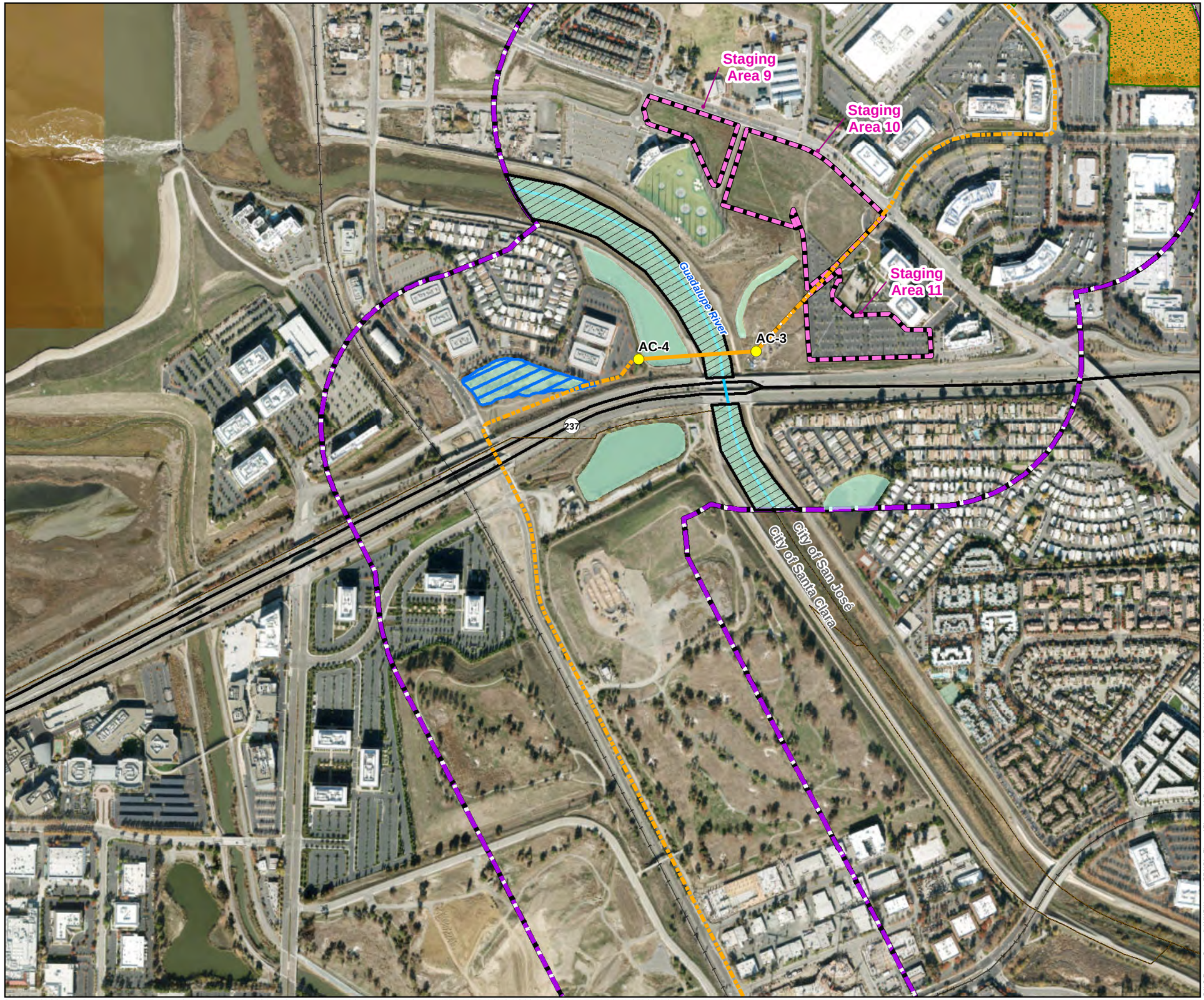
G:\LS Power Cement\NAD\Newark PEA\Src Figures\Figure 14 Potentially Impacted Species Habitats mxd 6/28/2024 RCQ

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA



LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000

Feet

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

G:\U.S Power Centrale\MXD\Newark PEA\Bio Figures\Figure 14 Potentially Impacted Species Habitats.mxd 02/8/2024 RCQ

POWER THE SOUTH BAY PROJECT

Figure 5.4-9: Potentially Impacted Species Habitats

Alameda Co. and Santa Clara Co., CA

LEGEND

Proposed Project Components

- Overhead Transmission Structure
- Baylands to NRS 230 kV AC Transmission Line (Overhead)
- Baylands to NRS 230 kV AC Transmission Line (Underground)
- Albrae to Baylands 320 kV DC Transmission Line (Overhead)
- Albrae to Baylands 320 kV DC Transmission Line (Underground)
- Newark to Albrae 230 kV AC Transmission Line (Overhead)
- Newark to Albrae 230 kV AC Transmission Line (Underground)
- Optional Trench Location
- Access Road
- HVDC Terminal Site
- Existing Substation Fenceline
- Construction Staging Area
- Biological Resource Survey Area

Potentially Impacted Species Habitats

- Burrowing owl, golden eagle and other raptors
- CA Tiger Salamander/CA red legged frog
- California Ridgeway's rail, CA black rail
- Salt marsh harvest mouse
- Tri-colored blackbird
- Vernal pool tadpole shrimp/Vernal pool fairy shrimp
- Western bumblebee/Crotch's bumblebee/ Monarch butterfly
- Western pond turtle
- Western snowy plover

General Features

- Municipal Boundary
- Interstate
- US Route or State Highway
- Railroad
- River or Stream
- Drainage Ditch

0 500 1,000 1,500 2,000

Feet

Sources: LSPGC 2023; Source: Esri, Maxar, Earthstar Geographics, and the GIS User Community, National Geographic, Esri, Garmin, HERE, UNEP-WCMC, USGS, NASA, ESA, METI, NRCAN, GEBCO, NOAA, increment P Corp.

Attachment C

LSPGC Response 2 to Data Request 1

July 10, 2024

VIA EMAIL

Mr. Tommy Alexander
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

RE: Response No. 2 to Data Request No. 1 for LS Power Grid California, LLC's Power the South Bay Project (Application 24-05-014)

Dear Mr. Alexander:

As requested by the California Public Utilities Commission (CPUC), LS Power Grid California, LLC (LS Power) has collected and provided the additional information that is needed to adequately conduct the California Environmental Quality Act (CEQA) review for the Power the South Bay Project (Proposed Project). This letter includes the following enclosures:

- Data Request Response Table No. 2 providing the additional information requested in the Power the South Bay Project Data Request 1, received June 13, 2024, that was not included as part of Response No. 1.
  - Attachment A – AERMOD Input and Output Files (PM2.5)
  - Attachment B – Average Daily Emissions Calculations
  - Attachment C – Updated Proponent's Environmental Assessment (PEA) Emissions Tables

Please contact me at (925) 808-0291 or djoseph@lspower.com with any questions regarding this information.

Sincerely,

Dustin Joseph
Director of Environmental Permitting

Enclosures

cc: Lucy Marton (LS Power)
Casey Carroll (LS Power)
Jacob Diermann (LS Power)
David Wilson (LS Power)
Josh Taylor (KPE)
Michelle Wilson (CPUC)
Dave Davis (ESA)
Michael Manka (ESA)

LS Power - Power the South Bay Project (A. 24-05-014) CPCN and PEA Data Request 1

RESPONSE OVERVIEW

Review of the Certificate of Public Convenience and Necessity (CPCN) Application and Proponent's Environmental Assessment (PEA) for the Power the South Bay Project (Application 24-05-014) was based on the California Public Utilities Commission's (CPUC) Guidelines for Energy Project Applications Requiring California Environmental Quality Act (CEQA) Compliance: Pre-filing and Proponent's Environmental Assessments (November 2019). Based on these criteria, the Energy Division found that the PEA contains sufficient information to satisfy the requirements of the Commission's Information and Criteria List, and therefore deemed Application 24-05-014 complete. The following additional information is provided in response to the Power the South Bay Project Data Request No. 1, which identified further details and evaluation that is needed to adequately conduct the CEQA review.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 2		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
3.0 – Project Description		
3.3.1	Please provide preliminary design drawings for project features. • Figures 3-8 to 3-15 provide good information. The CPUC requests additional profile drawings for the substations and terminals which should show the expected facility including the security walls, poles, A-frames, etc. with dimensions showing the height. Provide drawings, including overhead and profile views, showing the excavation dimensions for typical splice vault and duct banks.	Silicon Valley Power's (SVP) Scope of work will all be located within the existing Northern Receiving Station (NRS) substation fence and will include the following: - Height of new structures will range in height up to approximately 57 feet above grade. The height of existing structures range in height up to approximately 57 feet above grade. - The existing 8-foot chain link fence on the north and west side of the NRS substation and the 10-foot concrete post and panel fence on the south and east side of the NRS substation will not be modified. For security reasons, SVP prefers not to provide figures with specific locations of existing and future equipment within substation facilities.
3.3.4	Provide diagrams with dimensions of existing facilities. • See Section 3.3.1 above.	See response 3.3.1 above.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 2		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
5.3 – Air Quality		
5.3.4.1 & 5.3.4.4	The filed PEA qualitatively evaluates staging areas and worker receptors, but two items for health risk remain outstanding. Please update the Health Risk Assessment (HRA) to include: • Annual average PM2.5 concentration (including fugitive dust); and	Particulate matter less than or equal to 2.5 microns (PM2.5) is a complex mixture of substances that includes elements such as carbon and metals; compounds such as nitrates, organics, and sulfates; and complex mixtures such as diesel exhaust and wood smoke. The project-level threshold addresses the potential for an individual project to significantly elevate existing risks or hazards. A project would have a cumulatively considerable PM2.5 impact if the project would incrementally increase PM2.5 by more than 0.3 µg/m3 annual average. A project would have a significant impact if it resulted in an incremental annual increase of greater than 0.3 µg/m3 annual average PM2.5. Based on review of the CalEEMod outputs (refer to PEA **Appendix 5.3-A**), the highest PM2.5 generated within the vicinity of sensitive receptors would be at the NRS substation in construction year 2027. From this data, an AERMOD input emission rate was established, which is summarized in **Attachment A** to this Data Request No.2 response. The AERMOD dispersion model was utilized to determine the maximum Proposed Project PM2.5 emission concentration based on the highest annual emission from all sources. PM2.5 concentrations were calculated at the worst-case receptor locations as identified in PEA **Section 5.3.1.3**. Based on the modeling, the worst-case PM2.5 was calculated at 0.035 µg/m3 (refer to AERMOD output files in **Attachment A**). The 0.035 µg/m3 project-related annual increase in PM2.5 is well below the threshold of 0.3 µg/m3. Therefore, impacts would be less than significant.
5.3.4.1 & 5.3.4.4	• Cumulative HRA utilizing Bay Area Air Quality Management District (BAAQMD) tools (the filed PEA qualitatively discusses other construction projects that could be nearby, but not existing sources in the BAAQMD tools such as stationary or mobile).	Cumulative cancer risk thresholds established by BAAQMD are less than 100 people per million exposed for cancer risk, and greater than 10 for non-cancer hazards. Based upon modeling completed for the Proposed Project, as distances are increased beyond the project site(s), cancer risks drop quickly. A cumulative health risk during construction could exist if a large project(s) was occurring simultaneously to the Proposed Project using diesel construction equipment. However, based on the cumulative thresholds of 100 cases per million exposed and 10, the cumulative diesel construction equipment would essentially need to be as much as 10 times more intense to generate health risks near the thresholds. Based on review of the site and potential construction projects, no nearby construction projects would be expected to meet

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 2		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
		these diesel equipment conditions. Given this, a less-than-significant cumulative cancer and non-cancer health risk would be expected during construction at the SVP NRS modifications. With respect to PM2.5, a project would have a cumulatively considerable impact if it resulted in an incremental increase of greater than 0.3 µg/m3 annual average PM2.5, and it combined with cumulative sources to exceed 0.8 µg/m3 cumulative annual average. Based on review of the CalEEMod outputs, the highest PM2.5 generated within the vicinity of sensitive receptors would be at the NRS substation in construction year 2027. From this data, an AERMOD input emission rate was established, which is summarized in **Attachment A**. As stated above, the worst-case PM2.5 was calculated at 0.035 µg/m3. The Proposed Project emissions are below the project level and cumulative thresholds; and would therefore not result in a cumulatively considerable impact. Specifically, an over 22 times increase above the Proposed Project emissions would be required to exceed the cumulative threshold. Based on review of the site and potential construction projects, no nearby construction projects would be expected to meet these construction conditions. Given this, a less-than-significant cumulative PM2.5 health risk would be expected during construction at the SVP NRS modifications.
5.3.4.2	Appendix 5.3-A is provided, but it only includes model output with no Excel spreadsheets. Please provide Excel spreadsheets as they will be required to adequately estimate average daily emissions. • For context, Section 5.3.4.3, Appendix 5.3-A indicates that average daily emissions are underestimated. As an example, 2026 emissions are based on total emissions for the calendar year, divided by 365 days; however, construction in 2026 starts in June, and would occur six days a week, so the actual average daily emissions could be close to twice as much as reported. The BAAQMD recommends that average daily emissions be estimated	Emissions modeling in PEA **Appendix 5.3-A** are based on the equipment spreadsheets included as PEA **Appendix 3-A**. An Excel calculation for the average daily emissions which will be expected over the construction duration has been included as **Attachment B** to this Data Request response No.2. Updated PEA tables have been included as **Attachment C** to this Data Request response No.2. The tables have been updated to reflect the average daily emissions included as **Attachment B** to this Data Request response No.2.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 1, Response No. 2		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
	based on the number of construction days for the year, not the total days in the year.	

Attachment 4A - PM2.5 Dispersion Model Input Calculation

NRS Substation Upgrades

Year	PM 2.5 Annual Total from CalEEMod	Construction Start	Construction End	Construction Duration
2026	0.006	9/1/2026	12/31/2026	121
2027	**0.016**	12/31/2026	12/31/2027	365
2028	0.002	12/31/2027	2/15/2028	46

Largest Emission Noted	NRS Substation Upgrade
Year	2027
Emission per day (Ton/Total Construction Duration)	**0.016**
Annual Construction Start	12/31/2026
Annual Construction Completion	12/31/2027
Construction Duration in 2027	365
Construction Emission per day (lb/day)	0.089
Annualized Emission Rate (Grams/Second)	0.00047
Project Site Size (Acres)	3.51
Project Site Size (meters^2)	14204.47
Length of Smalles Side (meters)	119.18
AERMOD Input Emission Rate (g/s-m^2)	3.29E-08

```
1                     AERMOD PRIME - (DATED 23132 )

                     AERMODPrMSPx VERSION
              (C) COPYRIGHT 1998-2022, Trinity Consultants

 Run Began on  7/01/2024 at 11:36:06

** BREEZE AERMOD
** Trinity Consultants
** VERSION  12.0

CO STARTING
CO TITLEONE  NRS Substation Construction PM2.5
CO MODELOPT  DFAULT  CONC  NODRYDPLT  NOWETDPLT
CO RUNORNOT  RUN
CO AVERTIME  ANNUAL
CO POLLUTID  PM25
CO FINISHED

SO STARTING
SO ELEVUNIT  METERS
SO LOCATION  EA0A8004  AREAPOLY  591639  4140062.9  0
** SRCDESCR  NRS Substation Work
SO SRCPARAM  EA0A8004  3.29E-08  3  13  1
SO AREAVERT  EA0A8004  591639 4140062.9  591623.7 4140054.6  591602 4140096.7  591516.6 4140051.4
SO AREAVERT  EA0A8004  591565.7 4139958.3  591651.7 4140006.2  591648.6 4140012.5  591659.4 4140018.9
SO AREAVERT  EA0A8004  591657.5 4140024  591643.5 4140018.3  591633.3 4140038.7  591648.6 4140046.9
SO AREAVERT  EA0A8004  591639 4140062.9
SO SRCGROUP  ALL
SO FINISHED

RE STARTING
RE ELEVUNIT  METERS
RE DISCCART  591670.2  4140141.9  0  0
** SENSITIV
** RCPDESCR  R1
RE DISCCART  591714.2  4140072.4  0  0
** SENSITIV
** RCPDESCR  R2
RE DISCCART  591657.5  4139928.4  0  0
** SENSITIV
** RCPDESCR  R3
RE DISCCART  591603.9  4139899.7  0  0
** SENSITIV
** RCPDESCR  R4
RE FINISHED

ME STARTING
ME SURFFILE  "C:\Users\ryan\My Drive (rmtaylor76@gmail.com)\City of San Jose\23-32 Newark HVDC PEA\Models\Northern
Recieving Station NRS\AERMOD\KSJC_2017.SFC"
** SURFFILE  "C:\Users\ryan\My Drive (rmtaylor76@gmail.com)\City of San Jose\23-32 Newark HVDC PEA\Models\Northern
Recieving Station NRS\AERMOD\KSJC_2017.SFC"
ME PROFFILE  "C:\Users\ryan\My Drive (rmtaylor76@gmail.com)\City of San Jose\23-32 Newark HVDC PEA\Models\Northern
Recieving Station NRS\AERMOD\KSJC_2017.PFL"
** PROFFILE  "C:\Users\ryan\My Drive (rmtaylor76@gmail.com)\City of San Jose\23-32 Newark HVDC PEA\Models\Northern
Recieving Station NRS\AERMOD\KSJC_2017.PFL"
ME SURFDATA  23293 2017
ME UAIRDATA  23230 2017
ME PROFBASE  0  METERS
ME FINISHED

OU STARTING
OU FILEFORM  FIX
OU PLOTFILE  ANNUAL  ALL  ALL`ANNUAL.plt  10000
OU FINISHED

** **************************************************************************
** It is recommended that the user not edit any data below this line
** **************************************************************************
```

```
** AMPTYPE
** AMPDATUM  -1
** AMPZONE  -1
** AMPHEMISPHERE

** PROJECTIONWKT
PROJCS["UTM_6326_Zone11",GEOGCS["WGS_84",DATUM["World_Geodetic_System_1984",SPHEROID["WGS_1984",6378137,298.25722356
3]],TOWGS84[0,0,0,0,0,0,0]],PRIMEM["Greenwich",0],UNIT["Degree",0.0174532925199433]],PROJECTION["Universal_Transverse
_Mercator"],PARAMETER["Zone",11],UNIT["Meter",1,AUTHORITY["EPSG","9001"]]]
** PROJECTION  UTM
** DATUM  WGE
** UNITS  METER
** ZONE  11
** HEMISPHERE  N
** ORIGINLON  0
** ORIGINLAT  0
** PARALLEL1  0
** PARALLEL2  0
** AZIMUTH  0
** SCALEFACT  0
** FALSEEAST  0
** FALSENORTH  0

** POSTFMT  UNFORM
** TEMPLATE UserDefined
** AERMODEXE  AERMOD_BREEZE_23132_64.EXE
** AERMAPEXE  AERMAP_EPA_18081_64.EXE



  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
               ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186      56       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used          0.50
 ME W187      56       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET

 **********************************
 *** SETUP Finishes Successfully ***
 **********************************

 *** AERMOD - VERSION 23132  ***   ***  NRS Substation Construction PM2.5                                  ***
   07/01/24
 *** AERMET - VERSION  18081 ***   ***                                                                    ***
  11:36:06

  PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  ADJ_U*

                                          ***     MODEL SETUP OPTIONS SUMMARY       ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
      * NO GAS DEPOSITION Data Provided.
```

```
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM25

 **Note that special processing requirements apply for the 24-hour PM2.5 NAAQS - check available guidance.
   Model will process user-specified ranks of high 24-hour values averaged across the number of years modeled, and
   the multi-year average of individual ANNUAL values, averaged across the number of years modeled.

 **Model Calculates ANNUAL Averages Only

 **This Run Includes:      1 Source(s);       1 Source Group(s); and       4 Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:      0 VOLUME source(s)
                 and:      1 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  18081

 **Output Options Selected:
         Model Outputs Tables of ANNUAL Averages by Receptor
         Model Outputs External File(s) of High Values for Plotting (PLOTFILE Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and Missing Hours

 **Misc. Inputs:  Base Elev. for Pot. Temp. Profile (m MSL) =     0.00 ;  Decay Coef. =    0.000     ;  Rot. Angle =
    0.0
                  Emission Units = GRAMS/SEC                              ;  Emission Rate Unit Factor =
0.10000E+07
                  Output Units   = MICROGRAMS/M**3

 **Approximate Storage Requirements of Model =      3.5 MB of RAM.

 **Input Runstream File:          aermod.inp

 **Output Print File:             aermod.out


 *** AERMOD - VERSION 23132  ***   ***  NRS Substation Construction PM2.5                                    ***
   07/01/24
 *** AERMET - VERSION  18081 ***   ***                                                                      ***
  11:36:06

  PAGE   2
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  NODRYDPLT  NOWETDPLT  RURAL  ADJ_U*


                                          *** AREAPOLY SOURCE DATA ***
```

```
              NUMBER EMISSION RATE   LOCATION OF AREA  BASE     RELEASE  NUMBER      INIT.   URBAN  EMISSION RATE
 AIRCRAFT
   SOURCE       PART.  (GRAMS/SEC       X         Y      ELEV.    HEIGHT  OF VERTS.     SZ     SOURCE  SCALAR VARY
     ID         CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)           (METERS)              BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - -

 EA0A8004         0   0.32900E-07  591639.0 4140062.9     0.0     3.00      13         1.00     NO
  NO
```


*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ_U*

*** SOURCE IDs DEFINING SOURCE GROUPS ***

```
 SRCGROUP ID                                         SOURCE IDs
 -----------                                         ----------


  ALL        EA0A8004    ,
```


*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ_U*

*** METEOROLOGICAL DAYS SELECTED FOR PROCESSING ***
(1=YES; 0=NO)

```
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1
1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1
1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1
1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1
1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1
1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1
1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1 1 1  1 1 1 1 1 1 1 1
1 1
            1 1 1 1 1 1 1 1 1 1  1 1 1 1 1
```

NOTE: METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON WHAT IS INCLUDED IN THE DATA FILE.

*** UPPER BOUND OF FIRST THROUGH FIFTH WIND SPEED CATEGORIES ***
(METERS/SEC)

1.54,   3.09,   5.14,   8.23, 10.80,

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: C:\Users\ryan\My Drive (rmtaylor76@gmail.com)\City of San Jose\23-32 Newark HVDC Met Version: 18081
Profile file: C:\Users\ryan\My Drive (rmtaylor76@gmail.com)\City of San Jose\23-32 Newark HVDC
Surface format: FREE

Profile format: FREE

Surface station no.: 23293 Upper air station no.: 23230
Name: UNKNOWN Name: UNKNOWN
Year: 2017 Year: 2017

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
17	01	01	1	01	-22.4	0.219	-9.000	-9.000	-999.	246.	52.9	0.02	0.68	1.00	3.36	121.	7.9	277.5	2.0
17	01	01	1	02	-12.5	0.138	-9.000	-9.000	-999.	125.	21.0	0.02	0.68	1.00	2.17	180.	7.9	278.1	2.0
17	01	01	1	03	-16.7	0.164	-9.000	-9.000	-999.	160.	29.6	0.02	0.68	1.00	2.55	137.	7.9	278.8	2.0
17	01	01	1	04	-17.5	0.172	-9.000	-9.000	-999.	172.	32.7	0.02	0.68	1.00	2.67	125.	7.9	279.2	2.0
17	01	01	1	05	-21.8	0.215	-9.000	-9.000	-999.	239.	50.6	0.02	0.68	1.00	3.29	122.	7.9	279.2	2.0
17	01	01	1	06	-15.2	0.153	-9.000	-9.000	-999.	145.	25.8	0.02	0.68	1.00	2.39	154.	7.9	279.9	2.0
17	01	01	1	07	-18.9	0.187	-9.000	-9.000	-999.	194.	38.3	0.02	0.68	1.00	2.88	124.	7.9	279.9	2.0
17	01	01	1	08	-17.7	0.175	-9.000	-9.000	-999.	176.	33.7	0.02	0.68	0.74	2.71	132.	7.9	279.9	2.0
17	01	01	1	09	5.8	0.168	0.369	0.005	314.	166.	-74.7	0.02	0.68	0.39	2.32	134.	7.9	280.9	2.0
17	01	01	1	10	35.9	0.138	0.923	0.018	792.	123.	-6.6	0.02	0.68	0.27	1.59	138.	7.9	282.0	2.0
17	01	01	1	11	59.1	0.123	1.168	0.019	974.	104.	-2.9	0.02	0.68	0.23	1.28	129.	7.9	284.2	2.0
17	01	01	1	12	72.0	0.252	1.293	0.020	1085.	304.	-20.1	0.02	0.68	0.21	3.34	280.	7.9	284.9	2.0
17	01	01	1	13	87.9	0.389	1.384	0.019	1089.	582.	-60.3	0.05	0.68	0.21	4.65	263.	7.9	285.9	2.0
17	01	01	1	14	65.5	0.353	1.256	0.019	1091.	504.	-60.5	0.05	0.68	0.22	4.22	270.	7.9	285.9	2.0
17	01	01	1	15	46.1	0.403	1.118	0.018	1093.	613.	-128.0	0.05	0.68	0.25	4.97	244.	7.9	285.4	2.0
17	01	01	1	16	18.2	0.370	0.820	0.018	1094.	542.	-252.7	0.02	0.68	0.33	5.44	281.	7.9	285.4	2.0
17	01	01	1	17	-32.0	0.420	-9.000	-9.000	-999.	653.	209.2	0.02	0.68	0.57	6.43	279.	7.9	283.1	2.0
17	01	01	1	18	-28.9	0.288	-9.000	-9.000	-999.	382.	91.1	0.05	0.68	1.00	3.85	243.	7.9	282.0	2.0
17	01	01	1	19	-18.6	0.185	-9.000	-9.000	-999.	197.	37.6	0.05	0.68	1.00	2.52	246.	7.9	282.0	2.0
17	01	01	1	20	-13.3	0.147	-9.000	-9.000	-999.	135.	23.7	0.05	0.68	1.00	2.03	225.	7.9	280.9	2.0
17	01	01	1	21	-7.4	0.105	-9.000	-9.000	-999.	82.	14.3	0.02	0.68	1.00	1.69	116.	7.9	282.0	2.0
17	01	01	1	22	-10.4	0.130	-9.000	-9.000	-999.	112.	19.0	0.05	0.68	1.00	1.76	94.	7.9	281.4	2.0
17	01	01	1	23	-14.5	0.149	-9.000	-9.000	-999.	138.	24.5	0.02	0.68	1.00	2.33	133.	7.9	280.9	2.0
17	01	01	1	24	-21.8	0.215	-9.000	-9.000	-999.	240.	51.0	0.02	0.68	1.00	3.30	114.	7.9	280.4	2.0

First hour of profile data

                   *** THE ANNUAL AVERAGE CONCENTRATION   VALUES AVERAGED OVER   1 YEARS FOR SOURCE GROUP: ALL
***
                                  INCLUDING SOURCE(S):   EA0A8004   ,

                                            *** SENSITIVE DISCRETE RECEPTOR POINTS ***

                                       ** CONC OF PM25   IN MICROGRAMS/M**3   **

       X-COORD (M)   Y-COORD (M)   CONC   X-COORD (M)   Y-COORD (M)   CONC
 -
- - - - - - -
         591670.20   4140141.90   0.01205   591714.20   4140072.40   0.01455

         591657.50   4139928.40   0.03529   591603.90   4139899.70   0.01079

                                  *** THE SUMMARY OF MAXIMUM ANNUAL RESULTS AVERAGED OVER   1 YEARS ***

                                   ** CONC OF PM25   IN MICROGRAMS/M**3   **

                                                                                                          NETWORK
GROUP ID   AVERAGE CONC   RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
- -
- -

ALL   1ST HIGHEST VALUE IS   0.03529 AT (591657.50, 4139928.40,   0.00,   0.00,   0.00) SR

          2ND HIGHEST VALUE IS   0.01455 AT (591714.20, 4140072.40,   0.00,   0.00,   0.00) SR

          3RD HIGHEST VALUE IS   0.01205 AT (591670.20, 4140141.90,   0.00,   0.00,   0.00) SR

          4TH HIGHEST VALUE IS   0.01079 AT (591603.90, 4139899.70,   0.00,   0.00,   0.00) SR

          5TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
          6TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
          7TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
          8TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
          9TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)
         10TH HIGHEST VALUE IS   0.00000 AT (0.00,   0.00,   0.00,   0.00,   0.00)

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR

*** MODELOPTs: RegDFAULT CONC ELEV NODRYDPLT NOWETDPLT RURAL ADJ_U*

*** Message Summary : AERMOD Model Execution ***

 --------- Summary of Total Messages --------

A Total of   0 Fatal Error Message(s)
A Total of   3 Warning Message(s)
A Total of   194 Informational Message(s)

A Total of   8784 Hours Were Processed

A Total of   52 Calm Hours Identified

A Total of   142 Missing Hours Identified (1.62 Percent)

   ******** FATAL ERROR MESSAGES ********
              *** NONE ***

   ********   WARNING MESSAGES   ********
ME W186   56   MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used   0.50
ME W187   56   MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET
MX W481   8785   MAIN: Data Remaining After End of Year. Number of Hours=   24

   ****
   *** AERMOD Finishes Successfully ***
   ****

Project Construction Start	Project Construction End	Project Construction Duration
6/1/2026	12/31/2026	213
12/31/2026	12/31/2027	365
12/31/2027	10/15/2028	289
		867

Albrea Annual Construction Emission	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	Construction Start	Construction End	Construction Duration	
2026	0.250	2.347	7.517	0.014	0.055	0.373	0.428	0.052	0.154	0.206	9/1/2026	12/31/2026	121	
2027	0.119	1.036	2.218	0.004	0.023	0.031	0.054	0.022	0.008	0.029	12/31/2026	12/31/2027	365	
2028	0.012	0.099	0.209	0.000	0.002	0.003	0.005	0.002	0.001	0.003	12/31/2027	2/15/2028	46	
Total Annual Emissions (Lb/Day)	**0.380**	**3.482**	**9.944**	**0.019**	**0.080**	**0.407**	**0.487**	**0.076**	**0.163**	**0.238**			**532**	**Days**
	1.429	**13.090**	**37.382**	**0.070**	**0.300**	**1.531**	**1.831**	**0.284**	**0.612**	**0.896**				
Baylands Annual Construction Emission	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	Construction Start	Construction End	Construction Duration	
2026	0.241	2.280	7.386	0.014	0.053	0.370	0.423	0.051	0.153	0.204	6/1/2026	12/31/2026	213	
2027	0.023	0.232	0.555	0.001	0.005	0.004	0.009	0.005	0.001	0.006	12/31/2026	1/15/2027	15	
Total	**0.264**	**2.512**	**7.940**	**0.015**	**0.058**	**0.375**	**0.433**	**0.055**	**0.155**	**0.210**			**228**	**Days**
	2.318	**22.036**	**69.653**	**0.133**	**0.510**	**3.286**	**3.796**	**0.486**	**1.356**	**1.842**				
NRS Annual Construction Emissions	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	Construction Start	Construction End	Construction Duration	
2026	0.034	0.281	0.567	0.001	0.007	0.009	0.016	0.006	0.002	0.009	9/1/2026	12/31/2026	121	
2027	0.096	0.821	1.687	0.003	0.018	0.027	0.045	0.017	0.007	0.024	12/31/2026	12/31/2027	365	
2028	0.012	0.101	0.211	0.000	0.002	0.003	0.005	0.002	0.001	0.003	12/31/2027	2/15/2028	46	
Total	**0.141**	**1.204**	**2.465**	**0.004**	**0.027**	**0.039**	**0.066**	**0.025**	**0.010**	**0.035**			**532**	**Days**
	0.531	**4.526**	**9.265**	**0.016**	**0.101**	**0.147**	**0.248**	**0.094**	**0.037**	**0.131**				
Transmission Lines Annual Construction Emissions	ROG	NOx	CO	SO_2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	Construction Start	Construction End	Construction Duration	
2026	0.444	3.722	7.857	0.020	0.125	0.238	0.363	0.117	0.053	0.171	6/1/2026	12/31/2026	213	
2027	0.159	1.665	3.764	0.010	0.037	0.161	0.198	0.036	0.042	0.077	12/31/2026	12/31/2027	365	
2028	0.037	0.761	1.224	0.002	0.004	0.025	0.029	0.004	0.006	0.010	12/31/2027	10/15/2028	289	
Total	**0.639**	**6.148**	**12.844**	**0.031**	**0.167**	**0.424**	**0.591**	**0.157**	**0.101**	**0.258**			**867**	**Days**
	1.473	**14.182**	**29.629**	**0.072**	**0.385**	**0.977**	**1.362**	**0.361**	**0.234**	**0.595**				
Combined Total Emissions (Whole Project()	**1.424**	**13.346**	**33.193**	**0.069**	**0.332**	**1.245**	**1.576**	**0.313**	**0.428**	**0.741**				

Total Construction Duration 867 Days

Calculated Average Daily Emissions (lb/Day)	**3.286**	**30.786**	**76.569**	**0.160**	**0.766**	**2.871**	**3.637**	**0.721**	**0.988**	**1.710**

The following tables[1] from PEA **Section 5.3** (*Air Quality*) have been updated based on Data Request No. 1, Response No. 2.

Table 5.3-5: Expected Construction Emissions Summary (Total Tons and Average Pounds per Day) – Albrae Terminal and Newark Substation				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Total Construction Emissions (tons)	0.380	3.482	0.080	0.076
Calculated Average ~~Maximum~~ Daily Emissions (lb/day)	1.43~~37~~	13.09~~12.9~~	0.30	0.28~~29~~
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: PEA **Appendix 5.3-A** & Data Request No. 1, Response No. 2, **Attachment B** (*Average Daily Emissions Calculations*).				

Table 5.3-6: Expected Construction Emissions Summary (Total Tons and Average Pounds per Day) – Baylands Terminal				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Total Construction Emissions (tons)	0.264	2.512	0.058	0.210
Calculated Average ~~Maximum~~ Daily Emissions (lb/day)	~~1~~2.32	~~12.5~~22.04	0.51~~29~~	1.84~~0.28~~
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: PEA **Appendix 5.3-A** & Data Request No. 1, Response No. 2, **Attachment B** (*Average Daily Emissions Calculations*).				

Table 5.3-7: Expected Construction Emissions Summary (Total Tons and Average Pounds per Day) – NRS Substation				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Total Construction Emissions (tons)	0.141	1.204	0.027	0.025
Calculated Average ~~Maximum~~ Daily Emissions (lb/day)	0.53	4.53	0.10	0.09
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: PEA **Appendix 5.3-A** & Data Request No. 1, Response No. 2, **Attachment B** (*Average Daily Emissions Calculations*).				

[1] Where edits were made to text from the PEA, added text is shown in underline and removed text is shown in ~~strikethrough~~.

Table 5.3-8: Expected Construction Emissions Summary (Total Tons and Average Pounds per Day) – Transmission Lines				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Total Construction Emissions (tons)	0.639	6.148	0.167	0.157
Average Maximum Daily Emissions	~~2.43~~1.47	14.18~~20.4~~	0.38~~69~~	0.36~~64~~
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: PEA **Appendix 5.3-A** & Data Request No. 1, Response No. 2, **Attachment B** (*Average Daily Emissions Calculations*).				

Table 5.3-9: Combined Expected Construction Emissions Summary (Total Tons and Average Pounds per Day)				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Albrae Terminal and Newark Substation Total Construction Emissions (tons)	~~1.37~~0.380	~~12.9~~3.482	0.080~~30~~	0.076~~29~~
Baylands Terminal Total Construction Emissions (tons)	~~1.32~~0.264	~~12.5~~2.512	~~0.29~~0.058	~~0.28~~0.210
NRS Substation Total Construction Emissions (tons)	0.141~~53~~	~~4.5~~1.204	~~0.10~~0.027	~~0.09~~0.025
Transmission Line Total Construction Emissions (tons)	~~2.43~~0.639	~~20.4~~6.148	0.~~69~~167	0.157~~64~~
Combined Total Construction Emissions (~~T~~tons)	**~~5.65~~1.424**	**~~50.3~~13.346**	**~~1.38~~0.332**	**~~1.3~~0.468**
Average Daily Emissions (lb/day)	**3.285**	**30.787**	**0.766**	**1.080**
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: PEA **Appendix 5.3-A** & Data Request No. 1, Response No. 2, **Attachment B** (*Average Daily Emissions Calculations*).				

Attachment D

LSPGC Response 1 to Data Request 2

December 20, 2024

VIA EMAIL

Mr. Tommy Alexander
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

RE: Response No. 1 to Data Request No. 2 for LS Power Grid California, LLC's Power the South Bay Project (Application 24-05-014)

Dear Mr. Alexander:

As requested by the California Public Utilities Commission (CPUC), LS Power Grid California, LLC (LS Power) has collected and provided the additional information that is needed to adequately conduct the California Environmental Quality Act (CEQA) review for the Power the South Bay Project (Proposed Project). This letter includes the following enclosures:

- Data Request Response Table providing the additional information requested in the Power the South Bay Project Data Request No. 2, received December 12, 2024.
    - Attachment A: Updated Appendix 3-A, Construction Equipment and Workforce
    - Attachment B: Updated Table 3-4, Staging Areas
    - Attachment E: Updated CalEEMod Files
    - Attachment D: Updated Emissions Summary Table

Please contact me at (925) 808-0291 or djoseph@lspower.com with any questions regarding this information.

Sincerely,

Dustin Joseph

Dustin Joseph
Director of Environmental Permitting

Enclosures

cc: Lucy Marton (LS Power)
Casey Carroll (LS Power)
Jacob Diermann (LS Power)
David Wilson (LS Power)
Michelle Wilson (CPUC)
Vince Molina (ESA)
Dave Davis (ESA)

LS Power - Power the South Bay Project (A. 24-05-14) CPCN and PEA Data Request 2

RESPONSE OVERVIEW

Review of the Certificate of Public Convenience and Necessity (CPCN) Application and Proponent's Environmental Assessment (PEA) for the Power the South Bay Project (Application 24-05-014) was based on the California Public Utilities Commission's (CPUC) Guidelines for Energy Project Applications Requiring California Environmental Quality Act (CEQA) Compliance: Pre-filing and Proponent's Environmental Assessments (November 2019). Based on these criteria, the Energy Division found that the PEA contains sufficient information to satisfy the requirements of the Commission's Information and Criteria List, and therefore deemed Application 24-05-014 complete. The following additional information is provided in response to the Power the South Bay Project Data Request No. 2, which identified further details and evaluation that is needed to adequately conduct the CEQA review.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
3.0 – Project Description		
3.1	Project Overview, Project Location, first paragraph: The word "primarily" has been inserted such that the text states that the underground portion of the Project would be "located primarily within existing roadways". Where would underground portions of the Project be other than existing roads? Is this foreshadowing the potential trenching along Cushing Parkway or the HDD waterway crossings?	The word "primarily" is used because there are a few segments of underground transmission line that will be located on private property as described below: - The underground transmission line will leave the Newark substation underground in Weber Road, which is a private road owned by PG&E. - The underground transmission line may be located adjacent to Cushing Parkway within a utility easement. - The underground transmission line will be located on property owned by the Santa Clara Valley Water District just south of McCarthy Boulevard. - There will be a small segment of underground transmission line that will be located on the Regional Wastewater Facility property before it enters Los Esteros Road. - The underground transmission line will enter private property from Nortech Parkway and will remain on private or public property until it reaches Lafayette Street. The line will cross property owned by two private landowners, California State Lands, Santa Clara Valley Transportation Authority, Santa Clara Valley Water District, and the California Department of Transportation. In this segment, the line will also cross under the Guadalupe River.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
		Use of the word primarily is not only used because of the potential trenching along Cushing Parkway, nor is it used as any indication of which option at Cushing Parkway will be chosen.
3.3.4.2	Transmission Lines, Table 3-1, Proposed Project Pole Summary: Is "Approximate Pole Height" measured from the ground surface (and including the pole foundation)? If not, where is it measured from, or how is it measured?	The approximate pole height is just the height of the structure; it does not include the foundation height. Foundation heights are only anticipated to add 1-2' of additional height with their reveals. The pole height has been measured from the final ground elevation.
3.3.4.2	Underground Transmission Line Segments: Provide assumptions for the open trench alternative along the Cushing Parkway bridge, including construction techniques, duration, operation and maintenance, etc. As this alternative is still being analyzed as the worst-case scenario, this information will better inform the impact analyses.	Trenching within the utility easement alongside the Cushing Parkway bridge will be conducted in the same manner as trenching along the rest of the Project, as described in Section 3.5.6.1 of the Updated Proposed Project Description. There would be no splice vaults within the utility easement; the splice vaults would be located on either side of the Cushing Parkway bridge. Once installed, operations and maintenance activities are not anticipated to occur alongside Cushing Parkway bridge, as the majority of those activities would occur at the splice vaults, which would not be present alongside Cushing Parkway bridge.
3.3.4.2	Underground Transmission Line Segments: Please provide the anticipated number of splice vaults for the Project.	The underground portions of the proposed Newark to NRS transmission line would require approximately 20 to 30 vaults (refer to Updated Proposed Project Description Section 3.3.7).
3.3.4.2	Underground Transmission Line Segments: What is the composition of the thermal grout? Is it the same material as the fluidized or flowable backfill? See Question 12.	Thermal grout, or flowable thermal backfill (FTB), is generally very similar to flowable backfill. Both are mixtures of fine aggregates (usually less than 3/8"), water, sand, and cement or sometimes a cement and fly ash mixture. Both are designed to harden quickly and provide 100% compaction without vibration. However, FTB has the added requirement of providing a low thermal resistivity. This is accomplished by using high quality components with inherent low thermal resistivities and adjusting the mixture as needed.
3.3.5	Other Potentially Required Facilities, Aerial Marking and Lighting: Provide the rationale as to why aviation lighting and/or marking is not anticipated for the Project. This explanation will support the Aesthetics and Hazards analyses.	As set forth in CFR Title 14 Part 77.9, notice to the FAA is required for: (a) Any construction or alteration that is more than 200 ft. AGL at its site. (b) Any construction or alteration that exceeds an imaginary surface extending outward and upward at any of the following slopes:

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
		a. 100 to 1 for a horizontal distance of 20,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway more than 3,200 ft. in actual length, excluding heliports. b. 50 to 1 for a horizontal distance of 10,000 ft. from the nearest point of the nearest runway of each airport described in paragraph (d) of this section with its longest runway no more than 3,200 ft. in actual length, excluding heliports. c. 25 to 1 for a horizontal distance of 5,000 ft. from the nearest point of the nearest landing and takeoff area of each heliport described in paragraph (d) of this section. The overhead portions of the Newark to NRS 230 kV transmission line will not exceed 200 feet AGL or any imaginary surfaces and is not within 20,000 feet of any airports. Therefore, notice to the FAA is not required, and lighting will not be required.
3.4.3.1	New or Modified Rights-of-Way or Easements, LS Power Facilities: The proposed right-of-way (ROW) for the Project increased from 38 acres (with the HVDC terminals) to 48 acres (without the HVDC terminals). Please explain this increase. a. Additionally, is the 130-foot ROW for the overhead transmission line a ROW or an air right?	CAISO's adjusted scope required modifications to the size of the duct banks, which results in larger trench volume (either wider or deeper depending upon the orientation). The specifics on the duct bank changes are further discussed in 3.5.4.6, below. Due to these changes, the ROW for the underground duct banks increased, causing the increase in the proposed ROW. For further clarification, the 38 acres provided in the original Proposed Project Description was not intended to include the HVDC terminals as the acreages for those were accounted for in Section 3.4.1.1 in the original Proposed Project Description.
3.5.1.5	Helicopter Access: Explain why a Congested Area Plan would not be required.	Congested Area Plans (CAPs) are required by the FAA for external load operations performed over congested areas. Helicopters are anticipated to be utilized, including external load operations, during construction of the overhead portions of the Project, including for stringing conductor. However, these areas are undeveloped and restricted from public access. Therefore, LS Power does not anticipate requiring a CAP for Project construction.
3.5.3.3	Temporary Power: Provide assumptions for generator specifications. This will support the Air Quality and Greenhouse Gas Emissions analyses.	It is anticipated that 8 kW (~20 hp) diesel generators would be required during duct bank and splice vault installation work. Additionally, 25 kW (~45 hp) diesel generators would be required during cable installation work.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
3.5.4.3	Vegetation Clearing: Confirm that the 81.5 acres of temporary clearing would only be for the transmission lines and staging areas. The original Project Description did not include, or account for, temporary clearing associated with the Baylands Terminal site (if any).	The approximately 81.5 acres of temporary clearing is associated with construction staging areas as well as temporary work areas associated with the underground and overhead transmission line construction. The original Proposed Project Description accounted for the Baylands terminal site as a permanent impact, and it was not counted towards the total temporary clearing calculation.
3.5.4.6	Grading, Table 3-6, Proposed Project Grading, Excavation, and Material Removal Summary: Although the total proposed cut and fill quantities for the Project have decreased according to the revised Table 3-6, the underground transmission cut and fill quantities have increased. For context, explain why the underground transmission cut and fill quantities have increased.	CAISO's adjusted scope required modifications to the size of the duct banks, which results in larger trench volume (either wider or deeper depending upon the orientation). These updated duct bank sizes are provided in Section 3.3.4.1 of the Updated Proposed Project Description. For context, the modifications required the following duct bank changes: - Approximately 3.3 miles of the Baylands to NRS 230 kV transmission line has been modified from a single-circuit, one cable per phase 230 kV transmission line to the Newark to NRS 230 kV transmission line which would be a single-circuit, two cable per phase 230 kV transmission line. The Baylands to NRS 230 kV transmission line would have included 7 internal ducts (4-8" ducts and 3-4" ducts), and the modified Newark to NRS 230 kV AC transmission line would now include 12 smaller internal ducts (8-8" ducts and 4-2" ducts). - Approximately 6.7 miles of the Albrae to Baylands 320 kV DC transmission line has been modified to the Newark to NRS 230 kV AC transmission line. The originally proposed DC transmission line duct bank would have included 5 smaller internal ducts (3-8" ducts and 2-2" ducts), and the modified Newark to NRS 230 kV AC transmission line would now include 12 smaller internal ducts (8-8" ducts and 4-2" ducts).
3.5.6.1	Trenching: What is the composition of the fluidized backfill? Is "flowable backfill" the same as "fluidized backfill"? If not, what is its composition? This information will support the Hazards and Water Quality analyses.	Flowable backfill and fluidized backfill are synonymous. As discussed in the response to 3.3.4.2, they are a mixture of fine aggregates (usually less than 3/8"), water, sand, and cement or sometimes a cement and fly ash mixture. It is common for projects to have the same mix design for the flowable backfill and the flowable thermal backfill.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
3.5.7	Substation, Switching Stations, and Gas Compressor Stations: Describe construction activities for the modifications at the existing PG&E Newark and SVP NRS substations.	PG&E provided the following feedback: Construction activities for modifications at the existing PG&E Newark substation include installing new tubular steel poles and associated foundations located within the substation property but outside of the perimeter fence, stringing new overhead 230 kV transmission lines and OPGW fiber, and trenching for conduit. Construction activities within the Newark substation fenced area include demolition of existing lattice bay structure, installing new 230 kV dead ends, bus, CVT, and 230 kV switch support structures, and associated foundations, new 230 kV breakers and foundations, and overhead jumpers, modification of existing ground grid to address step and touch potential hazards, trenching for new conduits, pulling and terminating new control cable and fiber, and installing new breaker relays in the 230 kV M1 control enclosure. On December 12, 2024, LS Power sent a Request for Information (RFI) to SVP and is currently awaiting a response. LS Power will provide this information to the CPUC once it is received from SVP.
3.5.8.2	Traffic Control: It is not clear whether the City of Milpitas will require a traffic control plan (TCP). Is a TCP required for work in Milpitas?	The proposed underground transmission line alignment does not cross into the City of Milpitas, although it does exit McCarthy Boulevard in close proximity to the Milpitas city line (border of Milpitas and San José). LS Power does not anticipate requiring an encroachment permit and associated TCP from the City of Milpitas, although final TCPs approved by the City of San José (for work in McCarthy Boulevard) may dictate that some traffic control features (e.g., signs, cones, etc.) extend into the City of Milpitas. LS Power will coordinate closely with Milpitas and incorporate input into the City of San José TCPs as needed.
3.5.8.4	Livestock: For context, explain what has changed about the Project that Livestock is now a construction consideration. The original Project Description stated that livestock were not anticipated to be encountered, but the updated Project Description states that livestock may be encountered.	Since the submittal of the original Proposed Project Description, the structures to be built by LS Power near the existing Newark substation (NN-2 and NN-3) have moved from the east side of Weber Road to the west side of Weber Road within an area that PG&E occasionally grazes cattle on. In the original Proposed Project Description, LS Power indicated that PG&E's work would be in an area with livestock. It was stated that PG&E regularly performs work in this area

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
		and implements procedures for excluding cattle from work areas during such work. LS Power would coordinate with PG&E during Project construction regarding the livestock on this property. In addition to the livestock on the PG&E property, the Don Edwards Wildlife Refuge alongside Cushing Parkway is also a grazing location for cattle. The cattle are generally excluded from the maintenance easement that would be utilized by LS Power alongside the Cushing Parkway Bridge. Due to the exclusion fencing, LS Power would not anticipate encountering livestock during Project construction but would coordinate with USFWS during construction.
3.5.12.3	Hazardous Waste, Staging Areas and Newark to NRS 230 kV Transmission Line Site Contamination: Has LSPGC committed to the applicable restrictions and requirements of the 2003 "Covenant to Restrict Use of Property" for the Project components located within Cisco Systems Site 6? If not, provide context or an explanation.	While LS Power does not currently have any agreements in place with the owners of the potential staging areas and transmission line within the Cisco Systems Site 6, LS Power is aware of the "Covenant to Restrict Use of Property" and is committed to adhering to the applicable restrictions and requirements.
App. 3-A	Construction Equipment and Workforce: Duration of Use, Hours/Day, is not given for much of the equipment for Underground Crossings and Surveying. Please explain	Duration of use for the underground crossing support equipment would be the same as for the primary equipment. The updated Appendix 3-A has been revised to clarify this (**Attachment A**).
3.6.3	Construction Traffic: Identify the potential access routes used to access the staging areas. (It is understood that adjacent local roadways would be used as needed to access active work sites. There is no need to identify all of those.)	All of the proposed construction staging areas are located adjacent to public roadways, which would provide direct access to each specific staging site. Refer to the Updated Table 3-4, Staging Areas (**Attachment B**), for a listing of access for each staging area.
3.6.3	Construction Traffic, Table 3-8, Estimated Average Daily Construction Traffic: For context, explain the reason the trip numbers increased as much as they did.	As discussed in the response to 3.5.4.6, the modifications to the Project results in modifications to the duct bank that requires a larger trench volume (either wider or deeper depending upon the orientation), which in turn results in additional hauling trips. In addition, the traffic volumes also appear greater in the Updated Table 3-8 because the Updated Proposed Project Description only includes one new transmission line (Newark to NRS 230 kV transmission line) instead of the three new transmission lines (Newark to Albrae 230 kV transmission line, Albrae to Baylands 320 kV DC transmission line, and Baylands to NRS 230 kV transmission line)

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
		included in the original Proposed Project Description. Trips that were calculated to spread between the three lines are now more concentrated in the Updated Table 3-8.
3.6.4	Construction Schedule, Table 3-9, Proposed Preliminary Construction Schedule: Did the approximate number of workdays for underground transmission line construction increase due to the Guadalupe River HDD? If not, provide an explanation.	The approximate number of workdays for the underground transmission line construction increased due to additional time required to construct the increased duct bank size discussed in the response to 3.5.4.6. Additionally, the Updated Proposed Project Description only includes one transmission line segment (Newark to NRS 230 kV transmission line) rather than the three transmission line segments (Newark to Albrae 230 kV transmission line, Albrae to Baylands 320 kV DC transmission line, and Baylands to NRS 230 kV transmission line) included in the original Proposed Project Description. This increase is not a direct result of the Guadalupe River HDD which is included in the contemplated schedule.
3.7.2	Landscaping: Would the drought-resistant plants also be native species? If not, explain why.	No new landscaping is proposed as part of the Project. Any non-native landscaping impacted by the Project (specifically within the public right-of-way) would be restored to pre-project conditions and would be consistent with the restoration requirements outlined in local encroachment permits. Restoration of areas containing natural vegetation would also be restored to pre-project conditions and in accordance with APM BIO-1.
5.3 – Air Quality		
App. 5.3-A	Confirm that the One-Way Trips per Day for construction vehicle types in all CalEEMod runs match the given estimated average daily construction trips from Table 3-8 of the updated Project Description.	The modeling in CalEEMod was updated to match vehicles miles traveled (VMT) of 19,306 miles which is the total miles presented in Table 3-8 (3 models when combined). Trip generation trip distance was manually updated from defaults within CalEEMod to 45 miles which would slightly exceed 19,306 miles. Updated modeling files have been included as **Attachment C** and updated emissions summary tables have been included as **Attachment D**.
App. 5.3-A	Confirm that the Miles per Trip for worker trips is 11.7 miles (Based on attachments 1A, 1B, 1C; Section 5.3.1) or 15 miles. Based on the table notes in Table 3-8 of the updated Project Description: “Table assumes workers live approximately 15 miles away from the work site. This is based on the suburb area and the proximity of RV parks”. If	The modeling in CalEEMod was updated to match VMT of 19,306 miles which is the total miles presented in Table 3-8 (3 models when combined). Trip Generation Trip distance was manually updated from defaults within CalEEMod to 45 miles which would slightly exceed 19,306 miles. Updated modeling files have been included as **Attachment C** and updated emissions summary tables have been included as **Attachment D**.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**LS POWER RESPONSE**
	the latter, all CalEEMod runs must be updated to reflect this distance.	

Updated Appendix 3-A: Construction Equipment and Workforce

Work Activity				Activity Production				
Equipment Description	**Estimated Horsepower**	**Probable Fuel Type**	**Equipment Quantity**	**Estimated Workforce**	**Crews**	**Estimated Start Date**	**Estimated End Date**	**Duration of Use, Hrs./Day**
Transmission Line								
Underground Transmission Line								
Road Work, Site and Staging Preparation								
Truck - Water 4 K	300	Diesel	2	20	1	June 2026	September 2026	10
Loader - 4-5 Yd	275	Diesel	2					8
Truck - Dump 10-12 Yd	415	Diesel	6					5
Motor Grader	250	Diesel	1					8
Roller	405	Diesel	2					8
Pickup - 1/2 Ton	395	Gas	3					2
Pickup - 1 Ton	410	Diesel	3					2
Backhoe	70	Diesel	1					5
Discing Tractor and machine	640	Diesel	1					9
Skid Steer	74.3	Diesel	1					4
Pot Holing Machine (Hydro Vacuum Excavator)	525	Diesel	1					8
Excavating Scraper	407	Diesel	1					5
Generator – 25 Kw	45	Diesel	2					10
Security Vehicle	158	Gas	1					24
Bulldozer (CAT D5 Equivalent)	170	Diesel	1					7
Survey / Potholing								
Pickup - 1/2 Ton	395	Gas	2	7	2	June 2026	February 2027	6
Pot Holing Machine (Hydro Vacuum Excavator)	525	Diesel	1					6
Vaults								
Pickup - 1/2 Ton	395	Gas	2	8	3	July 2026	January 2027	4
Pickup - 1 Ton	410	Diesel	1					6
Excavator	275	Diesel	1					6
Backhoe - 2X4	68	Diesel	1					6
Loader - 4-5Yd	275	Diesel	1					6
Compressor	100	NA	1					6
Tractor Trailer	500	Diesel	1					3
Mobile Crane	260	Diesel	2					2
Truck - Dump 10-12 Yd	415	Diesel	2					3
Truck - Water 4 K	300	Diesel	1					4

Updated Appendix 3-A: Construction Equipment and Workforce

Work Activity				Activity Production				
Equipment Description	**Estimated Horsepower**	**Probable Fuel Type**	**Equipment Quantity**	**Estimated Workforce**	**Crews**	**Estimated Start Date**	**Estimated End Date**	**Duration of Use, Hrs./Day**
Duct Bank and Restoration								
Pickup - 1/2 Ton	395	Gas	3	11	4	July 2026	September 2027	4
Pickup - 1 Ton	410	Diesel	2					6
Excavator	275	Diesel	1					6
Backhoe	68	Diesel	1					6
Loader	275	Diesel	1					6
Compressor	100	NA	1					6
Truck - Water 4 K	300	Diesel	1					6
Asphalt Paver	235	Diesel	1					2
Roller	405	Diesel	1					3
Truck - Dump 10-12 Yd	415	Diesel	2					4
Truck - Water 4 K	300	Diesel	1					4
Concrete Truck	430	Diesel	2					6
Underground Crossings								
HDD Machine	25	Diesel	1	7	2	August 2026	July 2027	6
Pickup - 1/2 Ton	395	Gas	3					6
Pickup - 1 Ton	410	Diesel	2					6
Excavator	275	Diesel	1					6
Backhoe	68	Diesel	1					6
Truck - Dump 10-12 Yd	415	Diesel	2					6
Backhoe	68	Diesel	1					6
Truck - Dump 10-12 Yd	415	Diesel	2					6
Truck - Water 4 K	300	Diesel	1					6
Jack and Bore Machine	67	Diesel	1	7	1	October 2026	February 2027	6
Pickup - 1/2 Ton	395	Gas	3					6
Pickup - 1 Ton	410	Diesel	2					6
Excavator	275	Diesel	1					6
Backhoe	68	Diesel	1					6
Truck - Dump 10-12 Yd	415	Diesel	2					6
Truck - Water 4 K	300	Diesel	1					6
Cable Install								
Pickup - 1/2 Ton	395	Gas	1	8	2	August 2027	March 2028	4
Pickup - 1 Ton	410	Diesel	1					4
Wire Trailer/ Tensioner	70	NA	2					6
Wire Puller	82	Diesel	2					6
Cable Splicing Rig	300	Diesel	1					3

Updated Appendix 3-A: Construction Equipment and Workforce

Work Activity				Activity Production				
Equipment Description	**Estimated Horsepower**	**Probable Fuel Type**	**Equipment Quantity**	**Estimated Workforce**	**Crews**	**Estimated Start Date**	**Estimated End Date**	**Duration of Use, Hrs./Day**
Overhead Transmission Line								
Surveying								
Pickup - 1/2 Ton	395	Gas	2	3	1	June 2026	June 2026	
Clearing / ROW / Access								
Truck - Water 4 K	300	Diesel	2	18	2	June 2026	September 2026	10
Loader - 4-5 Yd	275	Diesel	1					8
Truck - Dump 10-12 Yd	415	Diesel	3					5
Motor Grader	250	Diesel	1					8
Pickup - 1/2 Ton	395	Gas	1					2
Pickup - 1 Ton	410	Diesel	1					2
Backhoe	70	Diesel	1					5
Skid Steer	74.3	Diesel	2					4
Pot Holing Machine (Hydro Vacuum Excavator)	525	Diesel	1					8
Excavating Scraper	407	Diesel	1					5
Foundation / Structures / Wire								
3/4 - Ton Truck, 4x4	275	Gas	3	25	1	June 2026	February 2027	3
Pickup - 1 Ton	410	Diesel	3					3
Boom/Crane Truck	367	Diesel	1					4
Flat Bed Pole Truck	400	Diesel	1					4
Truck - Water 4 K	300	Diesel	1					10
Backhoe/Frontloader	125	Diesel	2					4
Manlift/Bucket Truck	250	Diesel	8					4
Compressor Trailer	60	Diesel	1					6
R/T Crane	367	Diesel	5					5
Jet A Fuel Truck	300	Diesel	1					1
Helicopter Support Truck	300	Diesel	1					2
Light or Medium Duty Helicopter	NA	Jet A	1					3
Wire Trailer/ Tensioner	70	NA	2					6
Wire Puller	70	Gas	2					6
Drilling Rig	82	Diesel	2					6
Conductor Splicing Rig	300	Diesel	1					3
Truck - Dump 10-12 Yd	415	Diesel	2					3
Skid Steer	74.3	Diesel	2					4
Concrete Truck	430	Diesel	2					6

Updated Appendix 3-A: Construction Equipment and Workforce

Work Activity				Activity Production				
Equipment Description	**Estimated Horsepower**	**Probable Fuel Type**	**Equipment Quantity**	**Estimated Workforce**	**Crews**	**Estimated Start Date**	**Estimated End Date**	**Duration of Use, Hrs./Day**
Other								
Commissioning and Testing								
Pickup - 1/2 Ton	395	Gas	2	20	1	March 2028	June 2028	2
Pickup - 1 Ton	410	Diesel	2					2
Generator – 25 Kw	45	Diesel	2					10
Manlift - 40'	49	Diesel	3					8
Tool - Van/Conex 20'		NA	6					10
10 k Reach Forklift	130	Diesel	1					5
15 k lb Forklift	49	Diesel	1					5
PG&E Substation Upgrades and Connection								
Pickup - 1 Ton	410	Diesel	3	10	2	December 2026	February 2028	10
Forklift - 10 K Reach	130	Diesel	1					10
Excavator - Mini	70	Diesel	1					5
Loader - 4-5 Yd	275	Diesel	1					5
Pressure Digger - Lo-Drill (Tracked)	125	Diesel	2					10
Welding Truck	395	Diesel	2					2
Concrete Truck	430	Diesel	2					6
SVP Substation Upgrades and Connection								
Pickup - 1 Ton	410	Diesel	3	10	2	September 2026	February 2028	10
Forklift - 10 K Reach	130	Diesel	1					10
Excavator - Mini	70	Diesel	1					5
Loader - 4-5 Yd	275	Diesel	1					5
Pressure Digger - Lo-Drill (Tracked)	125	Diesel	2					10
Welding Truck	395	Diesel	2					2
Concrete Truck	430	Diesel	2					6

Updated Table 3-4: Staging Areas			
No.	**Location**	**Approximate Size (Acres)**	**Access[1]**
1	Located off Boyce Road, approximately 0.5 mile northwest of the existing Newark substation.	5.4	Access from Boyce Road, southwest to the staging area site.
2	Located off Weber Road, adjacent to the proposed Newark to NRS 230 kV transmission line alignment and the Newark Substation.	24.6	Direct access from Boyce Road and/or Weber Road.
3	Located off Boyce Road, adjacent to the proposed Newark to NRS 230 kV transmission line and approximately 0.1 mile east of the existing Newark substation.	7.8	Direct access from Boyce Road and/or Auto Mall Parkway.
4	Located off Fremont Boulevard, adjacent to the proposed Newark to NRS 230 kV transmission line alignment.	3.1	Direct access from Freemont Boulevard.
5	Located off North McCarthy Boulevard, adjacent to the proposed Newark to NRS 230 kV transmission line alignment.	2.6	Direct access from North McCarthy Boulevard.
6	Located off North McCarthy Boulevard, adjacent to the proposed Newark to NRS 230 kV transmission line alignment.	1.8	Direct access from North McCarthy Boulevard.
7	Located off Los Esteros Road, adjacent to the proposed Newark to NRS 230 kV transmission line alignment, north of the RWF.	16.7	Direct access from Los Esteros Road.
8	Located off Zanker Road, approximately 0.8 mile south of the proposed Newark to NRS 230 kV transmission line alignment.	51.6	Access from Zenker Road, Alviso Milpitas Road, and/or Thomas Foon Chew Way.
9	Located off Los Esteros Road, adjacent to the proposed Newark to NRS 230 kV transmission line, southwest of the RWF.	7.7	Direct access from Los Esteros Road.
10	Located off First Street, west of the intersection of Tony P. Santos Way and First Street, approximately 0.2 mile northwest of the proposed Newark to NRS 230 kV transmission line alignment.	3.4	Access from North First Street to either Anderson Aly or Bay Vista Drive.
11	Located off First Street, adjacent to the proposed Newark to NRS 230 kV transmission line alignment.	12.0	Access from North First Street, or by Bay Vista Drive.
12	Located off Nortech Court, adjacent to the proposed Newark to NRS 230 kV transmission line alignment.	6.0	Access from North First Street to private parking lot.
	TOTAL	**142.7**	

Notes:
[1] Access from the potential construction staging areas to the Proposed Project alignment would be on existing public roadways as depicted in the **Updated GIS Database**.

PGE Upgrades Newark - HVDC Tier 4 Final (12-18-24 Update) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	PGE Upgrades Newark - HVDC Tier 4 Final (12-18-24 Update)
Construction Start Date	12/15/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.20
Precipitation (days)	25.8
Location	37.50616549232012, -121.98839557092066
County	Alameda
City	Fremont
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1894
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Industrial	1.00	User Defined Unit	13.8	10,000	0.00	—	—	Electrical Substation no buildings

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.69	6.63	15.5	0.03	0.16	0.93	1.09	0.15	0.24	0.39	—	4,196	4,196	0.14	0.27	4,287
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.72	6.96	15.3	0.03	0.17	0.93	1.10	0.16	0.24	0.40	—	4,200	4,200	0.14	0.27	4,285
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.49	4.79	10.8	0.02	0.11	0.65	0.77	0.11	0.17	0.27	—	2,974	2,974	0.10	0.20	3,037
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.87	1.98	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	492	492	0.02	0.03	503

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2027	0.69	6.63	15.5	0.03	0.16	0.93	1.09	0.15	0.24	0.39	—	4,196	4,196	0.14	0.27	4,287

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.72	6.96	15.3	0.03	0.17	0.93	1.10	0.16	0.24	0.40	—	4,200	4,200	0.14	0.27	4,285
2027	0.69	6.75	15.2	0.03	0.16	0.93	1.09	0.15	0.24	0.39	—	4,161	4,161	0.14	0.27	4,246
2028	0.67	6.58	15.0	0.03	0.15	0.93	1.08	0.14	0.24	0.38	—	4,111	4,111	0.14	0.26	4,193
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.04	0.42	0.93	< 0.005	0.01	0.06	0.07	0.01	0.01	0.02	—	255	255	0.01	0.02	260
2027	0.49	4.79	10.8	0.02	0.11	0.65	0.77	0.11	0.17	0.27	—	2,974	2,974	0.10	0.20	3,037
2028	0.06	0.59	1.35	< 0.005	0.01	0.08	0.10	0.01	0.02	0.03	—	370	370	0.01	0.02	378
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.01	0.08	0.17	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	42.2	42.2	< 0.005	< 0.005	43.1
2027	0.09	0.87	1.98	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	492	492	0.02	0.03	503
2028	0.01	0.11	0.25	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	61.3	61.3	< 0.005	< 0.005	62.6

3. Construction Emissions Details

3.1. PGE Upgrades Newark (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	5.24	13.4	0.02	0.15	—	0.15	0.14	—	0.14	—	2,124	2,124	0.09	0.02	2,131

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.32	0.81	< 0.005	0.01	—	0.01	0.01	—	0.01	—	129	129	0.01	< 0.005	129
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.15	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	21.3	21.3	< 0.005	< 0.005	21.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.13	1.40	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	447	447	< 0.005	0.02	452
Vendor	0.03	1.59	0.53	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,629	1,629	0.05	0.24	1,702
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.09	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	27.3	27.3	< 0.005	< 0.005	27.7
Vendor	< 0.005	0.09	0.03	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	98.8	98.8	< 0.005	0.01	103
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	4.52	4.52	< 0.005	< 0.005	4.58
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	16.4	16.4	< 0.005	< 0.005	17.1
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.3. PGE Upgrades Newark (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	5.12	13.3	0.02	0.14	—	0.14	0.13	—	0.13	—	2,126	2,126	0.09	0.02	2,133
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	5.12	13.3	0.02	0.14	—	0.14	0.13	—	0.13	—	2,126	2,126	0.09	0.02	2,133
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.44	3.66	9.53	0.02	0.10	—	0.10	0.09	—	0.09	—	1,519	1,519	0.06	0.01	1,524
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.08	0.67	1.74	< 0.005	0.02	—	0.02	0.02	—	0.02	—	251	251	0.01	< 0.005	252
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.05	0.08	1.68	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	474	474	< 0.005	0.02	480
Vendor	0.03	1.43	0.50	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,596	1,596	0.05	0.24	1,673
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.11	1.32	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	439	439	< 0.005	0.02	444
Vendor	0.03	1.52	0.50	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,596	1,596	0.05	0.24	1,669
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.07	0.95	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	316	316	< 0.005	0.01	320
Vendor	0.02	1.06	0.36	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,140	1,140	0.04	0.17	1,193
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.17	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.3	52.3	< 0.005	< 0.005	52.9
Vendor	< 0.005	0.19	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	189	189	0.01	0.03	198
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.5. PGE Upgrades Newark (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.59	5.04	13.3	0.02	0.12	—	0.12	0.12	—	0.12	—	2,122	2,122	0.09	0.02	2,129

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.45	1.20	< 0.005	0.01	—	0.01	0.01	—	0.01	—	191	191	0.01	< 0.005	192
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.22	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.6	31.6	< 0.005	< 0.005	31.7
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.10	1.24	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	431	431	< 0.005	0.02	436
Vendor	0.03	1.44	0.48	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,558	1,558	0.05	0.23	1,627
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.11	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.1	39.1	< 0.005	< 0.005	39.6
Vendor	< 0.005	0.13	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	140	140	< 0.005	0.02	147
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.47	6.47	< 0.005	< 0.005	6.55
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.2	23.2	< 0.005	< 0.005	24.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Sequeste	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
PGE Upgrades Newark	Building Construction	12/1/2026	2/15/2028	5.00	316	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
PGE Upgrades Newark	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	5.00	275	0.27
PGE Upgrades Newark	Excavators	Diesel	Tier 4 Final	1.00	8.00	70.0	0.23
PGE Upgrades Newark	Bore/Drill Rigs	Diesel	Average	2.00	10.0	125	0.25
PGE Upgrades Newark	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	10.0	130	0.24
PGE Upgrades Newark	Welders	Diesel	Average	2.00	2.00	395	0.23

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
PGE Upgrades Newark	—	—	—	—
PGE Upgrades Newark	Worker	15.0	45.0	LDA,LDT1,LDT2
PGE Upgrades Newark	Vendor	12.0	45.0	HHDT,MHDT
PGE Upgrades Newark	Hauling	0.00	45.0	HHDT
PGE Upgrades Newark	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	14.2	annual days of extreme heat
Extreme Precipitation	3.25	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.7
AQ-PM	24.0
AQ-DPM	92.7
Drinking Water	10.2

Lead Risk Housing	5.14
Pesticides	5.17
Toxic Releases	50.8
Traffic	87.3
Effect Indicators	—
CleanUp Sites	99.9
Groundwater	95.4
Haz Waste Facilities/Generators	99.5
Impaired Water Bodies	33.2
Solid Waste	93.0
Sensitive Population	—
Asthma	25.4
Cardio-vascular	40.4
Low Birth Weights	70.6
Socioeconomic Factor Indicators	—
Education	20.9
Housing	2.79
Linguistic	53.9
Poverty	3.54
Unemployment	40.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	98.24201206
Employed	82.72808931
Median HI	97.34377005

Education	—
Bachelor's or higher	97.47209034
High school enrollment	100
Preschool enrollment	67.21416656
Transportation	—
Auto Access	76.73553189
Active commuting	55.34453997
Social	—
2-parent households	98.75529321
Voting	51.93122033
Neighborhood	—
Alcohol availability	69.39561145
Park access	32.96548184
Retail density	79.5970743
Supermarket access	40.89567561
Tree canopy	51.64891569
Housing	—
Homeownership	77.96740665
Housing habitability	96.39419992
Low-inc homeowner severe housing cost burden	94.99550879
Low-inc renter severe housing cost burden	93.13486462
Uncrowded housing	63.4800462
Health Outcomes	—
Insured adults	91.18439625
Arthritis	98.6
Asthma ER Admissions	74.4
High Blood Pressure	98.4
Cancer (excluding skin)	94.8

Asthma	99.9
Coronary Heart Disease	99.1
Chronic Obstructive Pulmonary Disease	99.7
Diagnosed Diabetes	96.7
Life Expectancy at Birth	78.5
Cognitively Disabled	66.4
Physically Disabled	87.9
Heart Attack ER Admissions	65.2
Mental Health Not Good	99.6
Chronic Kidney Disease	98.6
Obesity	99.9
Pedestrian Injuries	90.9
Physical Health Not Good	99.5
Stroke	99.1
Health Risk Behaviors	—
Binge Drinking	93.5
Current Smoker	98.5
No Leisure Time for Physical Activity	88.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	25.4
Children	17.1
Elderly	88.2
English Speaking	34.4
Foreign-born	97.3
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	21.5

Traffic Density	83.1
Traffic Access	60.6
Other Indices	—
Hardship	8.8
Other Decision Support	—
2016 Voting	55.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	45.0
Healthy Places Index Score for Project Location (b)	97.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Approx. 10KSF control enclosure/building
Construction: Construction Phases	Construction Schedule from Applicant List

Construction: Off-Road Equipment	Newark PGE Upgrades Construction from Applicant PD
Construction: Trips and VMT	Updated per Traffic Identified in construction spreadsheet
Operations: Energy Use	200 kW load so 1,752,000 kWH

NRS Substation Location - HVDC Tier 4 Final (12-18-24 Update) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	NRS Substation Location - HVDC Tier 4 Final (12-18-24 Update)
Construction Start Date	6/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	4.20
Precipitation (days)	25.8
Location	37.50616549232012, -121.98839557092066
County	Alameda
City	Fremont
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1894
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description

User Defined Industrial	1.00	User Defined Unit	13.8	10,000	0.00	—	—	Electrical Substation no buildings

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.71	6.63	15.4	0.03	0.17	0.93	1.10	0.16	0.24	0.40	—	4,195	4,195	0.14	0.27	4,286
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.71	6.75	15.0	0.03	0.17	0.93	1.10	0.16	0.24	0.40	—	4,159	4,159	0.14	0.27	4,244
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.49	4.64	10.6	0.02	0.11	0.65	0.77	0.11	0.17	0.27	—	2,945	2,945	0.10	0.20	3,007
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.09	0.85	1.94	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	488	488	0.02	0.03	498

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.71	6.63	15.4	0.03	0.17	0.93	1.10	0.16	0.24	0.40	—	4,195	4,195	0.14	0.27	4,286
2027	0.69	6.42	15.2	0.03	0.16	0.93	1.09	0.15	0.24	0.39	—	4,155	4,155	0.14	0.27	4,245
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.71	6.75	15.0	0.03	0.17	0.93	1.10	0.16	0.24	0.40	—	4,159	4,159	0.14	0.27	4,244
2027	0.69	6.54	14.9	0.03	0.16	0.93	1.09	0.15	0.24	0.39	—	4,120	4,120	0.14	0.27	4,205
2028	0.66	6.37	14.8	0.03	0.15	0.93	1.08	0.14	0.24	0.38	—	4,071	4,071	0.14	0.26	4,152
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.15	1.42	3.17	0.01	0.04	0.19	0.23	0.03	0.05	0.08	—	880	880	0.03	0.06	898
2027	0.49	4.64	10.6	0.02	0.11	0.65	0.77	0.11	0.17	0.27	—	2,945	2,945	0.10	0.20	3,007
2028	0.06	0.57	1.33	< 0.005	0.01	0.08	0.10	0.01	0.02	0.03	—	367	367	0.01	0.02	374
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.03	0.26	0.58	< 0.005	0.01	0.04	0.04	0.01	0.01	0.02	—	146	146	< 0.005	0.01	149
2027	0.09	0.85	1.94	< 0.005	0.02	0.12	0.14	0.02	0.03	0.05	—	488	488	0.02	0.03	498
2028	0.01	0.10	0.24	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	60.7	60.7	< 0.005	< 0.005	62.0

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.32	0.01	0.51	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.00	1,002	1,002	0.16	0.02	1,012
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	0.25	0.01	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.00	999	999	0.16	0.02	1,009
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.29	0.01	0.28	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.00	1,000	1,000	0.16	0.02	1,010
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.05	< 0.005	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	166	166	0.03	< 0.005	167

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	20.9	20.9	< 0.005	< 0.005	21.2
Area	0.31	< 0.005	0.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.79	1.79	< 0.005	< 0.005	1.79
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	979	979	0.16	0.02	989
Water	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.32	0.01	0.51	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.00	1,002	1,002	0.16	0.02	1,012
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	19.7	19.7	< 0.005	< 0.005	20.0
Area	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	979	979	0.16	0.02	989
Water	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.25	0.01	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.00	999	999	0.16	0.02	1,009

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.01	0.01	0.07	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	—	19.8	19.8	< 0.005	< 0.005	20.1
Area	0.28	< 0.005	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.88	0.88	< 0.005	< 0.005	0.89
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	979	979	0.16	0.02	989
Water	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.29	0.01	0.28	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	0.00	1,000	1,000	0.16	0.02	1,010
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.28	3.28	< 0.005	< 0.005	3.33
Area	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	0.15
Energy	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	162	162	0.03	< 0.005	164
Water	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Waste	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.05	< 0.005	0.05	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.00	166	166	0.03	< 0.005	167

3. Construction Emissions Details

3.1. NRS Upgrades (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	5.04	13.1	0.02	0.15	—	0.15	0.14	—	0.14	—	2,083	2,083	0.08	0.02	2,090
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.63	5.04	13.1	0.02	0.15	—	0.15	0.14	—	0.14	—	2,083	2,083	0.08	0.02	2,090
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	1.06	2.76	< 0.005	0.03	—	0.03	0.03	—	0.03	—	440	440	0.02	< 0.005	442
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.19	0.50	< 0.005	0.01	—	0.01	0.01	—	0.01	—	72.9	72.9	< 0.005	< 0.005	73.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.10	1.81	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	483	483	< 0.005	0.02	489
Vendor	0.03	1.50	0.53	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,628	1,628	0.05	0.24	1,706
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.13	1.40	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	447	447	< 0.005	0.02	452
Vendor	0.03	1.59	0.53	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,629	1,629	0.05	0.24	1,702
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.30	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	95.2	95.2	< 0.005	< 0.005	96.4

Vendor	0.01	0.33	0.11	< 0.005	0.01	0.09	0.10	0.01	0.03	0.03	—	344	344	0.01	0.05	360
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.8	15.8	< 0.005	< 0.005	16.0
Vendor	< 0.005	0.06	0.02	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.0	57.0	< 0.005	0.01	59.6
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.3. NRS Upgrades (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	4.91	13.1	0.02	0.14	—	0.14	0.13	—	0.13	—	2,085	2,085	0.08	0.02	2,092
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.60	4.91	13.1	0.02	0.14	—	0.14	0.13	—	0.13	—	2,085	2,085	0.08	0.02	2,092
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	3.51	9.33	0.01	0.10	—	0.10	0.09	—	0.09	—	1,489	1,489	0.06	0.01	1,494
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.64	1.70	< 0.005	0.02	—	0.02	0.02	—	0.02	—	247	247	0.01	< 0.005	247
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.08	1.68	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	474	474	< 0.005	0.02	480
Vendor	0.03	1.43	0.50	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,596	1,596	0.05	0.24	1,673
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.11	1.32	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	439	439	< 0.005	0.02	444
Vendor	0.03	1.52	0.50	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,596	1,596	0.05	0.24	1,669
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.07	0.95	0.00	0.00	0.34	0.34	0.00	0.08	0.08	—	316	316	< 0.005	0.01	320
Vendor	0.02	1.06	0.36	0.01	0.02	0.32	0.34	0.02	0.09	0.11	—	1,140	1,140	0.04	0.17	1,193
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.17	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.3	52.3	< 0.005	< 0.005	52.9
Vendor	< 0.005	0.19	0.07	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	189	189	0.01	0.03	198
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.5. NRS Upgrades (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.58	4.83	13.0	0.02	0.12	—	0.12	0.11	—	0.11	—	2,082	2,082	0.08	0.02	2,089
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.43	1.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	187	187	0.01	< 0.005	188
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	31.0	31.0	< 0.005	< 0.005	31.1
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.10	1.24	0.00	0.00	0.48	0.48	0.00	0.11	0.11	—	431	431	< 0.005	0.02	436
Vendor	0.03	1.44	0.48	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,558	1,558	0.05	0.23	1,627
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.11	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	39.1	39.1	< 0.005	< 0.005	39.6

Vendor	< 0.005	0.13	0.04	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	140	140	< 0.005	0.02	147
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.47	6.47	< 0.005	< 0.005	6.55
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.2	23.2	< 0.005	< 0.005	24.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	979	979	0.16	0.02	989
Total	—	—	—	—	—	—	—	—	—	—	—	979	979	0.16	0.02	989
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	979	979	0.16	0.02	989

Total	—	—	—	—	—	—	—	—	—	—	—	979	979	0.16	0.02	989
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	—	162	162	0.03	< 0.005	164
Total	—	—	—	—	—	—	—	—	—	—	—	162	162	0.03	< 0.005	164

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	0.00

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.07	< 0.005	0.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.79	1.79	< 0.005	< 0.005	1.79
Total	0.31	< 0.005	0.43	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	1.79	1.79	< 0.005	< 0.005	1.79
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.21	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.03	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	0.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.01	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Landscape	0.01	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	0.15
Total	0.05	< 0.005	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.15	0.15	< 0.005	< 0.005	0.15

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
User Defined Industrial	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00
Total	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	0.00

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
NRS Upgrades	Building Construction	9/15/2026	2/15/2028	5.00	371	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
NRS Upgrades	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	5.00	275	0.27
NRS Upgrades	Excavators	Diesel	Tier 4 Final	1.00	5.00	70.0	0.27
NRS Upgrades	Bore/Drill Rigs	Diesel	Average	2.00	10.0	125	0.25
NRS Upgrades	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	10.0	130	0.24
NRS Upgrades	Welders	Diesel	Average	2.00	2.00	395	0.23

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
NRS Upgrades	—	—	—	—
NRS Upgrades	Worker	15.0	45.0	LDA,LDT1,LDT2
NRS Upgrades	Vendor	12.0	45.0	HHDT,MHDT
NRS Upgrades	Hauling	0.00	45.0	HHDT
NRS Upgrades	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
User Defined Industrial	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year

Total all Land Uses	2.74	2.74	2.74	1,000	27.4	27.4	27.4	10,000

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	15,000	5,000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
User Defined Industrial	1,752,000	204	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)

User Defined Industrial	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
User Defined Industrial	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	14.2	annual days of extreme heat
Extreme Precipitation	3.25	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	1	1	1	2
Sea Level Rise	1	1	1	2

Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	13.7
AQ-PM	24.0
AQ-DPM	92.7
Drinking Water	10.2
Lead Risk Housing	5.14
Pesticides	5.17
Toxic Releases	50.8
Traffic	87.3
Effect Indicators	—
CleanUp Sites	99.9
Groundwater	95.4

Haz Waste Facilities/Generators	99.5
Impaired Water Bodies	33.2
Solid Waste	93.0
Sensitive Population	—
Asthma	25.4
Cardio-vascular	40.4
Low Birth Weights	70.6
Socioeconomic Factor Indicators	—
Education	20.9
Housing	2.79
Linguistic	53.9
Poverty	3.54
Unemployment	40.6

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	98.24201206
Employed	82.72808931
Median HI	97.34377005
Education	—
Bachelor's or higher	97.47209034
High school enrollment	100
Preschool enrollment	67.21416656
Transportation	—
Auto Access	76.73553189
Active commuting	55.34453997

Social	—
2-parent households	98.75529321
Voting	51.93122033
Neighborhood	—
Alcohol availability	69.39561145
Park access	32.96548184
Retail density	79.5970743
Supermarket access	40.89567561
Tree canopy	51.64891569
Housing	—
Homeownership	77.96740665
Housing habitability	96.39419992
Low-inc homeowner severe housing cost burden	94.99550879
Low-inc renter severe housing cost burden	93.13486462
Uncrowded housing	63.4800462
Health Outcomes	—
Insured adults	91.18439625
Arthritis	98.6
Asthma ER Admissions	74.4
High Blood Pressure	98.4
Cancer (excluding skin)	94.8
Asthma	99.9
Coronary Heart Disease	99.1
Chronic Obstructive Pulmonary Disease	99.7
Diagnosed Diabetes	96.7
Life Expectancy at Birth	78.5
Cognitively Disabled	66.4
Physically Disabled	87.9

Heart Attack ER Admissions	65.2
Mental Health Not Good	99.6
Chronic Kidney Disease	98.6
Obesity	99.9
Pedestrian Injuries	90.9
Physical Health Not Good	99.5
Stroke	99.1
Health Risk Behaviors	—
Binge Drinking	93.5
Current Smoker	98.5
No Leisure Time for Physical Activity	88.3
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	25.4
Children	17.1
Elderly	88.2
English Speaking	34.4
Foreign-born	97.3
Outdoor Workers	98.2
Climate Change Adaptive Capacity	—
Impervious Surface Cover	21.5
Traffic Density	83.1
Traffic Access	60.6
Other Indices	—
Hardship	8.8
Other Decision Support	—
2016 Voting	55.3

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	45.0
Healthy Places Index Score for Project Location (b)	97.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	No
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Approx. 10KSF control enclosure/building
Construction: Construction Phases	Construction Schedule from Applicant List
Construction: Off-Road Equipment	NRS Upgrades Construction from Applicant PD
Construction: Trips and VMT	Updated per Traffic Identified in construction spreadsheet
Operations: Energy Use	200 kW load so 1,752,000 kWH

Newark - NRS Transmission Line Work (12-18-24) Detailed Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Newark - NRS Transmission Line Work (12-18-24)
Construction Start Date	6/1/2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.70
Precipitation (days)	28.2
Location	37.43227346021219, -121.9649371427572
County	Santa Clara
City	San Jose
Air District	Bay Area AQMD
Air Basin	San Francisco Bay Area
TAZ	1796
EDFZ	1
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
User Defined Linear	14.0	Mile	17.0	0.00	0.00	—	—	Transmission Lines (UnderGround)

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.14	87.8	209	0.60	2.77	19.9	22.7	2.63	6.31	8.94	—	75,312	75,312	3.08	4.74	76,890
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	4.43	58.6	118	0.40	1.40	11.4	12.8	1.34	2.99	4.34	—	53,028	53,028	2.20	4.45	54,412
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.10	33.3	70.9	0.22	0.97	6.76	7.72	0.92	2.00	2.91	—	28,196	28,196	1.16	2.00	28,838
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.56	6.08	12.9	0.04	0.18	1.23	1.41	0.17	0.36	0.53	—	4,668	4,668	0.19	0.33	4,775

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	9.14	87.8	209	0.60	2.77	19.9	22.7	2.63	6.31	8.94	—	75,312	75,312	3.08	4.74	76,890

2027	1.87	27.8	61.3	0.23	0.57	7.60	8.16	0.56	2.00	2.56	—	31,056	31,056	1.30	2.95	32,019
2028	0.32	6.73	11.8	0.02	0.04	0.86	0.90	0.03	0.21	0.25	—	2,768	2,768	0.09	0.12	2,811
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	4.43	58.6	118	0.40	1.40	11.4	12.8	1.34	2.99	4.34	—	53,028	53,028	2.20	4.45	54,412
2027	4.38	55.6	116	0.40	1.36	11.4	12.7	1.30	2.99	4.30	—	52,381	52,381	2.19	4.45	53,763
2028	0.44	9.67	15.7	0.04	0.07	1.57	1.64	0.06	0.40	0.45	—	5,002	5,002	0.18	0.39	5,122
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	3.10	33.3	70.9	0.22	0.97	6.76	7.72	0.92	2.00	2.91	—	28,196	28,196	1.16	2.00	28,838
2027	1.35	20.5	39.6	0.15	0.41	5.02	5.43	0.40	1.32	1.72	—	20,345	20,345	0.85	1.94	20,958
2028	0.24	5.10	8.46	0.02	0.03	0.70	0.73	0.03	0.17	0.20	—	2,253	2,253	0.08	0.14	2,299
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.56	6.08	12.9	0.04	0.18	1.23	1.41	0.17	0.36	0.53	—	4,668	4,668	0.19	0.33	4,775
2027	0.25	3.75	7.22	0.03	0.08	0.92	0.99	0.07	0.24	0.31	—	3,368	3,368	0.14	0.32	3,470
2028	0.04	0.93	1.54	< 0.005	0.01	0.13	0.13	< 0.005	0.03	0.04	—	373	373	0.01	0.02	381

3. Construction Emissions Details

3.1. HVDC Cable Install (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.28	3.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	478	478	0.02	< 0.005	479

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.28	3.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	478	478	0.02	< 0.005	479
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.46	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	172	172	0.01	< 0.005	172
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.08	0.21	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.4	28.4	< 0.005	< 0.005	28.5
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.05	0.96	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	250	250	< 0.005	0.01	254
Vendor	0.03	1.52	0.64	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,616	1,616	0.08	0.24	1,693
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.06	0.73	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	231	231	< 0.005	0.01	234
Vendor	0.03	1.60	0.65	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,616	1,616	0.08	0.24	1,690
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.27	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	84.1	84.1	< 0.005	< 0.005	85.2
Vendor	0.01	0.56	0.23	< 0.005	0.01	0.16	0.17	0.01	0.04	0.05	—	581	581	0.03	0.09	608
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	14.1
Vendor	< 0.005	0.10	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	96.1	96.1	< 0.005	0.01	101
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.3. HVDC Cable Install (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	1.28	3.17	< 0.005	0.01	—	0.01	0.01	—	0.01	—	477	477	0.02	< 0.005	479
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.23	0.56	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	84.0	84.0	< 0.005	< 0.005	84.3
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	13.9	13.9	< 0.005	< 0.005	14.0
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.06	0.69	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	227	227	< 0.005	0.01	230
Vendor	0.03	1.51	0.61	0.01	0.02	0.45	0.48	0.01	0.13	0.14	—	1,576	1,576	0.06	0.23	1,646
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.12	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	40.5	40.5	< 0.005	< 0.005	41.0
Vendor	0.01	0.26	0.11	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.02	—	278	278	0.01	0.04	290
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.71	6.71	< 0.005	< 0.005	6.79
Vendor	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	46.0	46.0	< 0.005	0.01	48.0
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.5. HVDC Survey / Potholing (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	1.42	14.2	0.03	0.05	—	0.05	0.05	—	0.05	—	2,874	2,874	0.12	0.02	2,883
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.27	1.42	14.2	0.03	0.05	—	0.05	0.05	—	0.05	—	2,874	2,874	0.12	0.02	2,883
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.71	7.13	0.01	0.03	—	0.03	0.03	—	0.03	—	1,444	1,444	0.06	0.01	1,449
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.13	1.30	< 0.005	0.01	—	0.01	0.01	—	0.01	—	239	239	0.01	< 0.005	240
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.09	1.80	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	446	446	< 0.005	0.01	452
Vendor	0.02	1.07	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,100	1,100	0.05	0.16	1,152
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.12	1.37	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	413	413	< 0.005	0.02	417
Vendor	0.02	1.14	0.45	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,100	1,100	0.05	0.16	1,149
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.05	0.71	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	210	210	< 0.005	0.01	212
Vendor	0.01	0.56	0.23	< 0.005	0.01	0.15	0.16	0.01	0.04	0.05	—	553	553	0.03	0.08	578
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.7	34.7	< 0.005	< 0.005	35.1
Vendor	< 0.005	0.10	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	91.5	91.5	< 0.005	0.01	95.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.7. HVDC Survey / Potholing (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	1.42	14.2	0.03	0.05	—	0.05	0.05	—	0.05	—	2,876	2,876	0.12	0.02	2,886
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.15	1.53	< 0.005	0.01	—	0.01	0.01	—	0.01	—	311	311	0.01	< 0.005	312
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.03	0.28	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	51.4	51.4	< 0.005	< 0.005	51.6
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.11	1.28	0.00	0.00	0.45	0.45	0.00	0.10	0.10	—	405	405	< 0.005	0.01	410
Vendor	0.02	1.06	0.43	0.01	0.02	0.30	0.32	0.02	0.08	0.10	—	1,078	1,078	0.05	0.16	1,127
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.14	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	44.3	44.3	< 0.005	< 0.005	44.8
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	116	116	0.01	0.02	122

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.33	7.33	< 0.005	< 0.005	7.42
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	19.3	19.3	< 0.005	< 0.005	20.2
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.9. Transmission Line Construction - Crossings (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	4.32	31.2	0.06	0.12	—	0.12	0.12	—	0.12	—	6,234	6,234	0.25	0.05	6,256
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	4.32	31.2	0.06	0.12	—	0.12	0.12	—	0.12	—	6,234	6,234	0.25	0.05	6,256
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.22	1.55	11.2	0.02	0.04	—	0.04	0.04	—	0.04	—	2,240	2,240	0.09	0.02	2,248
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.28	2.04	< 0.005	0.01	—	0.01	0.01	—	0.01	—	371	371	0.02	< 0.005	372
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.05	0.90	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	223	223	< 0.005	0.01	226
Vendor	0.05	2.64	1.12	0.02	0.04	0.74	0.78	0.04	0.21	0.24	—	2,714	2,714	0.12	0.40	2,842
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.06	0.69	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	206	206	< 0.005	0.01	209
Vendor	0.05	2.81	1.10	0.02	0.04	0.74	0.78	0.04	0.21	0.24	—	2,714	2,714	0.12	0.40	2,835
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.25	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	75.0	75.0	< 0.005	< 0.005	75.9
Vendor	0.02	0.99	0.40	0.01	0.01	0.26	0.28	0.01	0.07	0.09	—	975	975	0.04	0.14	1,020

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	12.4	12.4	< 0.005	< 0.005	12.6
Vendor	< 0.005	0.18	0.07	< 0.005	< 0.005	0.05	0.05	< 0.005	0.01	0.02	—	161	161	0.01	0.02	169
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.11. Transmission Line Construction - Crossings (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	4.26	31.2	0.06	0.12	—	0.12	0.12	—	0.12	—	6,234	6,234	0.25	0.05	6,255
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.61	4.26	31.2	0.06	0.12	—	0.12	0.12	—	0.12	—	6,234	6,234	0.25	0.05	6,255
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.28	1.96	14.3	0.03	0.05	—	0.05	0.05	—	0.05	—	2,869	2,869	0.12	0.02	2,879
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.36	2.62	< 0.005	0.01	—	0.01	0.01	—	0.01	—	475	475	0.02	< 0.005	477
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.05	0.84	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	219	219	< 0.005	0.01	222
Vendor	0.05	2.50	1.06	0.02	0.04	0.74	0.78	0.04	0.21	0.24	—	2,658	2,658	0.12	0.39	2,785
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.05	0.64	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	203	203	< 0.005	0.01	205
Vendor	0.05	2.63	1.06	0.02	0.04	0.74	0.78	0.04	0.21	0.24	—	2,658	2,658	0.12	0.40	2,779
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.30	0.00	0.00	0.10	0.10	0.00	0.02	0.02	—	94.3	94.3	< 0.005	< 0.005	95.5
Vendor	0.02	1.19	0.49	0.01	0.02	0.34	0.36	0.02	0.09	0.11	—	1,224	1,224	0.06	0.18	1,280

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.06	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	15.6	15.6	< 0.005	< 0.005	15.8
Vendor	< 0.005	0.22	0.09	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	203	203	0.01	0.03	212
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.13. HVDC and HVAC - Vaults (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	2.80	11.6	0.02	0.09	—	0.09	0.08	—	0.08	—	2,565	2,565	0.10	0.02	2,574
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	2.80	11.6	0.02	0.09	—	0.09	0.08	—	0.08	—	2,565	2,565	0.10	0.02	2,574
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.15	1.21	5.00	0.01	0.04	—	0.04	0.04	—	0.04	—	1,108	1,108	0.04	0.01	1,112
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.22	0.91	< 0.005	0.01	—	0.01	0.01	—	0.01	—	183	183	0.01	< 0.005	184
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.10	2.05	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	510	510	< 0.005	0.02	517
Vendor	0.10	5.35	2.26	0.04	0.08	1.51	1.59	0.08	0.42	0.50	—	5,501	5,501	0.25	0.80	5,760
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.14	1.57	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	471	471	< 0.005	0.02	477
Vendor	0.10	5.68	2.24	0.04	0.08	1.51	1.59	0.08	0.42	0.50	—	5,501	5,501	0.25	0.80	5,747
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.05	0.69	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	206	206	< 0.005	0.01	209
Vendor	0.04	2.40	0.98	0.02	0.03	0.64	0.68	0.03	0.18	0.21	—	2,377	2,377	0.11	0.35	2,485

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.13	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.1	34.1	< 0.005	< 0.005	34.5
Vendor	0.01	0.44	0.18	< 0.005	0.01	0.12	0.12	0.01	0.03	0.04	—	394	394	0.02	0.06	411
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.15. HVDC and HVAC - Vaults (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.35	2.71	11.5	0.02	0.08	—	0.08	0.08	—	0.08	—	2,564	2,564	0.10	0.02	2,573
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.41	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	90.3	90.3	< 0.005	< 0.005	90.6
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.07	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	15.0	15.0	< 0.005	< 0.005	15.0
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.12	1.46	0.00	0.00	0.51	0.51	0.00	0.12	0.12	—	463	463	< 0.005	0.02	468
Vendor	0.10	5.32	2.15	0.04	0.08	1.51	1.59	0.08	0.42	0.50	—	5,388	5,388	0.25	0.80	5,633
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	16.5	16.5	< 0.005	< 0.005	16.7
Vendor	< 0.005	0.18	0.08	< 0.005	< 0.005	0.05	0.06	< 0.005	0.01	0.02	—	190	190	0.01	0.03	199
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.73	2.73	< 0.005	< 0.005	2.76
Vendor	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	31.4	31.4	< 0.005	< 0.005	32.9
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.17. HVDC and HVAC - Duct Bank and Restoration (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	5.47	13.9	0.03	0.18	—	0.18	0.17	—	0.17	—	3,719	3,719	0.15	0.03	3,732
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	5.47	13.9	0.03	0.18	—	0.18	0.17	—	0.17	—	3,719	3,719	0.15	0.03	3,732
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.29	2.37	6.00	0.01	0.08	—	0.08	0.07	—	0.07	—	1,607	1,607	0.07	0.01	1,613
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.43	1.10	< 0.005	0.01	—	0.01	0.01	—	0.01	—	266	266	0.01	< 0.005	267

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.31	0.43	8.48	0.00	0.00	2.10	2.10	0.00	0.49	0.49	—	2,103	2,103	0.01	0.07	2,132
Vendor	0.29	16.0	6.78	0.12	0.24	4.53	4.77	0.24	1.25	1.49	—	16,502	16,502	0.76	2.40	17,279
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.57	6.46	0.00	0.00	2.10	2.10	0.00	0.49	0.49	—	1,945	1,945	0.01	0.07	1,967
Vendor	0.29	17.1	6.71	0.12	0.24	4.53	4.77	0.24	1.25	1.49	—	16,504	16,504	0.76	2.40	17,240
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.22	2.86	0.00	0.00	0.89	0.89	0.00	0.21	0.21	—	850	850	0.01	0.03	860
Vendor	0.12	7.20	2.94	0.05	0.10	1.93	2.03	0.10	0.53	0.64	—	7,131	7,131	0.33	1.04	7,456
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.04	0.52	0.00	0.00	0.16	0.16	0.00	0.04	0.04	—	141	141	< 0.005	< 0.005	142
Vendor	0.02	1.31	0.54	0.01	0.02	0.35	0.37	0.02	0.10	0.12	—	1,181	1,181	0.05	0.17	1,234
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.19. HVDC and HVAC - Duct Bank and Restoration (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	5.31	13.9	0.03	0.17	—	0.17	0.16	—	0.16	—	3,719	3,719	0.15	0.03	3,731
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.66	5.31	13.9	0.03	0.17	—	0.17	0.16	—	0.16	—	3,719	3,719	0.15	0.03	3,731
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.40	3.22	8.42	0.02	0.10	—	0.10	0.10	—	0.10	—	2,253	2,253	0.09	0.02	2,261
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.07	0.59	1.54	< 0.005	0.02	—	0.02	0.02	—	0.02	—	373	373	0.02	< 0.005	374
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.43	7.93	0.00	0.00	2.10	2.10	0.00	0.49	0.49	—	2,065	2,065	0.01	0.07	2,093
Vendor	0.29	15.2	6.41	0.12	0.24	4.53	4.77	0.24	1.25	1.49	—	16,163	16,163	0.76	2.40	16,933
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.23	0.50	6.03	0.00	0.00	2.10	2.10	0.00	0.49	0.49	—	1,909	1,909	0.01	0.07	1,931
Vendor	0.29	16.0	6.46	0.12	0.24	4.53	4.77	0.24	1.25	1.49	—	16,165	16,165	0.76	2.40	16,900
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.13	0.30	3.76	0.00	0.00	1.25	1.25	0.00	0.29	0.29	—	1,170	1,170	0.01	0.04	1,185
Vendor	0.17	9.51	3.90	0.07	0.14	2.70	2.85	0.14	0.75	0.89	—	9,793	9,793	0.46	1.46	10,248
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.06	0.69	0.00	0.00	0.23	0.23	0.00	0.05	0.05	—	194	194	< 0.005	0.01	196
Vendor	0.03	1.74	0.71	0.01	0.03	0.49	0.52	0.03	0.14	0.16	—	1,621	1,621	0.08	0.24	1,697
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.21. Overhead Transmission Line Construction - Clearing ROW Access (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.93	20.9	20.6	0.07	0.88	—	0.88	0.81	—	0.81	—	7,835	7,835	0.32	0.06	7,862
Dust From Material Movement	—	—	—	—	—	1.19	1.19	—	0.13	0.13	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.74	5.27	5.19	0.02	0.22	—	0.22	0.20	—	0.20	—	1,975	1,975	0.08	0.02	1,982
Dust From Material Movement	—	—	—	—	—	0.30	0.30	—	0.03	0.03	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.96	0.95	< 0.005	0.04	—	0.04	0.04	—	0.04	—	327	327	0.01	< 0.005	328
Dust From Material Movement	—	—	—	—	—	0.05	0.05	—	0.01	0.01	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.05	0.90	0.00	0.00	0.22	0.22	0.00	0.05	0.05	—	223	223	< 0.005	0.01	226
Vendor	0.01	0.78	0.33	0.01	0.01	0.22	0.23	0.01	0.06	0.07	—	796	796	0.04	0.12	833
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.18	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	52.6	52.6	< 0.005	< 0.005	53.2
Vendor	< 0.005	0.20	0.08	< 0.005	< 0.005	0.05	0.06	< 0.005	0.02	0.02	—	201	201	0.01	0.03	210
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	8.71	8.71	< 0.005	< 0.005	8.81
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	33.2	33.2	< 0.005	< 0.005	34.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.23. Overhead Transmission Line Construction Foundation/Structures/WIre (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	14.1	24.2	0.05	0.55	—	0.55	0.50	—	0.50	—	5,795	5,795	0.24	0.05	5,814

Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.64	14.1	24.2	0.05	0.55	—	0.55	0.50	—	0.50	—	5,795	5,795	0.24	0.05	5,814
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.82	7.07	12.2	0.03	0.27	—	0.27	0.25	—	0.25	—	2,912	2,912	0.12	0.02	2,922
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.15	1.29	2.22	< 0.005	0.05	—	0.05	0.05	—	0.05	—	482	482	0.02	< 0.005	484
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.05	1.03	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	255	255	< 0.005	0.01	258
Vendor	0.05	2.67	1.13	0.02	0.04	0.75	0.79	0.04	0.21	0.25	—	2,750	2,750	0.13	0.40	2,880
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.07	0.78	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	236	236	< 0.005	0.01	238
Vendor	0.05	2.84	1.12	0.02	0.04	0.75	0.79	0.04	0.21	0.25	—	2,751	2,751	0.13	0.40	2,873
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.03	0.40	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	120	120	< 0.005	< 0.005	121
Vendor	0.02	1.40	0.57	0.01	0.02	0.37	0.39	0.02	0.10	0.12	—	1,382	1,382	0.06	0.20	1,445
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	0.01	0.01	—	19.8	19.8	< 0.005	< 0.005	20.1
Vendor	< 0.005	0.25	0.10	< 0.005	< 0.005	0.07	0.07	< 0.005	0.02	0.02	—	229	229	0.01	0.03	239
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.25. Overhead Transmission Line Construction Foundation/Structures/WIre (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61	13.4	24.2	0.05	0.51	—	0.51	0.48	—	0.48	—	5,794	5,794	0.24	0.05	5,814
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.45	2.61	0.01	0.06	—	0.06	0.05	—	0.05	—	626	626	0.03	0.01	628
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.27	0.48	< 0.005	0.01	—	0.01	0.01	—	0.01	—	104	104	< 0.005	< 0.005	104
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.06	0.73	0.00	0.00	0.25	0.25	0.00	0.06	0.06	—	231	231	< 0.005	0.01	234
Vendor	0.05	2.66	1.08	0.02	0.04	0.75	0.79	0.04	0.21	0.25	—	2,694	2,694	0.13	0.40	2,817
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	0.01	0.08	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	25.3	25.3	< 0.005	< 0.005	25.6
Vendor	0.01	0.28	0.12	< 0.005	< 0.005	0.08	0.08	< 0.005	0.02	0.03	—	291	291	0.01	0.04	305
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.19	4.19	< 0.005	< 0.005	4.24
Vendor	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	—	48.2	48.2	< 0.005	0.01	50.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.27. Commissioning and Testing (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.92	9.22	0.02	0.03	—	0.03	0.03	—	0.03	—	1,375	1,375	0.06	0.01	1,380
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.85	1.32	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	197	197	0.01	< 0.005	198
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.15	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	32.6	32.6	< 0.005	< 0.005	32.7
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.15	1.83	0.00	0.00	0.64	0.64	0.00	0.15	0.15	—	579	579	< 0.005	0.02	585
Vendor	0.01	0.79	0.32	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	798	798	0.04	0.12	834
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.27	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	83.8	83.8	< 0.005	< 0.005	84.9
Vendor	< 0.005	0.11	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	114	114	0.01	0.02	120
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.05	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	13.9	13.9	< 0.005	< 0.005	14.1
Vendor	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.9	18.9	< 0.005	< 0.005	19.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.29. Commissioning and Testing (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.92	9.22	0.02	0.03	—	0.03	0.03	—	0.03	—	1,375	1,375	0.06	0.01	1,380
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.24	5.92	9.22	0.02	0.03	—	0.03	0.03	—	0.03	—	1,375	1,375	0.06	0.01	1,380
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.16	4.01	6.26	0.01	0.02	—	0.02	0.02	—	0.02	—	933	933	0.04	0.01	936
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.73	1.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	155	155	0.01	< 0.005	155
Dust From Material Movement	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.11	2.26	0.00	0.00	0.64	0.64	0.00	0.15	0.15	—	615	615	< 0.005	< 0.005	617
Vendor	0.01	0.70	0.30	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	778	778	0.03	0.11	814
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.07	0.15	1.72	0.00	0.00	0.64	0.64	0.00	0.15	0.15	—	569	569	< 0.005	0.02	575
Vendor	0.01	0.75	0.30	0.01	0.01	0.22	0.24	0.01	0.06	0.07	—	778	778	0.03	0.11	812
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.09	1.20	0.00	0.00	0.42	0.42	0.00	0.10	0.10	—	390	390	< 0.005	0.01	395
Vendor	0.01	0.50	0.20	< 0.005	0.01	0.15	0.16	< 0.005	0.04	0.05	—	528	528	0.02	0.08	552

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.02	0.22	0.00	0.00	0.08	0.08	0.00	0.02	0.02	—	64.6	64.6	< 0.005	< 0.005	65.4
Vendor	< 0.005	0.09	0.04	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	87.4	87.4	< 0.005	0.01	91.3
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

3.31. Road Work, Site and Staging Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.61	9.53	65.8	0.12	0.49	—	0.49	0.47	—	0.47	—	13,167	13,167	0.53	0.11	13,212
Dust From Material Movement	—	—	—	—	—	6.93	6.93	—	3.08	3.08	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.34	2.01	13.9	0.03	0.10	—	0.10	0.10	—	0.10	—	2,778	2,778	0.11	0.02	2,787
Dust From Material Movement	—	—	—	—	—	1.46	1.46	—	0.65	0.65	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.37	2.53	< 0.005	0.02	—	0.02	0.02	—	0.02	—	460	460	0.02	< 0.005	461
Dust From Material Movement	—	—	—	—	—	0.27	0.27	—	0.12	0.12	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
HVDC Cable Install	Linear, Drainage, Utilities, & Sub-Grade	8/1/2027	3/15/2028	6.00	195	—
HVDC Survey / Potholing	Linear, Drainage, Utilities, & Sub-Grade	6/1/2026	2/15/2027	6.00	223	—
Transmission Line Construction - Crossings	Linear, Drainage, Utilities, & Sub-Grade	8/1/2026	7/15/2027	6.00	299	—
HVDC and HVAC - Vaults	Linear, Drainage, Utilities, & Sub-Grade	7/1/2026	1/15/2027	6.00	171	—
HVDC and HVAC - Duct Bank and Restoration	Linear, Drainage, Utilities, & Sub-Grade	7/1/2026	9/15/2027	6.00	379	—
Overhead Transmission Line Construction - Clearing ROW Access	Linear, Drainage, Utilities, & Sub-Grade	6/1/2026	9/15/2026	6.00	92.0	—
Overhead Transmission Line Construction Foundation/Structures/Wire	Linear, Drainage, Utilities, & Sub-Grade	6/1/2026	2/15/2027	6.00	223	—
Commissioning and Testing	Linear, Drainage, Utilities, & Sub-Grade	11/1/2027	10/15/2028	6.00	300	—
Road Work, Site and Staging Preparation	Linear, Drainage, Utilities, & Sub-Grade	6/1/2026	9/15/2026	5.00	77.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
HVDC Cable Install	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	6.00	70.0	0.23

HVDC Cable Install	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	6.00	82.0	0.15
HVDC Cable Install	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	3.00	300	0.08
HVDC Survey / Potholing	Off-Highway Tractors	Diesel	Tier 4 Final	2.00	8.00	525	0.29
Transmission Line Construction - Crossings	Excavators	Diesel	Tier 4 Final	2.00	6.00	275	0.30
Transmission Line Construction - Crossings	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	6.00	68.0	0.26
Transmission Line Construction - Crossings	Off-Highway Trucks	Diesel	Tier 4 Final	4.00	6.00	415	0.30
Transmission Line Construction - Crossings	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	6.00	300	0.30
Transmission Line Construction - Crossings	Bore/Drill Rigs	Diesel	Average	1.00	6.00	67.0	0.03
HVDC and HVAC - Vaults	Excavators	Diesel	Tier 4 Final	1.00	6.00	275	0.30
HVDC and HVAC - Vaults	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	68.0	0.26
HVDC and HVAC - Vaults	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	275	0.26
HVDC and HVAC - Vaults	Cranes	Diesel	Tier 4 Final	2.00	2.00	260	0.04
HVDC and HVAC - Vaults	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	3.00	415	0.30
HVDC and HVAC - Vaults	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.30
HVDC and HVAC - Duct Bank and Restoration	Excavators	Diesel	Average	1.00	6.00	275	0.30

HVDC and HVAC - Duct Bank and Restoration	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	1.00	6.00	68.0	0.26
HVDC and HVAC - Duct Bank and Restoration	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	275	0.26
HVDC and HVAC - Duct Bank and Restoration	Pavers	Diesel	Average	1.00	2.00	235	0.38
HVDC and HVAC - Duct Bank and Restoration	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	4.00	415	0.36
HVDC and HVAC - Duct Bank and Restoration	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.30
HVDC and HVAC - Duct Bank and Restoration	Rollers	Diesel	Average	1.00	3.00	405	0.34
Overhead Transmission Line Construction - Clearing ROW Access	Off-Highway Tractors	Diesel	Tier 4 Final	1.00	8.00	525	0.05
Overhead Transmission Line Construction - Clearing ROW Access	Off-Highway Trucks	Diesel	Average	2.00	10.0	300	0.36
Overhead Transmission Line Construction - Clearing ROW Access	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	275	0.30
Overhead Transmission Line Construction - Clearing ROW Access	Off-Highway Trucks	Diesel	Average	3.00	5.00	415	0.30
Overhead Transmission Line Construction - Clearing ROW Access	Graders	Diesel	Average	1.00	8.00	250	0.33

Overhead Transmission Line Construction - Clearing ROW Access	Tractors/Loaders/Back	Diesel	Average	1.00	5.00	70.0	0.30
Overhead Transmission Line Construction - Clearing ROW Access	Skid Steer Loaders	Diesel	Average	2.00	4.00	74.3	0.30
Overhead Transmission Line Construction - Clearing ROW Access	Scrapers	Diesel	Average	1.00	5.00	407	0.43
Overhead Transmission Line Construction Foundation/Structures/Wire	Cranes	Diesel	Average	6.00	4.00	367	0.23
Overhead Transmission Line Construction Foundation/Structures/Wire	Aerial Lifts	Diesel	Tier 4 Final	1.00	8.00	250	0.23
Overhead Transmission Line Construction Foundation/Structures/Wire	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	125	0.30
Overhead Transmission Line Construction Foundation/Structures/Wire	Cranes	Diesel	Tier 4 Final	2.00	8.00	260	0.06
Overhead Transmission Line Construction Foundation/Structures/Wire	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	3.00	415	0.19
Overhead Transmission Line Construction Foundation/Structures/Wire	Off-Highway Trucks	Diesel	Tier 4 Final	1.00	4.00	300	0.38
Overhead Transmission Line Construction Foundation/Structures/Wire	Cranes	Diesel	Average	1.00	4.00	400	0.23

Overhead Transmission Line Construction Foundation/Structures/Wire	Air Compressors	Diesel	Average	1.00	6.00	60.0	0.36
Overhead Transmission Line Construction Foundation/Structures/Wire	Off-Highway Trucks	Diesel	Average	2.00	3.00	300	0.10
Overhead Transmission Line Construction Foundation/Structures/Wire	Bore/Drill Rigs	Diesel	Average	1.00	6.00	82.0	0.30
Overhead Transmission Line Construction Foundation/Structures/Wire	Skid Steer Loaders	Diesel	Average	2.00	4.00	74.3	0.30
Commissioning and Testing	Generator Sets	Diesel	Tier 4 Final	2.00	10.0	45.0	0.74
Commissioning and Testing	Aerial Lifts	Diesel	Average	3.00	8.00	49.0	0.22
Commissioning and Testing	Rough Terrain Forklifts	Diesel	Tier 4 Final	1.00	5.00	130	0.23
Commissioning and Testing	Forklifts	Diesel	Tier 4 Final	1.00	5.00	49.0	0.12
Road Work, Site and Staging Preparation	Off-Highway Trucks	Diesel	Tier 4 Final	2.00	10.0	300	0.36
Road Work, Site and Staging Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Final	2.00	8.00	275	0.30
Road Work, Site and Staging Preparation	Off-Highway Trucks	Diesel	Tier 4 Final	6.00	5.00	415	0.30
Road Work, Site and Staging Preparation	Graders	Diesel	Tier 4 Final	1.00	8.00	250	0.30
Road Work, Site and Staging Preparation	Rollers	Diesel	Tier 4 Final	2.00	8.00	405	0.30
Road Work, Site and Staging Preparation	Off-Highway Tractors	Diesel	Tier 4 Final	1.00	9.00	640	0.02

Road Work, Site and Staging Preparation	Skid Steer Loaders	Diesel	Average	1.00	4.00	74.3	0.30
Road Work, Site and Staging Preparation	Off-Highway Tractors	Diesel	Tier 4 Final	1.00	8.00	525	0.05
Road Work, Site and Staging Preparation	Scrapers	Diesel	Tier 4 Final	1.00	5.00	407	0.43
Road Work, Site and Staging Preparation	Rubber Tired Dozers	Diesel	Tier 4 Final	1.00	7.00	170	0.12
Road Work, Site and Staging Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	5.00	70.0	0.30

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
HVDC Cable Install	—	—	—	—
HVDC Cable Install	Worker	8.00	45.0	LDA,LDT1,LDT2
HVDC Cable Install	Vendor	12.0	45.0	HHDT,MHDT
HVDC Cable Install	Hauling	0.00	20.0	HHDT
HVDC Cable Install	Onsite truck	—	—	HHDT
HVDC Survey / Potholing	—	—	—	—
HVDC Survey / Potholing	Worker	14.0	45.0	LDA,LDT1,LDT2
HVDC Survey / Potholing	Vendor	8.00	45.0	HHDT,MHDT
HVDC Survey / Potholing	Hauling	0.00	20.0	HHDT
HVDC Survey / Potholing	Onsite truck	—	—	HHDT
Transmission Line Construction - Crossings	—	—	—	—
Transmission Line Construction - Crossings	Worker	7.00	45.0	LDA,LDT1,LDT2
Transmission Line Construction - Crossings	Vendor	20.0	44.4	HHDT,MHDT

Transmission Line Construction - Crossings	Hauling	0.00	20.0	HHDT
Transmission Line Construction - Crossings	Onsite truck	—	—	HHDT
HVDC and HVAC - Vaults	—	—	—	—
HVDC and HVAC - Vaults	Worker	16.0	45.0	LDA,LDT1,LDT2
HVDC and HVAC - Vaults	Vendor	40.0	45.0	HHDT,MHDT
HVDC and HVAC - Vaults	Hauling	0.00	20.0	HHDT
HVDC and HVAC - Vaults	Onsite truck	—	—	HHDT
HVDC and HVAC - Duct Bank and Restoration	—	—	—	—
HVDC and HVAC - Duct Bank and Restoration	Worker	66.0	45.0	LDA,LDT1,LDT2
HVDC and HVAC - Duct Bank and Restoration	Vendor	120	45.0	HHDT,MHDT
HVDC and HVAC - Duct Bank and Restoration	Hauling	0.00	20.0	HHDT
HVDC and HVAC - Duct Bank and Restoration	Onsite truck	—	—	HHDT
Overhead Transmission Line Construction - Clearing ROW Access	—	—	—	—
Overhead Transmission Line Construction - Clearing ROW Access	Worker	7.00	45.0	LDA,LDT1,LDT2
Overhead Transmission Line Construction - Clearing ROW Access	Vendor	6.00	43.4	HHDT,MHDT
Overhead Transmission Line Construction - Clearing ROW Access	Hauling	0.00	20.0	HHDT
Overhead Transmission Line Construction - Clearing ROW Access	Onsite truck	—	—	HHDT

Overhead Transmission Line Construction Foundation/Structures/WIre	—	—	—	—
Overhead Transmission Line Construction Foundation/Structures/WIre	Worker	8.00	45.0	LDA,LDT1,LDT2
Overhead Transmission Line Construction Foundation/Structures/WIre	Vendor	20.0	45.0	HHDT,MHDT
Overhead Transmission Line Construction Foundation/Structures/WIre	Hauling	0.00	20.0	HHDT
Overhead Transmission Line Construction Foundation/Structures/WIre	Onsite truck	—	—	HHDT
Commissioning and Testing	—	—	—	—
Commissioning and Testing	Worker	20.0	45.0	LDA,LDT1,LDT2
Commissioning and Testing	Vendor	6.00	44.4	HHDT,MHDT
Commissioning and Testing	Hauling	0.00	20.0	HHDT
Commissioning and Testing	Onsite truck	—	—	HHDT
Road Work, Site and Staging Preparation	—	—	—	—
Road Work, Site and Staging Preparation	Worker	0.00	11.7	LDA,LDT1,LDT2
Road Work, Site and Staging Preparation	Vendor	0.00	8.40	HHDT,MHDT
Road Work, Site and Staging Preparation	Hauling	0.00	20.0	HHDT
Road Work, Site and Staging Preparation	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
HVDC Cable Install	—	—	17.0	0.00	—
HVDC Survey / Potholing	—	—	17.0	0.00	—
Transmission Line Construction - Crossings	—	—	17.0	0.00	—
HVDC and HVAC - Vaults	—	—	17.0	0.00	—
HVDC and HVAC - Duct Bank and Restoration	—	—	17.0	0.00	—
Overhead Transmission Line Construction - Clearing ROW Access	—	—	17.0	0.00	—
Overhead Transmission Line Construction Foundation/Structures/WIre	—	—	17.0	0.00	—
Commissioning and Testing	—	—	17.0	0.00	—
Road Work, Site and Staging Preparation	—	—	17.0	0.00	—

5.6.2. Construction Earthmoving Control Strategies

Non-applicable. No control strategies activated by user.

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt

User Defined Linear	17.0	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	204	0.03	< 0.005
2027	0.00	204	0.03	< 0.005
2028	0.00	204	0.03	< 0.005

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	12.2	annual days of extreme heat
Extreme Precipitation	2.50	annual days with precipitation above 20 mm
Sea Level Rise	2.62	meters of inundation depth
Wildfire	10.5	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	0	0	N/A
Sea Level Rise	1	0	0	N/A
Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	2	1	1	3
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	15.0
AQ-PM	19.4

AQ-DPM	29.0
Drinking Water	39.0
Lead Risk Housing	50.6
Pesticides	0.00
Toxic Releases	30.3
Traffic	94.1
Effect Indicators	—
CleanUp Sites	99.4
Groundwater	94.2
Haz Waste Facilities/Generators	93.2
Impaired Water Bodies	91.9
Solid Waste	100.0
Sensitive Population	—
Asthma	38.0
Cardio-vascular	40.0
Low Birth Weights	98.8
Socioeconomic Factor Indicators	—
Education	73.4
Housing	23.8
Linguistic	—
Poverty	27.9
Unemployment	36.4

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	65.64865905

Employed	58.03926601
Median HI	67.43231105
Education	—
Bachelor's or higher	46.42627999
High school enrollment	100
Preschool enrollment	71.06377518
Transportation	—
Auto Access	50.77633774
Active commuting	35.32657513
Social	—
2-parent households	66.12344412
Voting	58.42422687
Neighborhood	—
Alcohol availability	48.03028359
Park access	58.14192224
Retail density	62.49197998
Supermarket access	14.28204799
Tree canopy	39.85628128
Housing	—
Homeownership	46.75991274
Housing habitability	62.22250738
Low-inc homeowner severe housing cost burden	75.25984858
Low-inc renter severe housing cost burden	47.02938535
Uncrowded housing	42.73065572
Health Outcomes	—
Insured adults	53.9715129
Arthritis	0.0
Asthma ER Admissions	20.1

High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	80.1
Cognitively Disabled	95.5
Physically Disabled	78.7
Heart Attack ER Admissions	65.7
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0
Obesity	0.0
Pedestrian Injuries	96.4
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	3.9
Children	55.0
Elderly	87.4
English Speaking	31.8
Foreign-born	65.1
Outdoor Workers	23.6

Climate Change Adaptive Capacity	—
Impervious Surface Cover	21.5
Traffic Density	88.2
Traffic Access	46.8
Other Indices	—
Hardship	40.7
Other Decision Support	—
2016 Voting	69.9

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	67.0
Healthy Places Index Score for Project Location (b)	64.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification

Land Use	Approx. 10KSF control enclosure/building
Construction: Construction Phases	Construction Schedule from Applicant
Construction: Off-Road Equipment	Construction Activity Input (UPDATE 11/1/2024)
Construction: Trips and VMT	Updated per Traffic Identified in construction spreadsheet 66 120

Updated Air Quality Emissions Summary Tables

Updated Table 5.3-5: Expected Construction Emissions Summary (Pounds per Day) – Newark Substation				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Average Maximum Daily Emissions	0.49	4.64	0.11	0.11
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: **Data Request 2, Response 1, Attachment C (CalEEMod Files)**				

Updated Table 5.3-6: Expected Construction Emissions Summary (Pounds per Day) – NRS Substation				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Average Maximum Daily Emissions	0.49	4.79	0.11	0.11
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: **Data Request 2, Response 1, Attachment C (CalEEMod Files)**				

Updated Table 5.3-7: Expected Construction Emissions Summary (Pounds per Day) – Transmission Lines				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Average Maximum Daily Emissions	3.1	33.3	0.97	0.92
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: **Data Request 2, Response 1, Attachment C (CalEEMod Files)**				

Updated Table 5.3-8: Combined Expected Construction Emissions Summary (Pounds per Day)				
	ROG	**NO_x**	**PM10 (Exhaust)**	**PM2.5 (Exhaust)**
Newark Substation Construction	0.49	4.64	0.11	0.11
NRS Substation Construction	0.49	4.79	0.11	0.11
Transmission Line Construction	3.1	33.3	0.97	0.92
Combined Total Emissions	**4.08**	**42.73**	**1.19**	**1.14**
BAAQMD Air Quality Thresholds	54	54	82	54
Exceeds Thresholds?	***NO***	***NO***	***NO***	***NO***
Source: **Data Request 2, Response 1, Attachment C (CalEEMod Files)**				

Updated GHG Emissions Summary Tables

Updated Table 5.8-3: Expected Annual Construction CO_2e Emissions	
Year	**CO_2e (MT/Year)**
Newark Substation 2026	43
Newark Substation 2027	503
Newark Substation 2028	63
NRS Substation 2026	149
NRS Substation 2027	498
NRS Substation 2028	62
Transmission Lines 2026	4775
Transmission Lines 2027	3470
Transmission Lines 2028	381
Total	**9,944**
Yearly Average Construction Emissions (MT/year over 30 years)	**331.4667**
Notes: Expected construction emissions are based upon CalEEMod modeling assumptions (refer to **Data Request 2, Response 1, Attachment C (CalEEMod Files)**) through years 2026 to 2028.	

Updated Table 5.8-4: Operational Emissions Summary MT/Year	
Site Locations	**CO_2e (MT/Year)**
Newark Operations (Exceeding Existing Emissions)	0
NRS Substation operations (Exceeding Existing Emissions)	0
Amortized Construction Emissions (**Table 5.8-3** above)	331.46
Total Construction and Operations (MT/Year)	**331.46**
Threshold	**10,000**

Updated Table 5.8-4: Operational Emissions Summary MT/Year	
Site Locations	**CO_2e (MT/Year)**
Exceeds Threshold?	***NO***
Data is in MT. Conversion rate is 1 pound = 0.000453592 MT. Data is presented in decimal format and may have rounding errors. Source: **Data Request 2, Response 1, Attachment C (CalEEMod Files)**	

Attachment E

LSPGC Response 1 to Data Request 3

January 14, 2025

VIA EMAIL

Mr. Tommy Alexander
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, California 94102

RE: Response No. 1 to Data Request No. 3 for LS Power Grid California, LLC's Power the South Bay Project (Application 24-05-014)

Dear Mr. Alexander:

As requested by the California Public Utilities Commission (CPUC), LS Power Grid California, LLC (LS Power) has collected and provided the additional information that is needed to adequately conduct the California Environmental Quality Act (CEQA) review for the Power the South Bay Project (Proposed Project). This letter includes the following enclosures:

- Data Request Response Table providing the additional information requested in the Power the South Bay Project Data Request No. 3, received January 10, 2025.
- Updated Fuel Usage Calculations

Please contact me at (925) 808-0291 or djoseph@lspower.com with any questions regarding this information.

Sincerely,

D Joseph

Dustin Joseph
Director of Environmental Permitting

Enclosures

cc: Lucy Marton (LS Power)
Casey Carroll (LS Power)
Jacob Diermann (LS Power)
David Wilson (LS Power)
Michelle Wilson (CPUC)
Vince Molina (ESA)
Dave Davis (ESA)

LS Power - Power the South Bay Project (A. 24-05-14) CPCN and PEA Data Request 3

RESPONSE OVERVIEW

Review of the Certificate of Public Convenience and Necessity (CPCN) Application and Proponent's Environmental Assessment (PEA) for the Power the South Bay Project (Application 24-05-014) was based on the California Public Utilities Commission's (CPUC) Guidelines for Energy Project Applications Requiring California Environmental Quality Act (CEQA) Compliance: Pre-filing and Proponent's Environmental Assessments (November 2019). Based on these criteria, the Energy Division found that the PEA contains sufficient information to satisfy the requirements of the Commission's Information and Criteria List, and therefore deemed Application 24-05-014 complete. The following additional information is provided in response to the Power the South Bay Project Data Request No. 3, which identified further details and evaluation that is needed to adequately conduct the CEQA review.

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**RESPONSE**
Project Description		
3.3.4.1	Section 3.3.4.1, Transmission Line: In Section 3.3.4.1, the updated project description states that "the underground transmission line would be encased within a duct bank proposed to have twelve smaller internal ducts: eight eight-inch ducts for conductor (with six ducts for the installed transmission cable and two ducts as spares), four two-inch ducts for fiber optic cables, and two two-inch ducts for a ground continuity cable. Additional two-inch fiber optic cable ducts would be installed within the City of Fremont for their use as a condition of their franchise agreement." As written, this list of internal ducts suggests that there would typically be 14 smaller internal ducts (i.e., eight conductor ducts, four fiber optic cable ducts, and two ground continuity cable ducts) and 16 internal ducts for portions within the City of Fremont. However, pursuant to our conversation with the LSPGC team on January 9, 2025, we understand that there would typically be 12 internal ducts (i.e., eight conductor ducts, two fiber optic cable ducts, and two ground continuity cable ducts) except for portions of the line in	The CPUC's understanding is correct. Our typical duct bank configuration would include 12 internal ducts: • 8 eight-inch ducts for conductor (with six ducts for the installed transmission cable and two ducts as spares) • 2 two-inch ducts for fiber optic cables • 2 two-inch ducts for a ground continuity cable The exception to this would be in the City of Fremont where a condition of our Franchise Agreement may require up to two additional two-inch ducts. In that case the duct bank would include the following internal ducts: • 8 eight-inch ducts for conductor (with six ducts for the installed transmission cable and two ducts as spares) • 2 two-inch ducts for fiber optic cables • 2 two-inch ducts for a ground continuity cable • 2 two-inch ducts for the City of Fremont's future use

LS Power – Power the South Bay Project (A. 24-05-014) Data Request No. 2, Response No. 1		
PEA Section	**DATA REQUEST**	**RESPONSE**
	the City of Fremont, where there would be 14 internal ducts (i.e., the aforementioned 12 internal ducts plus two additional fiber optic cable ducts). Please confirm the number of internal ducts associated with the underground transmission line segments.	
3.5.3.2	Section 3.5.3.2, Work Area Disturbance, Table 3-5, Work Area Disturbance Summary: In Table 3-5, the updated project description states that modifications to the existing Silicon Valley Power (SVP) Northern Receiving Station (NRS) substation would result in 13.5 acres of permanent disturbance. The project description also states that the existing SVP NRS substation is approximately 13.5 acres. Please clarify if the 13.5 acres of permanent disturbance is a previously disturbed area, or if the 13.5 accounts for the new permanent disturbance resulting from the Power the South Bay Project. If this refers to a new permanent disturbance, please confirm where this disturbance would occur.	All modifications to the NRS substation would occur within the existing, pre-disturbed, NRS substation that is 13.5 acres in size. There will be no new permanent disturbance as a result of the SVP modifications to the NRS substation.
5.3 – Air Quality		
	Upon review of the updated CalEEMod modeling provided in LSPGC's Response 1 to Data Request 2, it appears that updated Health Risk Assessment (HRA) calculations were not provided. Please provide updated HRA calculations.	The emissions modeling included with Response 1 to Data Request 2 were revised to address changes in VMT and updated traffic estimates. These emissions do not affect the HRA analysis, which is a function of offroad diesel construction equipment emissions and diesel particulate matter (DPM) emissions. Therefore, the updated HRA calculations submitted as part of the CAISO updates (November 2024) are current.
	Upon review of the updated modeling and emission calculations provided in LSPGC's Response 1 to Data Request 2, it appears that there were no updates to fuel usage. Please provide updated fuel usages for the Project.	Updated Fuel Usage calculations have been provided as an attachment to this response package.

Power the South Bay Project
Updated Project Fuel Use Calculations - Project Construction
Data Request No. 3

Fuel Usage (gallons) = CO_2 emission (kg) / fuel combustion rate (kg/gallon)

Diesel Emissions		
off road equipment	4231.1	MT
onroad (haul & vendor trips)	4758.8	MT
Total Diesel Emissions	8989.9	MT
kg/MT	1000	
Total CO_2 Emissions (kg)	8989900	kg

Diesel fuel combustion rate	10.21	kg/gallon
Diesel fuel consumption	880,499.51	gallons

Gasoline Emissions		
Worker Trips	711.53	MT
kg/MT	1000	
Total Emissions (kg)	711530	kg

Gasoline combustion rate	8.78	kg/gallon
Gasoline consumption	81,039.86	gallons

Notes
Combustion rates taken from The Climate Registry 2020 default emission factors (Table 2.1).