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1.0 EXECUTIVE SUMMARY

1.1 INTRODUCTION

This Application for Certification (AFC) for the proposed Quail Brush Generation Project (Quail Brush or Project) has been prepared by Quail Brush Genco, LLC, in accordance with the California Energy Commission's (CEC) Power Plant Site Certification Regulations (California Code of Regulations, Title 20, Section 1704 et seq. – the 12-month AFC regulations). This executive summary provides an overview of the project in accordance with Appendix B, Section (a), of the regulations.

This AFC has been prepared in accordance with CEC guidelines and provides the following:

- A detailed description of the Project
- An assessment of the Project's likely impact on the existing environment
- Measures proposed by Quail Brush Genco, LLC to mitigate potential impacts and ensure that environmental issues are properly and responsibly addressed
- A discussion of compliance with applicable laws, ordinances, regulations, and standards

1.2 PROJECT OVERVIEW

The proposed Quail Brush Generation Project (Project) will be a nominal 100-megawatt (MW) intermediate/peaking load facility operating up to 3,800 hours per year using natural gas-fired reciprocating engine technology. The Project will be located west of the City of Santee, south of the Sycamore Landfill and north of State Route 52 in the City of San Diego, California. The proposed Project consists of four main components including the approximately 11-acre power plant (plant) site located within a 21.6-acre privately owned parcel optioned by Development Land Holdings, LLC. Development Land Holdings and the Project company Quail Brush Genco, LLC (Applicant), are wholly owned subsidiaries of Cogentrix Energy, LLC, the Project owner/operator. Additional key Project components include the 230 kilovolt (kV) generation tie-line (gen tie), the utility switchyard, and the natural gas pipeline lateral.

The major features associated with the installation of the proposed Project include the following:

- Grading of the power plant and utility switchyard and installation of new equipment foundations, piping, and utility connections;
- Eleven (11) nominal 9.3 MW (gross) Wartsila model 20V34SG natural gas-fired reciprocating engines;
- Eleven (11) separate state-of-the-art air pollution control systems representing Best Available Control Technology (BACT), one system for each of the 11 reciprocating engines, consisting of a selective catalytic reduction (SCR) unit for oxides of nitrogen (NO_x) control and an oxidation catalyst unit for control of carbon monoxide (CO) and precursor organic compounds (POC);
- Eleven (11) approximately 48-inch diameter x 100-foot tall stacks, each with a separate continuous emissions monitoring system (CEMS);
- Acoustically engineered building enclosing all 11 reciprocating engines;

- Closed loop cooling system consisting of multiple fan-cooled radiator assemblies outside of the engine building;
- One (1) urea storage tank, approximately 20,000 gallons, and a handling system serving the SCR units;
- One (1) 4 million British thermal units per hour (MMBtu/hr) natural gas-fired heater (San Diego Air Pollution Control District [SDAPCD] exempt), used for heating of the natural gas fuel to the reciprocating engines;
- One (1) 4 MMBtu/hr natural gas-fired heater (SDAPCD exempt), used for heating of the engine cooling water system for 10-minute start capability;
- One (1) engine standby heater;
- One (1) new lube oil tank, approximately 10,000 gallons;
- One (1) used lube oil tank, approximately 10,000 gallons;
- One (1) maintenance service oil tank, approximately 6,000 gallons;
- Two (2) maintenance water tanks, approximately 5,000 gallons each;
- Two (2) bunkered wastewater holding tanks, approximately 3,000 gallons each;
- Miscellaneous ancillary equipment;
- One (1) fire water tank, approximately 600,000 gallons;
- One (1) diesel fueled fire pump engine, rated at approximately 144 boiler horse power unit (bhp);
- One (1) diesel storage tank, approximately 250 gallons;
- One (1) domestic water storage tank, approximately 10,000 gallons;
- Onsite septic tank and tile field;
- Onsite 230kV facility switchyard including switchgear and the main voltage step-up transformer , switchgear, circuit breakers, and disconnects;;
- Approximately 1 mile of 230kV single-circuit gen tie between the Project and the anticipated Point of Interconnection (POI) to the existing San Diego Gas & Electric (SDG&E) Miguel to Mission 230kV transmission line situated west of the plant site;
- New SDG&E 230kV utility switchyard at the POI configured as a line-break of the existing SDG&E 230kV transmission line that will include circuit breakers and disconnects, and an access road;
- Approximately 2,200 feet of 8-inch diameter natural gas pipeline lateral between the Project site and the existing SDG&E 20-inch diameter high pressure natural gas pipeline located across Mast Avenue from the landfill entrance;
- Chain-link security fencing enclosing the facility with a secured entrance on the access road leading from Sycamore Landfill Road to the facility;
- Chain-link security fencing enclosing the utility switchyard at the POI; and
- Temporary construction laydown and parking areas proposed to be located on previously disturbed Sycamore Landfill property approximately one-half mile from the plant site (approximately 5 acres is required). A truck turnout for equipment unloading/loading will be located along Sycamore Landfill Road adjacent to the plant site. Additional construction personnel parking will be located offsite with shuttle service to the Project site.

The proposed Project will use very little water since the Wartsila engines use a closed loop cooling system. A demineralizing system will not be required since there is no requirement for purified water. Site water usage will be primarily for fire protection, personal consumption, sanitary purposes, landscape irrigation, and wash-down cleaning. As a result, site consumption will average approximately 1.0 gallon per minute (gpm) or 1.61 acre feet per year (afy). These water requirements will be served through one 600,000-gallon fire water tank and one 10,000-gallon domestic water storage tank located onsite. Drinking water will be served by bottle water supply serviced by a Service Company. Section 2.3.6 includes additional details about water supply.

Sanitary wastewater will be discharged to an onsite septic system. Process wastewater or service water that has the potential for contamination will be discharged to a wastewater holding tank. In the unlikely event of an upset condition, the contents of the holding tank will be conveyed offsite by a licensed contractor for proper treatment and disposal.

1.2.1 Project Objectives

The Project's basic objectives are to:

- Provide environmentally sound, efficient and reliable power generation using commercially available proven technology to respond to the San Diego Gas & Electric (SDG&E) 2009 solicitation for conventional generation;
- Use a site location within SDG&E's service territory that has infrastructure with available capacity and ability to reliably support Project electric transmission, fuel supply and water needs with minimal impact on existing infrastructure systems or required new construction;
- Use a site that is commercially available, including control for reasonable access and linear facility easements;
- Develop a site that has compatible zoning, compatible adjacent land uses, and is located away from sensitive receptors; and
- Maximize the capacity of the classes of equipment to be used, consistent with good engineering practice.

1.2.2 Project Site Selection

The approach to site selection focused on identifying potential sites that satisfy Project objectives and have a low potential for environmental impacts. Consideration was given to sites near existing 230kV transmission lines and natural gas pipelines. The proposed Project site is consistent with these site selection criteria and was based, in part, on the following key selection criteria:

- Ability to gain site control
- Location in an area appropriate for industrial development and compatible with its surroundings
- Proximity to SDG&E Mission to Miguel 230kV transmission line
- Proximity to a SDG&E gas supply pipeline
- The ability, with implementation of reasonable mitigation measures, to have no significant impact on the environment

1.3 FACILITY LOCATION

The proposed Project site is located in the City of San Diego, California on land immediately south and west of the Sycamore Landfill. The property tax assessor designation for the plant site parcel is APN 366-081-42. The parcel is located in an area currently zoned RS-1-8 (single family residential use). It is assumed that a zoning change and community plan amendment will be required for this parcel, and that the zone change process will be conducted concurrently with the CEC siting and permitting effort. The proposed Project is located within Township 15 South, Range 1 West, Section 7, Township 15 South, Range 2 West, Section 12, and unsectioned portions of the El Cajon and Mission San Diego Land Grants, within the La Mesa, California, United States Geological Survey (USGS) 7.5-minute topographic quadrangle map.

The proposed Project is sited to minimize engineering constraints, site geology, electric transmission constraints, waste and fuel constraints, and environmental impacts, including stabilizing construction disturbance. Figure 2.1-1 provides an aerial photograph of the proposed Project showing the locations of the proposed plant site and other components including the gen tie, utility switchyard, and natural gas pipeline lateral in relationship to the surrounding area. To the immediate south of the Project is SR 52. To the immediate north is the Sycamore Landfill. The City of Santee is located to the east of the Project.

1.4 PROJECT SCHEDULE

Construction of the generation plant, from mobilization, through site preparation and grading, to commercial operation, is expected to take place from March 2013 until June 2014.

1.5 PROJECT OWNERSHIP

The proposed Project consists of four main components including the approximately 11-acre power plant (plant) site located within a 21.6-acre privately owned parcel optioned by Development Land Holdings, LLC. Development Land Holdings and the Project company Quail Brush Genco, LLC (Applicant), are wholly owned subsidiaries of Cogentrix Energy, LLC, the Project owner/operator. Additional key Project components include the 230 kilovolt (kV) generation tie-line (gen tie), the utility switchyard, and the natural gas pipeline lateral.

As is consistent with San Diego Gas and Electric (SDG&E) practice and California Public Utilities Commission (CPUC) law and regulation, the new natural gas pipeline and electric transmission line will be designed, constructed, owned and operated by SDG&E.

The applicant is a wholesale power producer. Cogentrix Energy, LLC, has executed a 30-year power purchase agreement with SDG&E for the delivery up to 100 MW of electricity for up to 3,800 hours per year.

1.6 PROJECT ALTERNATIVES

The CEC conducts its review of alternatives to satisfy the Warren-Alquist Act and the California Environmental Quality Act (CEQA). Appendix B(f)(1) of the CEC guidelines requires a discussion of the range of reasonable alternatives to a proposed project, or to the location of the project, that would feasibly attain most of the basic objectives of the but avoid or substantially lessen significant effects. To enable this review, the criteria and objectives that led to the

selection of the Project site and design features are provided in the AFC, along with a detailed discussion of the range of alternatives considered (Section 3.0).

A No Project Alternative was considered but rejected in view of SDG&E objectives to enhance the reliability and efficiency of power supply to its customers. While the No Project Alternative would not have the specific environmental impacts addressed in the AFC for the proposed Project, the No Project Alternative would delay SDG&E's efforts to support reliability within its service territory. The No Project Alternative would forego all of the benefits associated with the proposed Project.

Three possible alternative sites in the general vicinity of the proposed Project site were reviewed and found to be no more acceptable than the proposed Project site.

Several alternative generating technologies were reviewed, including conventional boiler and steam turbine, conventional simple-cycle combustion turbine, conventional combined-cycle power plant, Kalina combined-cycle, advanced combustion turbine designs, hydroelectric processes, geothermal power process, ocean wave energy processes, energy from biomass, solar energy, and energy generation from wind. Three NO_x control alternatives were considered for the combustion turbine alternative. The proposed Project's technology was evaluated by SDG&E and the Project power purchase contract is based on the proposed multi-unit reciprocating engine configuration. More complete discussions of alternatives are presented in Section 3.0.

1.7 ENVIRONMENTAL CONSIDERATIONS

In order to comply with CEC licensing requirements and the California Environmental Quality Act, sixteen areas of possible environmental impact, including cumulative impacts, resulting from the proposed Project were investigated. Detailed descriptions and analyses of these areas are presented in Sections 4.1 through 4.17 of the AFC and summarized briefly in this section. With the implementation of reasonable and feasible mitigation measures, there will be no significant environmental effects.

1.7.1 Cultural Resources

Tetra Tech EC, Inc. conducted cultural resources investigations in support of the Project. A description of the cultural resources investigations and description of survey results is described in Section 4.1 of the AFC.

Based on the survey results and the pending consultations with Native Americans, the Project is not likely to have significant impacts on cultural resources as a result of ground-disturbing activities. Implementation of identified mitigation measures will assure that impacts are less than significant.

1.7.2 Land Use

The proposed Project site is currently unoccupied and vacant. Access to the Project site will be via Sycamore Landfill Road. Mast Boulevard will provide access to the gas lateral line; access roads will be constructed to provide access to the gen-tie line. Existing uses adjacent to the proposed Project site include residential uses to the east and southeast, two schools located

southeast, State Route (SR) 52 to the south and west, Mission Trails Regional Park (MTRP) located to the south, and the Sycamore Landfill is located north of the Project site. The majority of the adjacent parcels are open space associated with Sycamore Landfill, MCAS Miramar, and the MTRP.

The proposed Project site is currently zoned as Residential-Single (RS) Unit 1-8 and is not a permitted use in the RS zones, even with a Conditional Use Permit (CUP). The proposed Project currently conflicts with the City's zoning. Areas surrounding the proposed Project are zoned residential, RS-1-8. However, no residential use currently exists within the East Elliott Community Plan area. The Project site is designated as park, open space, and recreation according to the City of San Diego General Plan Land Use map. Additionally, the Project site is designated as open space according to the East Elliott Community Plan Land Use map. Because land uses of greater intensity are not permitted in the park, open space, and recreation designations, the proposed Project currently conflicts with the City of San Diego East Elliott Community Plan. A zone change and amendment to the East Elliott Community Plan will be required for the Project to be in compliance with local zoning policies; the applicant is currently working with the City of San Diego to determine the appropriate course of action for this Project.

The Project site is located within the boundaries of the City of San Diego's Multiple Species Conservation Program (MSCP) Subarea Plan, which is part of the larger County of San Diego's Final MSCP Plan. The Project site is located within the Multi-Habitat Planning Area (MHPA) as discussed in Section 4.12, Biological Resources. The MHPA is established by the City Subarea Plan; however, the site is located on private land that does not have any conservation easements or preservation requirements, and is therefore not part of the MSCP preserve.

The Project proponent is proposing a boundary adjustment to the MHPA to exclude the Project site. The Project boundary adjustment would be conducted in accordance with Section 5.4.2 of the MSCP Plan. Compliance with the MSCP Plan along with mitigation measures approved by CDFG, USFWS, and the City of San Diego, impacts to all biological resources that are covered by the MSCP Plan, and those that are not covered by the MSCP Plan, are anticipated to be less than significant.

Project implementation would not result in the conversion of farmland to nonagricultural use. The Project site is not located on land designated as prime farmland, unique farmland, or farmland of statewide importance and, therefore, would not result in the conversion of farmland to nonagricultural use (City of San Diego 2007). No other changes are anticipated that would lead to conversion of farmland to nonagricultural use.

It is anticipated that once the necessary plan amendment, zone change, and boundary adjustment are completed, the Project would not contribute to a significant impact to land use in the project vicinity. Therefore, the Project would not result in a significant cumulative land use impact.

1.7.3 Noise

Currently, the region immediately surrounding the Project site is undeveloped land and the majority of noise sensitive areas are located to the east in the City of Santee. There is significant terrain shielding that will help block sound propagating to the residential areas. Traffic noise from is the most consistent source of noise affecting the immediate surrounding areas

including truck traffic generated by the Sycamore Landfill (the project is located on the Landfill access road) and Hwy 52.

An ambient sound survey was conducted over a two-day period from July 20 to July 21, 2011 to characterize the existing acoustic environment in the vicinity of the Project site. The measurement locations were selected to be representative of residential receptors nearest to the Project site as well as other nearby potentially noise sensitive receptors such as schools and designated park lands. Results of the ambient sound survey are discussed in Section 4.3 of the AFC.

Operational sound associated with the Project was evaluated employing a computer simulation. Results from acoustic modeling are described in Section 4.3 of the AFC.

The Project will produce noticeable noise during operations, but the noise levels will comply with City of San Diego and City of Santee's requirements for industrial and residential uses. Noise will also be produced at the Project site during construction. The Project is expected to comply with LORS if the mitigation discussed in Section 4.3 of the AFC is included in the design.

1.7.4 Traffic and Transportation

Characteristics of major highways and roads in the Project vicinity, and other relevant roads and highways in the area, are presented in the local traffic and transportation facilities discussion in Section 4.4.

Construction worker traffic will occur over an 18-month period, with the peak activities occurring for 2 months. The addition of a maximum of 268 (based on the maximum monthly workforce) worker daily commute trips would comprise less than 4 percent of the 2009 peak hour trips on SR 52 in the vicinity of the Project and would not increase the 2010 V/C on SR 52 above the 0.01 threshold. Only a very limited amount of workers would travel on Mast Boulevard and Sycamore Landfill Road due to the off-site parking area and the shuttle service that will be provided during Project construction. Thus, worker trips would not impact traffic on these roads or affect the LOS at the intersection. It is anticipated that most construction workers would use West Hills Parkway and Mission Gorge Road to access the offsite parking area. The addition of a maximum of 268 (based on the maximum monthly workforce) worker daily commute trips would comprise less than 2 percent of the 2009 average weekday trips on West Hills Parkway in the vicinity of the Project. Due to the relatively low number of peak worker commute trips during a short period of 2 months, the impacts of project-related construction worker commuter traffic will be less than significant.

A project construction Traffic Management Plan (TMP) will be developed for the Project using Mast Boulevard and Sycamore Landfill Road that will specify delivery routing for equipment, materials and other deliveries to facilitate traffic flow. The TMP will be developed in coordination with the Sycamore Landfill to ensure that construction traffic during the gen tie construction period of approximately 5 months does not interfere with landfill operations. Project design features will limit traffic and transportation impacts from construction and operation to a level that is less than significant.

1.7.5 Visual Resources

A visual resource analysis was conducted in conformance with California Energy Commission (CEC) guidelines for the inventory and assessment of visual impacts for an AFC.

A viewshed analysis was conducted as a standard computerized application in an ArcView 10-based geographical information system (GIS). Overall, the viewshed analysis indicated that virtually all points with a straight-line view to the plant site are located within 2.5 miles of the site, and that large portions of the area within 2.5 miles are blocked from view by topography. Given the scale of the plant (a main plant structure of approximately 176,000 square feet on a plant site of 11 acres), and the height of some of the structures onsite (primarily the stack height of 100 feet), the potential for visual impacts is present. While the Project will change the existing character of the site, significant impacts to the scenic attractiveness of the Visual Sphere of Influence (VSOI) as a whole are not anticipated due to adjacent industrial scenery and other man-made developments. Therefore, less than significant impacts will occur relative to existing scenic attractiveness.

During the Project construction period, construction activities, construction materials, equipment, trucks, temporary structures, and vehicles, will be visible to surrounding areas to the south and southwest and some areas to the southeast due to the undulating, but open viewing conditions surround the plant site which offer a variety of seen and unseen opportunities. Because the plant site is currently undeveloped, such construction activities at the site will contrast moderately with the existing character of the surrounding area, which has a mixture of natural and industrial elements. While visual changes associated with construction activities at the plant site and along the gen tie route will introduce activities and structures not currently occurring in the area, construction activities will be conducted within a 18-month period. Therefore, visual impacts from Project construction are considered temporary and thus, less than significant.

In summary, impacts were classified as less than significant at five viewpoints, including the Key Observation Point selected for the analysis, and insignificant at two viewpoints. The analysis indicated that significant visual impacts from the Project are not expected. Mitigation measures proposed in Section 4.5.3 will be implemented to reduce impacts to less than significant levels.

1.7.6 Socioeconomics

Project construction is expected to employ an average of 124 workers a month for the 18-month construction period. Monthly construction employment would peak at a maximum of 268 workers in month 11 of the proposed schedule. Very few, if any, of the workers employed during the construction phase of the Project (26 workers at most) would be expected to permanently relocate to the area as a result of this Project. The impact of Project construction on regional population levels is, therefore, expected to be minimal. Construction of the Project is not expected to displace existing population or physically divide an existing community.

Construction of the Project would have positive impacts on the local economy. Benefits associated with construction would be temporary impacts that would last for the duration of the construction phase of the Project, approximately 18 months. The total construction payroll, including both craft and staff employees, would be approximately \$8.7 million spread over the 18-month construction period. Local expenditures for construction materials and supplies are

expected to total \$3 million during the construction phase of the Project. In addition to the jobs directly related to construction of the Project, construction of the Project would also support an estimated 77 (21 indirect and 56 induced) jobs per year for the duration of the construction period. Annual construction-related indirect and induced income impacts would be approximately \$1.0 million and \$1.9 million, respectively. Construction of the Project would also generate approximately \$5.5 million in indirect (\$1.8 million) and induced (\$3.7 million) output (sales). Assuming a San Diego County tax rate of 8.75 percent, the Project would generate approximately \$282,500 in sales tax (in 2011 dollars) over the life of the construction phase of the Project.

Operation of the Project would have positive impacts on the local economy through the creation of local employment opportunities and through local expenditures for supplies and services. When completed, the Project is expected to employ 11 full-time operations employees in San Diego County, with an annual payroll of approximately \$1.35 million, which would include all salaries, overtime, benefits, and incentives, as well as payments to short-term contract employees. In addition, an annual operations and maintenance budget of about \$1 million would be spent locally (within San Diego County) on goods and supplies.

Construction and operation of the Project is not expected to result in significant adverse environmental and human health impacts to minority or low income communities within six miles of the Project site.

1.7.7 Air Quality

Air quality is described in Section 4.7 of the AFC. Emissions to the air will consist primarily of combustion by-products produced by the power cycle engines, the diesel-fired emergency fire pump and the fuel and warm start heaters. The facility will utilize dry (radiator type) cooling, thus eliminating the need for cooling towers, and their attendant visible plumes. Controlled emissions from these sources will not exceed the local air district major source thresholds for any criteria pollutant, and do not exceed the threshold above which emission offsets would be required for the Project. The project will be subject to the Prevention of Significant Deterioration (PSD) regulations, and will require PSD review by EPA Region IX. There may be some particulate matter (PM10) exceedances during project construction; however, the emissions will be temporary and limited to the construction period. Because the project is a “peaking power” source it will support renewable power production, and will also offset peaking power produced by older, higher polluting facilities.

1.7.8 Public Health

Public health is described in Section 4.8 of the AFC. A human health risk assessment was conducted to determine the potential impacts from Project emissions of toxic air contaminants. Air would be the dominant pathway for public exposure to chemical substances released by the Project. The health risk assessment method considered the emission rate of the pollutant, its potency, and receptor proximity to calculate facility risk and assumed no dispersion or dilution. The nearest residential receptor is located approximately 0.45 miles from the plant site. The Project can be characterized as a low priority facility with minimum receptor impacts. Based on the results of the human health risk assessment, the Project poses an insignificant incremental cancer and non-cancer health risk.

1.7.9 Hazardous Materials

Hazardous materials that would be used during construction and operation were evaluated for hazardous characteristics and are listed in Table 4-9.3. Project operations will require weekly transportation of hazardous materials to the plant site (see also Section 4.4, Traffic and Transportation). Transportation of hazardous materials will comply with all Caltrans, USEPA, California Department of Toxic Substances Control (DTSC), California Highway Patrol (CHP), and California State Fire Marshal regulations. Some of these materials will be continuously stored at the generating site. Others will be brought onsite for the initial startup and be maintained every 3 to 5 years. Some materials will be used only during startup.

The quantities of hazardous materials onsite during construction are anticipated to be small compared to quantities required during operation. Construction personnel will be trained to properly handle all incidental releases of materials. Possible incidents would likely involve small scale spills during cleaning or use of other materials in the storage areas or during refueling of machinery, and fluids related to equipment maintenance. Use of best management practices would reduce the potential for the release of construction-related fuels and other hazardous materials to storm water and receiving waters as discussed in Section 4.13, Water Resources. Best management practices prevent sediment and storm water contamination from spills or leaks, control the amount of runoff from the site, and require proper disposal or recycling of hazardous materials. Therefore, the expected environmental impact is minimal.

1.7.10 Worker Health and Safety

During project activities, workers will be exposed to construction safety and plant operation safety hazards. To evaluate these hazards and control measures, hazard analyses have been prepared for both construction and operations that identify the hazards anticipated and identify the safety programs that would be developed and implemented to mitigate and appropriately manage those hazards. The hazard analysis prepared for construction activities is outlined in Table 4.10-1; the hazard analysis prepared for plant operations is outlined in Table 4.10-2. A comprehensive illness and injury prevention program will be implemented in accordance with California Division of Occupational Safety and Health (Cal-OSHA) requirements and other LORS. With implementation of these programs, worker safety impacts will be less than significant.

1.7.11 Waste Management

Wastewater, solid non-hazardous waste, and liquid and solid hazardous waste will be generated at the Project site during facility construction and operation.

As described Section 4.11, waste management impacts are anticipated to be less than significant due to the types and quantities of wastes and recyclables generated, and considering implementation of mitigation measures and incorporation of programs relevant to management of wastes. These programs will assure that wastes are appropriately managed and that no significant impacts are caused by these wastes.

1.7.12 Biological Resources

Analysis of biological resources was completed by a combination of literature review, desktop studies, and biological surveys conducted in May through July 2011. Biological surveys were carried out on an approximately 264-acre survey area. The survey area was set to encompass all parcels where the proposed plant site, gen tie, switchyard, and natural gas pipeline lateral would be sited, as well as potential mitigation parcels. Setting a broader survey area allowed flexibility for changes to Project-specific components without having to conduct additional surveys. Surveys were carried per the Draft Biological Resources Work Plan (Appendix H.1). Surveys included a general habitat assessment survey (Appendix H.2). A California gnatcatcher protocol survey (Appendix H.3), a sensitive plant species survey (Appendix H.4), and a preliminary jurisdictional delineation (Appendix H.5).

The proposed Project site is within the jurisdictional boundaries of the City Subarea Plan, which is part of the larger San Diego County MSCP Plan. The survey area is located within and immediately adjacent to the MHPA as identified under the Subarea Plan. The plant site parcel will be located on land that is currently within the boundary of the MHPA established by the City Subarea Plan. Because the plant will require development beyond the 25 percent development limit imposed for private land within the MHPA, a boundary adjustment to the MHPA will be required.

Because the proposed Project would directly impact greater than 0.10 acres of upland habitats, this impact is considered to be significant and would require mitigation. Recommendation for project related mitigation measures associated with impacts to native vegetation and habitat is discussed in Mitigation Measure BIO-1.

It was determined that the proposed Project may result in potential impacts to four special-status plant species (willow monardella, heart-leaved pitcher sage, San Diego barrel cactus and variegated dudleya) and six special-status wildlife species (White-tailed kite, Coronado Island skink, Cooper's hawk, Southern California rufous-crowned sparrow, and San Diego black-tailed jackrabbit) that were observed on the proposed Project site during biological surveys. Quino checkerspot butterfly is not anticipated to occur onsite due to lack of constituent habitat elements; however, USFWS protocol requires that protocol survey be conducted within areas if suitable plant communities occur within the proposed Project site regardless of other key habitat components.

Potential project impacts to species protected under the MBTA and CFG Code are considered significant. Mitigation Measure BIO-3 provided below will reduce potential project impacts to nesting bird species to less than significant.

Due to the existing developments adjacent to the proposed Project site, design of the proposed Project to stay predominantly within low-quality habitat and location of the proposed Project site within noncontiguous habitat, impacts to an urban/wildlands interface are expected to be less than significant and no mitigation measures are recommended.

However, once the parcel for the plant site is removed from the MHPA boundary, that parcel and other Project features would be located immediately adjacent to the MHPA. The City Subarea Plan provides specific guidelines to reduce project related impacts associated with adjacent habitat. Adjacency Management Guidelines, discussed below, are designed to reduce

any potential indirect impacts, relating from the construction and maintenance of the proposed Project, to resources adjacent to the proposed Project to less than significant.

1.7.13 Water Resources

Estimated average annual and peak water usage rates are provided in Section 2.2.7 and summarized in Table 4.13-6. The estimated peak water usage during the construction phase is approximately 5,200,000 gallons (approximately 16 af) during the first 3 months. During operations, the estimated peak facility water usage is approximately 685,000 gallons per year (2 af per year [afy]). Average annual and peak use water balance diagrams are included in Figures 2.2-5A and 2.2-5B. Domestic water will be supplied by Palomar Mountain Premium Spring Water (Palomar). The Project requires relatively little water and will not directly pump groundwater or capture onsite surface water for use in the facility. Transfers or exchanges will not be required. As a result, no significant adverse impacts to local water supply are expected. Furthermore, the Project water consumption represents less than 1 percent of Palomar's supplies.

The volume and quality of wastewater that would be generated by the Project and methods of disposal are described in detail in Section 4.13. Estimated average annual and peak wastewater discharge rates are provided in Section 2.2.9 and summarized in Table 4.13-7. The combined wastewater discharge volume is minimal, and wastewater will not be discharged to existing sewer or other wastewater infrastructure. Contaminated process water will be treated and disposed offsite and sanitary wastewater will be treated in the proposed onsite septic system. As a result, impacts to the wastewater system would be less than significant.

Mitigation measures are described in Section 4.13.3. By complying with all applicable water quality LORS and implementing a Project-specific SWPPP, SPCC Plan, BMPs, and other mitigation measures, the Project construction and operation will not violate water quality standards or waste discharge requirements, or otherwise substantially degrade water quality.

1.7.14 Agriculture and Soils

The Project, including all four major components, is located within land designated as "Grazing Land" (Figure 4.14-2). The Project does not include Important Farmland, Prime Farmland, Unique Farmland, or Farmland of Statewide Importance. Farmlands of Local Importance are located south and east of the Project, south of SR 52. The productivity of the soil for grazing purposes will be lost; however, the proposed Project is not currently used for grazing. Therefore, no impacts are expected to agricultural resources from Project operations.

The potential for soil erosion will be minimized through implementation of BMPs in accordance with a site-specific SWPPP that is required under the Clean Water Act for all construction projects over 1 acre in size. The BMPs will also be in accordance with the City of San Diego Storm Water Standards Manual (City of San Diego 2011). Monitoring will involve inspections to verify that the BMPs described in the SWPPP are properly implemented and effective. Therefore, impacts from soil erosion via water are expected to be less than significant. Through the implementation of BMPs specified in the SWPPP and associated monitoring activities during the operations phase, soil erosion is expected to be insignificant during Project operations.

1.7.15 Paleontological Resources

An overall paleontological review that focuses on the identified formations and geomorphic provinces known to occur in San Diego County was used as the basis of the analysis presented in Section 4.15.

Geologic maps show that the proposed Project site is underlain by Stadium Conglomerate of the Poway Group and the Friars Formation of the La Jolla Group. Both are considered to be highly sensitive for paleontological resources as demonstrated in paleontology publications and local agency documents (City of San Diego 2007, Deméré and Walsh 1993, SDSU 2011). The Stadium Conglomerate is exposed in the vicinity of the Project and was observed to be near to or exposed in the current ground surface.

Given the proximity of the Stadium Conglomerate to the surface, it is assumed that any ground disturbing activities, including shallow ones, associated with the proposed Project would have the potential to encounter this paleontologically sensitive unit. Activities disturbing paleontologically sensitive sediment include those amenable to monitoring, such as large and small scale excavations where back dirt as well as cut walls can be observed. Other activities such as pile-driving would be less amenable to monitoring because sediments impacted cannot be observed and, in some cases, no back dirt is produced.

With the implementation of engineering design features and BMPs, as described in Section 4.13, Water Resources, and Section 4.14, Agriculture and Soils, and mitigation measures potential construction-related impacts would be reduced to less than significant levels. Since no earth-moving activities are anticipated to occur during operation and maintenance of the proposed Project, no impacts on paleontological resources would occur.

1.7.16 Geological Hazards and Resources

The Project lies within a region that is considered to be seismically active but historically has experienced fewer earthquakes than other areas within southern California. Nevertheless, there are multiple, sufficiently active faults in the region that are capable of causing ground-shaking in the Project vicinity (Figure 4.16-4). The site is located in a Seismic Risk Zone 4.

As described in Section 4.16, the proposed Project will not cause significant adverse impacts in terms of geological hazards or loss of resources. It is not anticipated that the Project will overlap in time or geographic extent with other activities that will adversely impact geological hazards or resources. It is also not anticipated that the Project will interact with or intensify any impact to geological hazards or resources in the area. Therefore, the Project would not contribute to a cumulative impact to geologic resources when considered in combination with projects or developments in the vicinity.

1.7.17 Cumulative Impacts

Past, present, and reasonably foreseeable projects in the vicinity of the proposed Project that could affect the same resources as those of the Project are discussed in Section 4.17. The analyses of the proposed Project's potential to result in cumulative impacts as a result of the combination of its impacts with those of the identified cumulative projects, is addressed in each of the resources sections presented in this AFC. The incremental contribution by the proposed Project to overall development in the East Elliott Community Plan area is small. Implementation

of the mitigation measures described in each resource section of this AFC would limit the proposed Project’s contribution to acceptable levels for all issue areas. Consequently, the contribution of the proposed Project to cumulative impacts would be expected to be less than significant.

1.7.18 Summary

The Project will comply with all applicable LORS, and will help to meet the local energy capacity and reliability needs of the area and will result in environmental impacts that are less than significant. Where needed to assure that environmental impacts remain below significance thresholds, mitigation has been built in to the Project design as described in detail in subsequent sections of this AFC.

1.8 LAWS, ORDINANCES, REGULATIONS, AND STANDARDS

Each section of the AFC addresses the relevant Laws, Ordinances, Regulations, and Standards (LORS) and compliance with them.

1.9 PERMITTING REQUIREMENTS

Each issue area section of the AFC provides an agency contact list, a list of applicable federal, state, and local permits that would be required by each jurisdiction for the Project, as well as a permit schedule for permits appropriate to the topic.

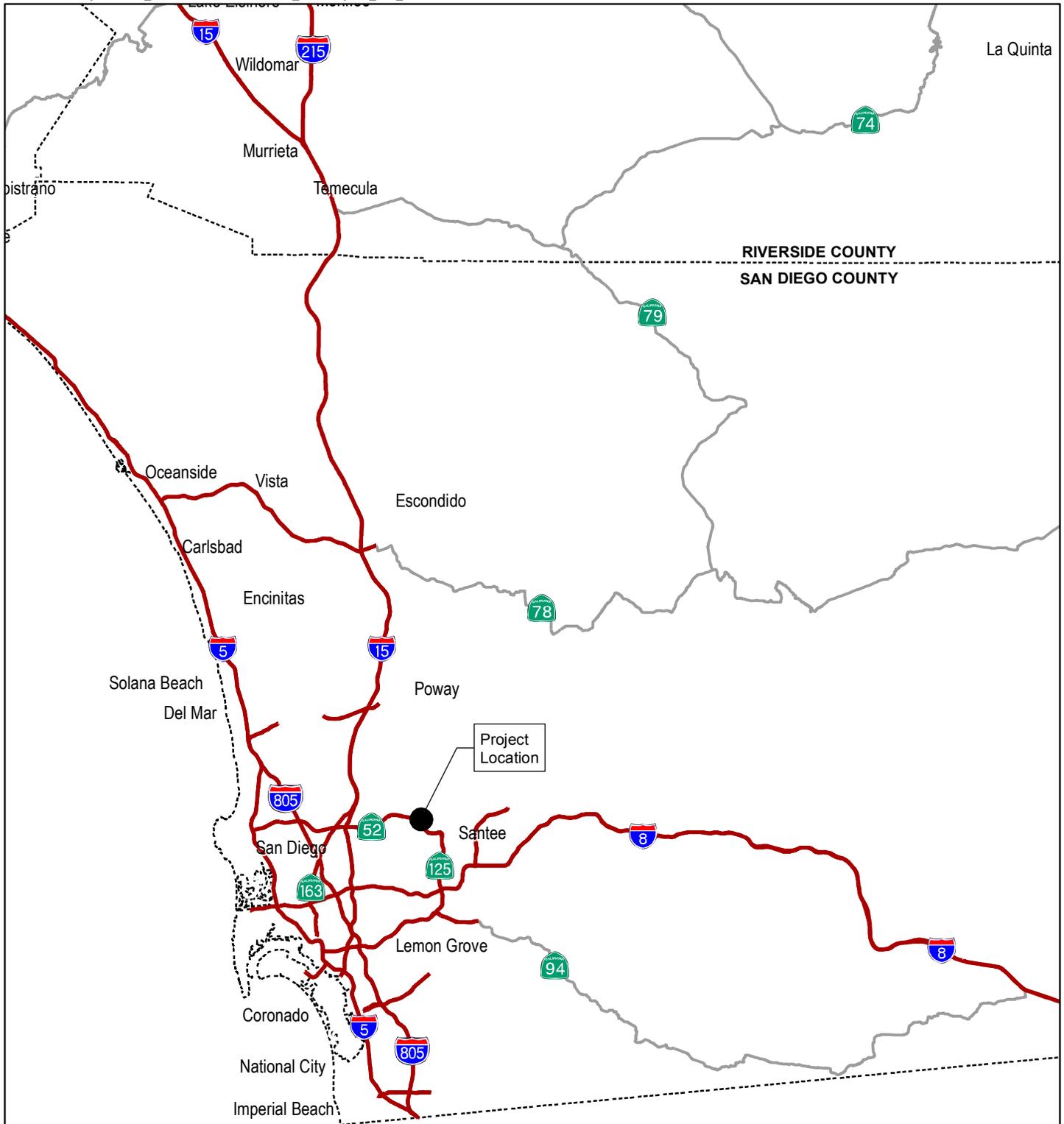
1.10 APPLICANT CONTACTS AND PROOF OF SERVICE LIST

The following AFC contacts and proof of service list should be used for the Applicant (with project roles noted in parentheses):

Gary Palo Vice President of Development	Cogentrix Energy, LLC 949-721-0055 garypalo@cogentrix.com
C. Richard Neff, P.E. Vice President – Environment, Health & Safety (Development Manager)	Cogentrix Energy, LLC 704-672-2818 RickNeff@Cogentrix.com
Ella Foley Gannon (AFC Counsel)	Bingham McCutchen LLP 415-393-2572 ella.gannon@bingham.com
Barry McDonald, P.E. Vice President – Solar Energy Development (Cogentrix Program Manager)	Tetra Tech EC, Inc. 949-809-5041 barry.mcdonald@tetrattech.com
Connie Farmer Senior Environmental Project Manager (AFC Project Manager)	Tetra Tech EC, Inc. 303-980-3653 connie.farmer@tetrattech.com
Sarah McCall Environmental Planner/Project Manager (AFC Deputy Project Manager)	Tetra Tech EC, Inc. 303-980-3676 sarah.mccall@tetrattech.com

FIGURES

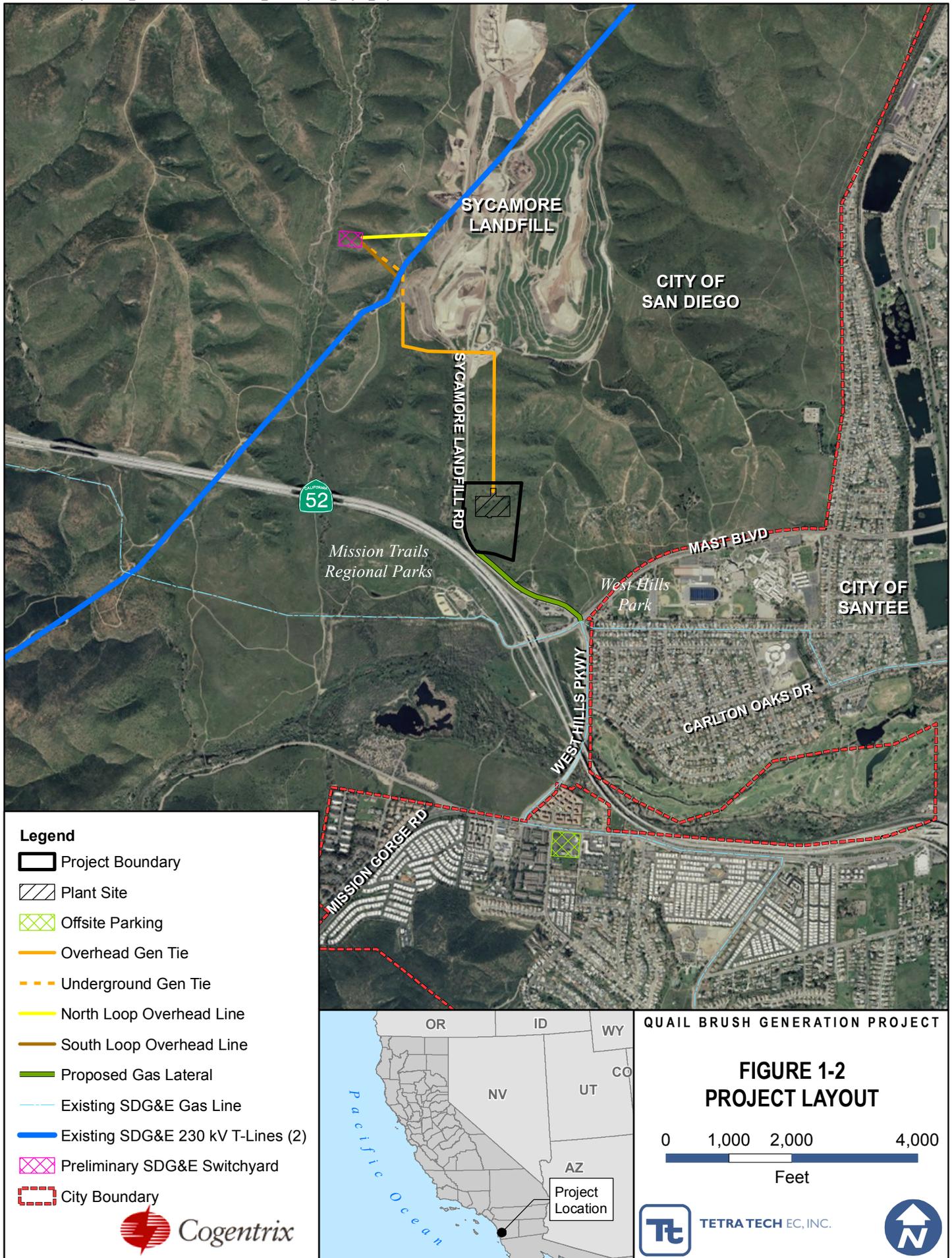




QUAIL BRUSH GENERATION PROJECT

**FIGURE 1-1
SITE LOCATION MAP**





Legend

-  Project Boundary
-  Plant Site
-  Offsite Parking
-  Overhead Gen Tie
-  Underground Gen Tie
-  North Loop Overhead Line
-  South Loop Overhead Line
-  Proposed Gas Lateral
-  Existing SDG&E Gas Line
-  Existing SDG&E 230 kV T-Lines (2)
-  Preliminary SDG&E Switchyard
-  City Boundary



QUAIL BRUSH GENERATION PROJECT

**FIGURE 1-2
PROJECT LAYOUT**

0 1,000 2,000 4,000



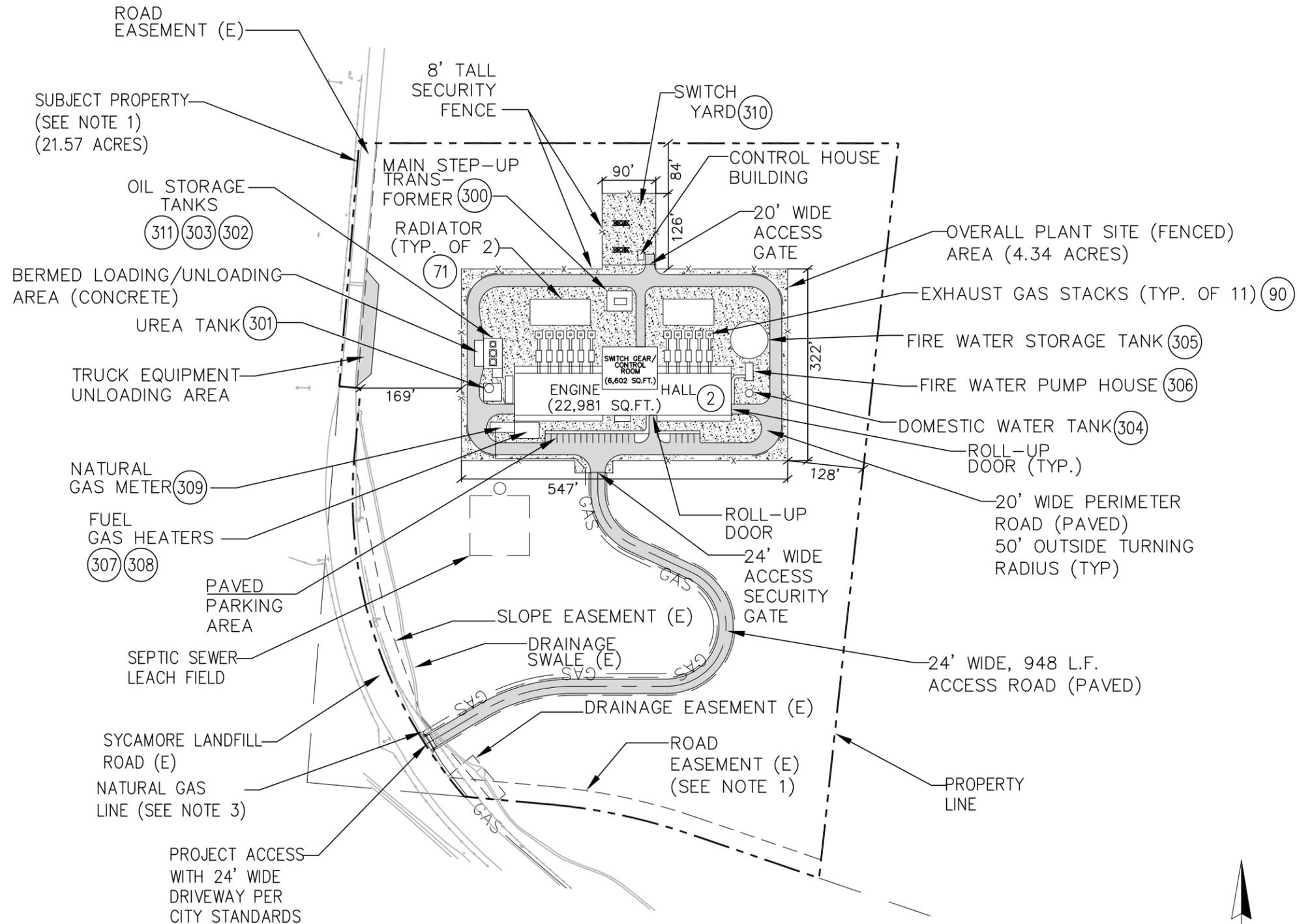
Feet



TETRA TECH EC, INC.

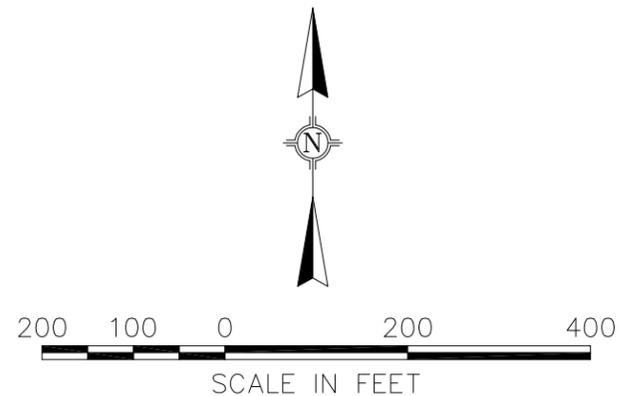


P:\4346-COGENTRIX QUAIL BRUSH\CAD-ENGINEERING\SITE PLAN\CAD\FIGURE 1-3 SITE PLAN-COGENTRIX.DWG
 PLOT/UPDATE: Aug 24, 2011 11:35:04 AM



NOTES:

1. PROPERTY AND EASEMENT INFORMATION FROM ALTA/ACSM LAND TITLE SURVEY PREPARED BY RBF CONSULTING APRIL 25, 2011.
2. PLANT SITE ITEMS FROM QUAIL BRUSH MASTER LAYOUT PLAN QB-SP-2 REVISION B DATED 3/9/11. (SEE APPENDIX B2 FOR ADDITIONAL DETAILS ON THE POWER PLANT LAYOUT.)
3. ALIGNMENT OF NATURAL GAS LINE WILL BE ESTABLISHED BY SAN DIEGO GAS & ELECTRIC.



LEGEND:

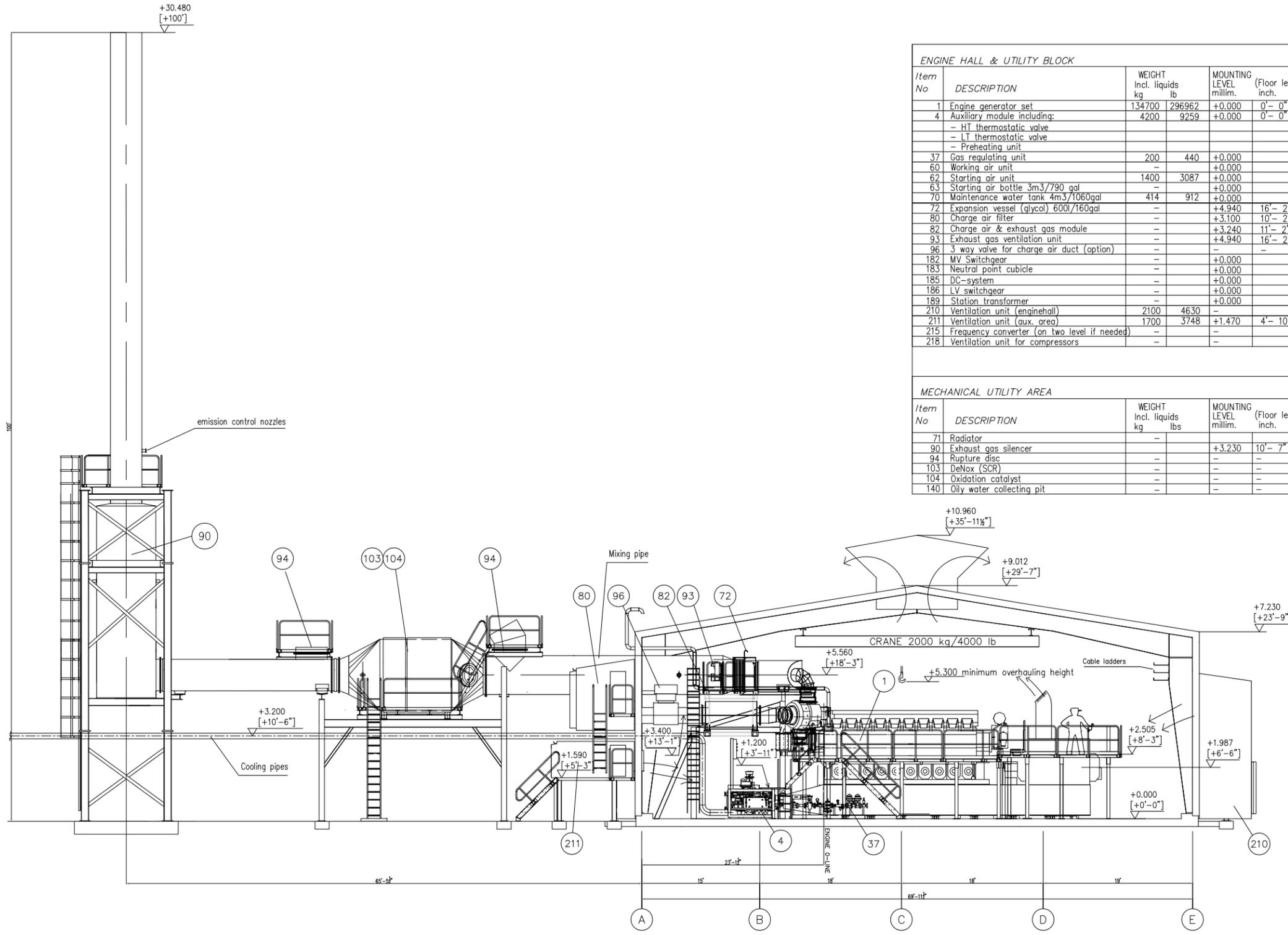
GAL.	GALLON
L.F.	LINEAR FEET
SQ.FT.	SQUARE FEET
TYP.	TYPICAL
(E)	EXISTING
(310)	ITEM NO.
	ASPHALT PAVEMENT
	GRAVEL
	CHAINLINK FENCE
	PARCEL BOUNDARY
	NEW NATURAL GAS LINE

POWER PLANT EQUIPMENT (SEE NOTE 2)

Item No	Pcs.	DESCRIPTION	DESCRIPTION		
			Dia.	Ht.	Cap.(G)
2	1	Engine Hall	-	24'	
71	2	Radiator Sets		18' H	
90	11	Exhaust gas Stack	4' ø	100' H	
300	1	Main Step-Up Transformer		30' H	
301	1	Urea Tank	13' ø	22' H	20,000
302	1	Used Oil Tank	10' ø	20' H	10,000
303	1	New Oil Tank	10' ø	20' H	10,000
304	1	Domestic Water Tank	10' ø	20' H	10,000
305	1	Fire Water Tank	60' ø	30' H	600,000
306	1	Fire Water Pumphouse		STACK=30'H	
307	1	Warm Start Gas Heater		STACK=30'H	
308	1	Fuel Gas Heater		STACK=30'H	
309	1	Natural Gas Metering Station		6' H	
310	1	Facility 230kV Switchyard		52' H Mast	
311	1	Maintenance Oil Tank	8' ø	16' H	6,000

QUAIL BRUSH GENERATION PROJECT

**FIGURE 1-3
SITE PLAN**



ENGINE HALL & UTILITY BLOCK

Item No	DESCRIPTION	WEIGHT Incl. liquids kg	lb	MOUNTING LEVEL millim.	(Floor level) inch.
1	Engine generator set	134700	296962	+0.000	0'- 0"
4	Auxiliary module including:	4200	9259	+0.000	0'- 0"
	- HT thermostatic valve				
	- LT thermostatic valve				
	- Preheating unit				
37	Gas regulating unit	200	440	+0.000	
60	Working air unit	-	-	+0.000	
62	Starting air unit	1400	3087	+0.000	
63	Starting air bottle 3m3/790 gal	-	-	+0.000	
70	Maintenance water tank 4m3/1060gal	414	912	+0.000	
72	Expansion vessel (glycol) 600l/160gal	-	-	+4.940	16'- 2"
80	Charge air filter	-	-	+3.100	10'- 2"
82	Charge air & exhaust gas module	-	-	+3.240	11'- 2"
93	Exhaust gas ventilation unit	-	-	+4.940	16'- 2"
96	3 way valve for charge air duct (option)	-	-	-	-
182	MV Switchgear	-	-	+0.000	
183	Neutral point cubicle	-	-	+0.000	
185	DC-system	-	-	+0.000	
186	LV switchgear	-	-	+0.000	
189	Station transformer	-	-	+0.000	
210	Ventilation unit (enginehall)	2100	4630	-	-
211	Ventilation unit (aux. area)	1700	3748	+1.470	4'- 10"
215	Frequency converter (on two level if needed)	-	-	-	-
218	Ventilation unit for compressors	-	-	-	-

MECHANICAL UTILITY AREA

Item No	DESCRIPTION	WEIGHT Incl. liquids kg	lbs	MOUNTING LEVEL millim.	(Floor level) inch.
71	Radiator	-	-	-	-
90	Exhaust gas silencer	-	-	+3.230	10'- 7"
94	Rupture disc	-	-	-	-
103	DeNox (SCR)	-	-	-	-
104	Oxidation catalyst	-	-	-	-
140	Oily water collecting pit	-	-	-	-



LEGEND:

gal	GALLON
kg	KILOGRAM
lb	POUND
millim	MILLIMETERS
m ³	CUBIC METERS
1	ITEM NO.

QUAIL BRUSH GENERATION PROJECT

**FIGURE 1-4
TYPICAL ELEVATION VIEW**



QUAIL BRUSH GENERATION PROJECT

**FIGURE 1-5
VISUAL SIMULATION OF
THE PROJECT
AS SEEN FROM KOP 1**



TETRA TECH EC, INC.