DOCKETED	
Docket Number:	21-SPPE-02
Project Title:	STACK Trade Zone Park
TN #:	243473
Document Title:	STACK TZP Responses to CEC Data Request Set 1
Description:	N/A
Filer:	Scott Galati
Organization:	DayZenLLC
Submitter Role:	Applicant Representative
Submission Date:	6/7/2022 4:12:35 PM
Docketed Date:	6/7/2022

RESPONSE TO CEC STAFF DATA REQUEST SET 1 (1-59)

STACK Trade Zone Park (21-SPPE-02)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION
SUBMITTED BY: **STACK Infrastructure**

June 7, 2022

DAYZEN LLC

INTRODUCTION

Attached are STACK Infrastructure's (STACK) responses to California Energy Commission (CEC) Staff Data Request Set No. 1 (1-59) for the Trade Zone Park (TZP) Application for Small Power Plant Exemption (SPPE) (21-SPPE-02). Staff issued Data Request Set No. 1 on May 16, 2022.

The Data Responses are grouped by individual discipline or topic area. Within each discipline area, the responses are presented in the same order as Staff presented them and are keyed to the Data Request numbers (1-59). Additional tables, figures, or documents submitted in response to a data request (e.g., supporting data, stand-alone documents such as plans, folding graphics, etc.) are found in Attachments at the end of the document and labeled with the Data Request Number for ease of reference.

For context, the text of the Background and Data Request precede each Data Response.

GENERAL OBJECTIONS

STACK objects to all data requests that require analysis beyond which is necessary to comply with the California Environmental Quality Act (CEQA) or which require STACK to provide data that is in the control of third parties and not reasonably available to STACK. Notwithstanding this objection, STACK has worked diligently to provide these responses swiftly to allow the CEC Staff to prepare the Draft Environmental Impact Report (DEIR).

AIR QUALITY AND PUBLIC HEALTH

BACKGROUND: AIR DISTRICT APPLICATION

The proposed project would require a permit from the Bay Area Air Quality Management District (BAAQMD). For purposes of consistency, staff needs copies of all correspondence between the applicant and the BAAQMD in a timely manner in order to stay up to date on any issues that arise prior to the completion of the initial study or the environmental impact report.

DATA REQUESTS

1. Please provide copies of all substantive correspondence between the applicant and the BAAQMD regarding the project, including permit application and e-mails, within one week of submittal or receipt. This request is in effect until staff publishes the initial study or the environmental impact report.

Response to Data Request 1

STACK will docket copies responsive to this request as directed within one week of submittal. To date there has been no correspondence between STACK and the BAAQMD regarding the project.

2. Please identify the current schedule for the BAAQMD permit application submittal. Please submit a copy of that application to the docket when it is submitted to BAAQMD.

Response to Data Request 2

STACK has not yet filed an application for BAAQMD permits for the emergency generators and will not likely file any application until after Staff produces its environmental document.

BACKGROUND: MANUFACTURERS' SPECIFICATION SHEETS

There are inconsistencies in the description of the proposed emergency standby generators (gensets) in the SPPE application (TN 240910). Page 16 of the SPPE application states that each of the 36 large gensets (CAT 3516E) would be equipped with selective catalytic reduction (SCR) and diesel particulate filters (DPF) to comply with Tier 4 emissions standards. Page 84 of the SPPE application states that the proposed engines will comply with the applicable federal Tier 2 and Tier 4

emissions standards for emergency standby electrical generation CI engines. Page 88 of the SPPE application states that the gensets proposed for installation are made by Caterpillar, with a certified Tier 4 rating. Appendix AQ-1 indicates that Miratech Catalyst and DPF would be used to meet a Tier 4 rating.

Page 88 of the SPPE application also states that Appendix AQ-2 contains the manufacturers specification sheets for the engines and the air pollution control systems. However, only the performance data for the smaller CAT C32 engines are included in Appendix AQ-2. The SPPE application does not show manufacturer guarantees for the CAT 3516E or the control efficiencies for add-on controls, such as SCR or DPFs. Staff needs the manufacturer specification sheets for the engines and the air pollution control systems to verify the emissions for the proposed CAT 3516E and CAT C32 engines.

DATA REQUESTS

3. Please clarify whether all the engines would be certified with Tier 4 rating or use a SCR and DPF emissions control system to meet a Tier 4 rating. Please clarify which engines would not meet a Tier 4 rating, if any, and how they would comply with BAAQMD Best Available Control Technology (BACT) requirements.

Response to Data Request 3

The 36-CAT 3516E engines and the 2-CAT C32 engines are all rated at >1000 HP, and as such they must meet the BAAQMD BACT guidelines which requires Tier 4 compliance. Each of these engines will be equipped with add-on controls that consist of DPF and the Miratech SCR control system. The emissions and impacts were based upon the use of and compliance with the EPA Tier 4 limits.

4. Please provide the vendor guarantees and performance data for the larger engines (CAT 3516E) and guarantees for the control systems on the larger engines (CAT 3516E) and smaller engines (CAT C32), including the SCR system and DPF specifications. This information should identify potential emissions for a foreseeable range of engine load settings and documentation substantiating the effectiveness of the proposed SCR and DPF systems.

Response to Data Request 4

The vendor specifications and guarantees are contained in Appendix AIR DR-4.

BACKGROUND: AMMONIA EMISSIONS

With the use of SCR to control oxides of nitrogen (NOx) emissions from the proposed engines, unreacted ammonia would also be emitted. Staff needs the ammonia emissions estimate to complete the analysis.

DATA REQUEST

5. Please provide engine ammonia emission rates and total emissions due to the use of SCR.

Response to Data Request 5

Based on the Miratech control data supplied in Response 4, the following table presents the estimated ammonia slip emissions for each engine as well as the total from all engines.

Parameter	C3516E	C32
HP Rating	4023	1474
M&R Test Hours/Yr	50	50
NH_3 Injection, Hours/Yr	50	50
NH_3 Emissions Factor, g/bhp	0.09	0.09
Per engine, lbs/hr	0.7975	0.2922
Per Engine, lbs/yr	39.88	14.61
Per Engine, tpy	0.02	0.0073
Number of Engines	36	2
Total Annual Emissions, tpy	0.72	0.015
Total Emissions all Sources, tpy	0.735	
Note: The emissions as calculated are conservative as they assume that NH3 is injected for the entire M&R testing hour. In practice, NH3 is typically not injected until the catalyst reaches its minimum activation temperature.		

BACKGROUND: CONSTRUCTION AND OPERATION EMISSIONS CALCULATIONS

Appendix AQ-1 (Engine Emissions Data) and Appendix AQ-4 (Construction Emissions CalEEMod) in the SPPE application Appendices A and B document (TN 240911-1) are used to document emissions calculations. Staff needs the spreadsheet files of the emissions estimates with live, embedded calculations to complete the analysis.

DATA REQUEST

6. Please provide the spreadsheet versions of the worksheets in Appendix AQ-1 and Appendix AQ-4 with the embedded calculations live and intact.

Response to Data Request 6

Atmospheric Dynamics Incorporated (ADI) will provide the active spreadsheets upon Staff's invitation to upload the files to its preferred secure file transfer system. Please direct the invitation to Gregory Darvin with ADI.

BACKGROUND: CONSTRUCTION MITIGATION MEASURES

Pages 56 and 94 of 163 in the SPPE Appendices A and B document (TN 240911-1) state that all off-road construction equipment are assumed to be Tier 4 final. However, the proposed mitigation measure MM AIR-1 does not include this requirement.

In addition, in its comment letter on the Draft Environmental Impact Report for the CA3 Backup Generating Facility (TN 242229), the BAAQMD recommended the following mitigation measures, in addition to the standard best management practices, to further address construction-related impacts:

- ***All off-road equipment greater than 25 horsepower (hp) shall have engines that meet or exceed Tier 4 final off-road emission standards. Use of zero-emission and hybrid-powered equipment is encouraged.***
- ***All on-road trucks used for material delivery or hauling shall have engines that meet or exceed 2014 CARB emissions standards.***
- ***Where grid power is available, portable diesel engines should be prohibited.***
- ***Install wind breaks (e.g., trees, fences) on the windward side(s) of actively disturbed construction areas. Wind breaks should have at maximum 50 percent air porosity.***
- ***All excavation, grading, and/or demolition activities shall be suspended when average wind speeds exceed 20 miles per hour (mph).***
- ***Sandbags or other erosion control measures shall be installed to prevent silt runoff to public roadways from sites with a slope greater than one percent.***

DATA REQUEST

7. Please indicate if any mitigation measures or assumptions, other than those proposed in MM AIR-1, were used in CalEEMod to estimate construction emissions.

Response to Data Request 7

Note the following:

- The CalEEMod input and output files clearly note that all off-road construction equipment was evaluated at Tier 4.
- We do not believe that CalEEMod has a provision for setting all on-road trucks to meet CARB 2014 emissions standards. CalEEMod evaluates on-road truck emissions using the EMFAC database for the years in which construction is to be performed. In addition, we do not know how such a provision could be enforced in practical terms.
- The current construction equipment list for SVY05 and SVY06 shows only one (1) generator set for each data center building construction period. The Applicant will use grid power when available to avoid using diesel powered generator sets.
- CalEEMod has no provision for the incorporation of wind breaks in the construction analysis. If the BAAQMD requires such a condition for construction, then the applicant will implement it.
- CalEEMod has no provision for the incorporation of a wind speed trigger for halting construction. If the BAAQMD requires such a condition for construction, then the applicant will implement it.
- Sandbags and other erosion controls are addressed in the SWPPP. Roadway cleanup measures were addressed in the Applicants proposed mitigations.

BACKGROUND: ROAD DUST EMISSIONS PARAMETERS

Pages 20, 38, 58, and 95 of 163 in the SPPE Appendices A and B document (TN 240911-1) show that material moisture content, material silt content, and mean vehicle speed were set to zero in CalEEMod for road dust emissions estimation. Staff would like to understand the reason for setting these values to zero.

DATA REQUEST

8. Please provide the justification for setting material moisture content, material silt content, and mean vehicle speed to zero for the road dust emissions estimation. If the approach cannot be justified, please revise CalEEMod using site appropriate parameters.

Response to Data Request 8

The input values noted are for "unpaved" road use during the operational phases of SVY05 and SVY06. The project will not be serviced by any unpaved roads during operations therefore the input values were set to zero and no mitigations were specified.

BACKGROUND: READINESS TESTING AND MAINTENANCE LIMITS

Page 89 of the SPPE application states that the maximum daily emissions were estimated assuming only eight of the CAT 3516E engines would be tested on any day. However, page 97 of the SPPE application states that each engine was assumed to operate up to 10 hours per day to conservatively represent 10 different engines operating for one hour each in any one day. The engines were assumed to be tested anytime from 7 AM to 5 PM. Staff would like to verify the maximum number of engines to be tested on any day and whether these assumptions would be made enforceable by permit conditions.

Additionally, recent (3/30/2022) noise studies for the project include a design recommendation in TN 242507 that would cause operations outside of the hours assumed in the air quality impact analysis, as follows: "…full-load testing of generators shall be limited to the hours of 5 PM to 7 PM." This newer project design change would conflict with the assumptions used in prior air quality analyses.

DATA REQUESTS

9. Please clarify the maximum number of engines to be tested on any day.

Response to Data Request 9

A maximum of eight (8) engines will be tested on any given day.

10. Please confirm whether the applicant would request from the BAAQMD an enforceable limit that would allow the maximum number of engines to be tested on any day for the CAT 3516E engines.

Response to Data Request 10

The basic emissions assumptions and analysis are based on a maximum of 8 engines being tested on any given day. STACK would expect that the BAAQMD would place such a limiting condition on the resultant permits. STACK will request such a condition.

11. Please confirm that the applicant would request from the BAAQMD an enforceable limit that would allow the testing of engines only between 7 AM to 5 PM daily (or is it 5 PM to 7 PM?).

Response to Data Request 11

The purpose of the limitation proposed by STACK was to ensure compliance with the City of San Jose's noise ordinance and to limit operations during business hours as a mitigation related to the nearby commercial property. STACK is undertaking additional noise modeling and considering additional analysis and potential mitigation to ensure that generator testing can take place between 7:00 AM and 7:00 PM. Depending on the outcome of this analysis, STACK assumes that it will able to test the generators anytime between 7:00 AM and 7:00 PM. ADI is modifying the air quality modeling to reflect these potential run times.

12. Please confirm whether the noise mitigation in TN 242507 that prescribes testing after 5 PM could be accommodated by changing the proposed hours of operation assumed in the air quality analysis.

Response to Data Request 12

See Response to Data Request 11.

13. If the applicant proposes this for noise mitigation, please re-evaluate short-term (1-hour) air quality impacts to consider the potential for air emission testing occurring between the hours of 5 PM to 7 PM.

Response to Data Request 13

See Response to Data Request 11. The air quality and public health modeling is currently being revised to reflect 12 hours of operation per day in place of the 10 hours per day as used in the application. The modeling results based on 7:00 AM through 7:00 PM will be submitted under separate cover.

14. Please confirm that the applicant would request from the BAAQMD an enforceable limit on concurrent testing of engines so that only a single engine operates for maintenance and testing at any given time.

Response to Data Request 14

STACK's analysis of emissions and impacts used the assumption that only one (1) engine would be tested at any given time, STACK would expect that the BAAQMD would place such a condition on the resulting permits. STACK will request such a condition.

BACKGROUND: SCREENING FOR LOW-LOAD CONDITIONS

The air quality impact analysis (SPPE application, p. 97) indicates that testing can occur over a range of load conditions. However, the analysis says that "an air quality screening analysis was not performed," and "…the worst-case stack condition and the worst-case engine location could be determined from the screening analysis" (SPPE application, p. 97). Staff needs a detailed description of the types of testing and maintenance scenarios, the frequency of full-load tests and low-load tests, and confirmation of impacts at various standby engine load points to verify the assumptions used in the SPPE analysis.

DATA REQUESTS

15. Please provide a detailed description of the testing and maintenance frequencies and standby engine load points for the CAT 3516E and CAT C32 engines. The description should include the length and engine load points for each weekly, monthly, quarterly, and annual testing and maintenance event.

Response to Data Request 15

STACK has chosen not to set a testing schedule, but rather will conduct M&R testing as necessary under the following limitations:

- No more than eight (8) engines will be tested on any given day.
- Engine testing will be restricted to non-concurrent testing periods, i.e., only one (1) engine will be tested at any given time.
- Engines will be tested during the period of 7:00 AM to 7:00 PM.
- Engines may be tested at loads ranging from 10 to 100% depending upon the maintenance procedures established by the Applicant.

16. Please provide a screening review of short-term (1-hour) ambient air quality impacts during testing for a representative range of engine load points (SPPE Appendix AQ-2 defines performance at 100, 75, 50, 25, and 10 percent load) to confirm that full-load testing would produce the highest ground-level concentrations.

Response to Data Request 16

A load screening analysis was performed on the worst-case engine, identified from running all 36 Caterpillar 3516E engines at a normalized emission rate of one (1) gram/second. The two engines identified as causing the maximum impacts, designated SVY0501 and SVY0601 were modeled at the requested load ranges. Please note that the emissions referenced in Response to Data Request AQ-2 are uncontrolled, but the engines will need to satisfy the Tier 4 requirements, which includes the use of SCR and an oxidation catalyst. As such, the emissions will not exceed 0.5 g/bhp-hr for NOx and 2.6 g/bhp-hr for CO. The results of the screening load analysis for the 1-hour averages for NOx and CO demonstrate that the 100 percent load case results in the largest modeled concentrations. The results are presented in Appendix AIR DR-16.

BACKGROUND: SCREENING FOR CHANGES IN BUILDING DESIGN

Recent noise studies for the project include a design recommendation in TN 242507 that could change how wind flows around the buildings to the nearest receptors, as follows: "…[add] rooftop parapet walls … at a height of 16 feet to shield the nearby uses from operational noise." Staff needs to confirm if installing 16-foot-high parapets would change the results of the previously filed air quality impact analysis as a result of downwash influences.

DATA REQUEST

17. Please provide a screening evaluation of short-term (1-hour) and annual air quality impacts with the recommended parapet in place to determine whether adding noise mitigation in TN 242507 would cause maximum fenceline concentrations to increase above those previously presented.

Response to Data Request 17

The 16-foot parapet wall was included in the revised BPIP-PRIME input file to determine the influence of the wall on the modeled concentrations. It was assumed that the wall was one (1) meter in depth. This is shown in Appendix AIR DR-17. The results of the BPIP-PRIME with the parapet wall will be included in the revised modeling analysis where

all engines are modeled between the hours of 7:00 AM and 7:00 PM and will be submitted under separate cover.

BACKGROUND: CONSTRUCTION-PHASE DISPERSION MODELING

Project construction-phase emissions from off-road equipment are represented as 59 individual point sources in the AERMOD dispersion model electronic files uploaded by the applicant for staff review. The applicant uses a similar arrangement in modeling "crossover" impacts when partial site operation could overlap with the second phase of construction. Staff reviewed the discussion for information on the point sources, and the application indicates that: "The exit temperature and stack velocity were based on an average sized construction engine that could be used for the project." (SPPE application, p. 99) Staff has not been able to find information in the SPPE application to support the construction modeling stack parameters.

DATA REQUEST

18. Please provide a reference or citation supporting the assumed release temperatures and velocities in the stack parameters for the construction-phase point sources modeled.

Response to Data Request 18

Note the following: ADI utilized the stack parameters from a survey conducted by ADI in 2011 for a range of construction equipment types for manufacturers such as Caterpillar, John Deere, Case, Hitachi, Komatsu, and Terex showed an average exhaust stack height above ground of 10.3 ft., an average stack diameter of 6 inches and exhaust all well in excess of 700 degrees Fahrenheit. (A copy of this short survey is included in Appendix AIR DR-18.)

BACKGROUND: HEALTH RISK ASSESSMENT (HRA)

The applicant conducted HRA for construction, overlap (construction + operation), and operation, but staff finds the presentation of results to be unclear.

DATA REQUESTS

19. Please confirm that the risk results of Table 4.3-21 on page 105 of the SPPE application is for Construction Health Risk Assessment Summary, Table 4.3-23 and

4.3-24 is for Operation Health Risk Assessment Summary, and Table 4.3-28 is for Overlap (Construction + Operation) Health Risk Assessment Summary.

Response to Data Request 19

Confirmed. Tables 4.3-21, -23, -24, and -28 are titled clearly and correctly and follow the direction on phased construction analysis provided by the CEC on the Great Oaks South Backup Generating Facility.

20. Please explain why the risk numbers in Table 4.3-28 on page 112 (Overlap of Construction + Operation) is lower than the risk numbers of Table 4.3-23 and 4.3-24 (Operation) on page 106. For example, the cancer risk at the point of maximal impact (PMI) in Table 4.3-23 (Operation) is 2.29E-05, higher than the cancer risk at PMI (i.e., 4.16E-6) in Table 4.3-28 (Overlap of operation and construction). Is it reasonable that the overlap of construction and operation should be higher than operation alone?

Response to Data Request 20

Those results are verified. The overlap modeling for annual averages was reassessed with the construction and operations broken out into source groups. The emissions were verified as well. Based on the period average source group modeling results, the diesel engine testing concentrations were an order of magnitude larger than the construction concentrations (i.e., 0.011 ug/m3 versus 0.007 ug/m3). This is consistent with the summarized modeling results in the application where operations had larger impacts than construction. It's also important to note that the overlap modeling assessment would only occur for a two-year period as compared to the operations modeling which is 30 years.

BIOLOGICAL RESOURCES

BACKGROUND: SPECIAL STATUS SPECIES

The Biological Resources Section 4.4 of the SPPE application mentions that the site is highly urbanized, devoid of sensitive habitat, and special-status species are not present on the site. However, the section acknowledges nesting raptors could potentially use the trees onsite for nesting or as a roost. The SPPE site is near several dedicated open space/nature preserve areas containing wetlands, riparian woodlands, and aquatic habitats: Sierra Vista Open Space Preserve, Guadalupe River corridor, and Baylands Park. These communities support multiple special-status species.

DATA REQUEST

21. Please provide a copy of any biological survey performed as well as any plant/animal species research conducted, such as results from a California Natural Diversity Database search.

Response to Data Request 21

The entirety of the project site consists of developed areas. As a result, no biological surveys or plant/animal species research from the California Natural Diversity Database are needed. As described in the SPPE Application, special status plant and wildlife species are not present on the highly urbanized project site, although raptors (birds of prey) could use the trees on the site for nesting or as a roost. The SPPE Application includes proposed mitigation measures (MM BIO 1.1-1.4) requiring completion of a nesting bird survey prior to any construction activities or tree removal on the site and establishment of buffer zones if nesting birds are present.

The data request mentions three areas near the site that support special status species: Sierra Vista Open Space Preserve, Guadalupe River corridor, and Baylands Park. These areas are located 5.1 miles, 2.4 miles, and 5.3 miles from the site, respectively, and are not in the immediate vicinity of the project area. Special status species in these areas are not expected to utilize the developed project site for any reason, with the possible exception of nesting birds, which are discussed in the SPPE Application and addressed by Proposed Design Measures BIO 1.1 through 1.4.

BACKGROUND: TREES AND ARBORIST REPORTS

The Biological Resources Section 4.4 of the SPPE application presents information from the November 2021 and June 2021 Arborist Reports included in Appendix B

and Appendix C, respectively. Section 4.4 outlines that there are 156 trees to be removed with an additional 54 trees along the transmission line route and 26 neighboring trees that all might be negatively impacted by the construction activities.

DATA REQUESTS

22. There are inconsistencies with the numbers of trees to be removed and those being counted for mitigation. For example, only 10 native onsite trees are mentioned for removal when it specifies that there are 13 native trees onsite. Also, from the arborist report in Appendix B, there are two native trees that meet the 38-inch city ordinance threshold that require mitigation but were not counted as part of the total for native trees to be mitigated. Please double check the accuracy of and confirm the exact numbers for trees that will be removed and mitigated.

Response to Data Request 22

There are 13 native trees on site, ten of which are of ordinance size. Table 4.4-2 Tree Replacement Ratios discloses that native trees of ordinance size are replaced at a 5:1 ratios, native trees with a circumference of 19-38 inches are replaced at a 3:1 ratio, and native trees with a circumference below 19 inches are replaced at a 1:1 ratio. The SPPE application specifically states that “Since 156 trees onsite would be removed, 10 trees would be replaced at a 5:1 ratio , 99 trees would be replaced at a 4:1 ratio, 47 trees would be replaced at a 1:1 ratio.” All 13 native trees are included in that statement for removal, as there are 156 trees within the boundaries of the project site and we state that 156 trees onsite would be removed. However, only 10 of the 13 native trees are replaced at a 5:1 ratio because only 10 are of ordinance size.

The arborist report for Appendix B analyzed trees along the proposed transmission line route. Table 3.4.2 of the SPPE application includes a summary of the trees along the transmission line route consistent with Appendix B and states that the transmission line route contains 28 native Coast Redwood Trees; 18 that are ordinance sized and 10 that are not. Removal of these trees is not proposed as part of the project. As described in Section 4.4.2.1 under the analysis for Impact statement e, trees along the transmission line route may be injured during project construction activities and may require substantial pruning to ensure clearance. Therefore, applicant proposed mitigation measures are included in the project design to reduce impacts to existing trees to less than significant levels.

To confirm, 156 trees onsite will be removed. The trees will be replaced at the following ratios: 10 trees would be replaced at a 5:1 ratio , 99 trees would be replaced at a 4:1 ratio, 47 trees would be replaced at a 1:1 ratio. The project does not propose removal of the trees along the transmission line, and any impact to these trees will be mitigated. Section

4.4.2.1 describes the proposed mitigation for trees under the analysis for Impact statement e.

23. Please update Figure 4.4-1 and Figure 4.4-2 to clearly show which trees will be removed and which trees will be protected and possibly removed later. Try to match Figure 4.4-1 to the figure titled TPZ Map on page 11 of the arborist report in Appendix C. Also, please clearly show the 26 neighboring trees as there are only 19 trees labeled A-S adjacent to the project site shown on the TPZ Map, so it is not clear where the other seven trees are.

Response to Data Request 23

The arborist report is being revised as requested and will be provided under separate cover. Please note that Revised Drawings including the Revised Landscape Plan are included in Appendix GHG DR-34.

BACKGROUND: SANTA CLARA VALLEY HABITAT CONSERVATION PLAN

The Biological Resources Section 4.4 of the SPPE application, and more specifically section 4.4.2.1, acknowledges that the project would be subject to the Santa Clara Valley Habitat Conservation Plan, including nitrogen deposition fees.

DATA REQUESTS

24. Please specify in more detail what is required for the project to comply with the guidelines of the habitat plan.

Response to Data Request 24

The proposed project is considered a “covered project” under the SCVHP. The Santa Clara Valley Habitat Agency leads the implementation of the SCVHP although fees for this project are paid to the City of San Jose. The SCVHP defines measures to avoid, minimize, and mitigate impacts on covered species and their habitats. These measures are described as conditions on covered actives designed to achieve the following objectives:

- Provide avoidance of covered species during implementation of covered activities throughout the study area.
- Prevent take of individuals from covered activities as prohibited by law.

- Minimize adverse effects on natural communities and covered species where conservation actions will take place.

- Avoid and minimize impacts on jurisdictional wetlands and waters throughout the study area.

- Payment of all required SCVHP fees, including nitrogen deposition fees

25. The operation of the proposed emergency diesel backup generators would result in NOx emissions that could, depending on the height and velocity of the emission plume from the generators, negatively impact the neighboring special-status plant and wetland communities. Since the project will need to pay nitrogen deposition fees per the Santa Clara Valley Habitat Conservation Plan guidelines, please provide a more thorough discussion of nitrogen deposition from the project along with pertinent data and figures.

Response to Data Request 25

The contribution of nitrogen deposition to impacts on serpentine habitat in Santa Clara County was estimated as a part of the development of the Santa Clara Valley Habitat Plan (SCVHP). The SCVHP accounts for both the existing and future indirect impacts of nitrogen deposition from all sources (i.e. stationary, industrial, mobile etc.), both inside and outside the SCVHP area. The SCVHP identifies measures to conserve and manage serpentine habitat areas over the term of the SCVHP. These measures are funded through the collection of nitrogen deposition fees from all projects generating mobile source emissions (i.e. new vehicle trips). Through collection of mobile source emission fees and implementation of conservation and management measures, cumulative impacts to serpentine habitat and associated special-status species are reduced to a less than significant level.

Although the proposed project is considered a covered project under the SCVHP, the SCVHP does not require projects to pay the nitrogen deposition impact fee for emissions from stationary sources such as the project's diesel generators.[1] The project would, however, be required to pay nitrogen deposition fees for vehicle trips generated by the project. As described previously, the SCVHP conservation strategies for serpentine habitats account for nitrogen deposition from all sources, including stationary sources such as the proposed diesel generators. Through collection of nitrogen deposition fees by San Jose and other local partners from mobile sources within the SCVHP area, nitrogen deposition impacts from all sources are reduced by the Habitat Agency's

[1] See Appendix BIO DR-25; Gerry Haas, Program Manager, Santa Clara Valley Habitat Agency. Email Communication. December 12, 2017.

conservation activities, including managed grazing programs on serpentine soils, to a less than significant level. Project implementation, therefore, would not result in significant impacts to special status species or habitat, nor would it conflict with the SCVHP.

CULTURAL RESOURCES

BACKGROUND

Staff has reviewed the results of the Archaeological Resources Assessment (ARA) written by PaleoWest (2022) and the March 8, 2022, SPPE Application Supplement – Section 4.5 Cultural Resources (TN 242219). In reviewing these documents, staff has determined that additional information is required to complete staff's analysis. The built environment windshield survey does not include a one-building band surrounding the project Study Area (see PaleoWest 2022, Figures 2 and 4). This is the primary means by which visual impacts of a proposed project may be readily assessed on any potentially significant 45+ year-old districts, buildings, structures, or objects.

DATA REQUEST

26. Please revise the built environment windshield survey to include a one-building band of parcels directly adjacent to the project Study Area.

    a. Please provide dates of construction for buildings within a one-building band of the Study Area that appear in a 1979 aerial photograph as compared to buildings that appear in a 1974 aerial photo in the EDR Aerial Photo Decade Package in the Ramboll US Consulting, Inc. October 2020, *Phase I Environmental Site Assessment* (DJP 2021, Appendix H, Appendix C.2). Several buildings may require evaluation in accordance with the CEQA Guidelines depending on their date of construction. Preliminary research conducted by staff indicates that at least two of these buildings may require evaluation: the building located at 2001 Fortune Drive (Parcel Id: 24417003) immediately to the east of the project Study Area, which appears as built in 1976, and a building located at 1700 Montague Expressway (Parcel Id: 24424004), which appears as built in 1968. These buildings may be 45+ years in age. Staff is requesting confirmation of these preliminary findings and additional research to determine if any other buildings within a one-building band of the project Study Area are 45+ years in age. If any buildings within a one-building band of the Study Area are confirmed to be 45+ years in age, please provide an evaluation of those parcels, including all structures, buildings, and objects that are 45 years or older on California Department of Parks and Recreation 523 series forms, evaluating their eligibility for listing on the California Register of Historical Resources (CRHR), or as a local landmark. Also, when evaluating these buildings please include a consideration of existing City of San Jose historical and architectural context statements.

    b. Please include a statement in accordance with California Office of Historic Preservation Technical Assistance Series #1: CEQA Historical Resources, Special Considerations, regarding historical resources achieving significance

within the past 50 years. The great majority of buildings within the project Study Area or adjacent to the project area appear to be less than 45+ years in age, and a brief statement regarding their significance in accordance with "Special Considerations" as outlined in OHP Technical Series #6 for historical resources having achieved significance within the past 50 years is requested (OHP 2011, page 3).

Response to Data Request 26

STACK requests a technical telephone conference between PaleoWest and Cultural Staff to discuss further direction on these cultural resources set of data requests in order to provide adequate responses.

BACKGROUND

The ARA does not include the identification of or a discussion of staging areas, which can involve ground disturbance. The identification of staging areas is necessary to ensure that all potential project impacts are assessed.

DATA REQUEST

27. Please identify project staging areas.

    a. If staging areas are within the current project Study Area and will not have an impact on cultural resources, please state this clearly in the ARA.

    b. If staging areas are off-site, or not within the currently defined project Study Area, please revise the ARA and Cultural Resources Section 4.5 of the SPPE Application Supplement (TN 242219) to include updated records searches, surveys, and findings for both archaeology and built environment as necessary.

Response to Data Request 27

STACK anticipates all staging areas and construction parking will be on site.

BACKGROUND

The ARA does not include prehistoric, ethnographic, or historic contexts/setting sections, which are standard in cultural resources technical reports. These contexts help place the Project area in time and assist in assessing the probability of encountering subsurface archaeological deposits.

DATA REQUEST

28. Please revise the ARA and Cultural Resources Section 4.5 of the SPPE Application Supplement (TN 242219) to include prehistoric, ethnographic, and historic context information.

Response to Data Request 28

Please see Response to Data Request 26 above.

BACKGROUND

The record search results in the ARA are unclear. The records search results text in the ARA indicates that there are two tables showing previously conducted investigations and previously recorded cultural resources; however, there are four tables total in the ARA, some of which are misnumbered. There is also one report number, author, year, and title that is in bold in Table 2 of page 7 of the ARA. Staff is unclear as to what the bold report represents. The record search results text indicates there are four previously recorded cultural resources within the Study Area, but there is no table showing the resource numbers, descriptions, or any known National Register of Historic Places (NRHP)/CRHR eligibility. This section should clearly indicate the results of the record search along with corresponding tables. Lastly, no record search results map(s) was provided to the CEC staff

DATA REQUESTS

29. Please revise the previous cultural resources investigation table(s) to clearly indicate if previous investigations cross into the Project area.

Response to Data Request 29

Please see Response to Data Request 26 above.

30. Please revise the previous cultural resources table in the ARA. This table should include a Primary number, Trinomial, a description of the resource, the date(s) it was recorded or updated, and any known NRHP/CRHR eligibility.

Response to Data Request 30

Please see Response to Data Request 26 above.

31. Please provide record search results maps to the CEC staff. The map(s) should include the locations of all previous cultural resources reports and resources in relation to the Project area and 0.25-mile record search buffer.

Response to Data Request 31

Please see Response to Data Request 26 above.

BACKGROUND

It is unclear as to whether the Native American representatives, identified by the Native American Heritage Commission, were consulted with as part of tribal outreach and data gathering for the ARA. Neither the ARA nor any appendices indicate that the Native American representatives were contacted. However, page 5 of section 4.5-Cultural Resources of the SPPE Application Supplement (TN 242219) indicates the Native American representative were contacted.

DATA REQUEST

32. Please revise the ARA and/or Cultural Resources Section 4.5-of the SPPE Application Supplement (TN 242219) to clearly indicate whether Native American representatives were contacted as part of the ARA, including copies of any letters sent and the results of the outreach effort.

Response to Data Request 32

Please see Response to Data Request 26 above.

GREENHOUSE GAS EMISSIONS

BACKGROUND: GREENHOUSE GAS EMISSIONS FROM ENERGY USE, MOBILE SOURCES AND BUILDING OPERATION

The SPPE application does not provide a table showing greenhouse gas (GHG) emissions from energy use, mobile sources, and building operation with assumptions used for the emissions estimation. Staff is not able to match the assumptions used in CalEEMod for operational emissions estimation with the Project Description Section 2. Page 21 of the SPPE application states that Building SVY05 will be approximately 220,300 square feet and Building SVY06 will be approximately 306,500 square feet. Page 37 of the SPPE application states that the Advanced Manufacturing building (AMB) will comprise a four-story building of approximately 135,000 square feet. However, Appendix AQ-4 shows that the total floor surface area in CalEEMod was assumed to be 500,100 square feet for first phase of construction, which includes 225,000 square feet for SVY05, 135,000 square feet for AMB, and 140,100 square feet for a parking garage. The floor surface area for SVY06 was assumed to be 288,000 square feet in CalEEMod. Staff needs to confirm the floor surface area for each building.

In addition, staff needs to verify the number of emergency backup generators and electricity needed for each data center building. Page 11 of the SPPE application states that SVY05 will be supported by 16 generators and SVY06 will be supported by 22 generators. However, the air quality modeling files show that there would be 17 generators (16 larger generators and one smaller generator) for SVY05 and 21 generators (20 larger generators and one smaller generator) for SVY06.

DATA REQUESTS

33. Please provide a table showing GHG emissions from energy use, mobile sources, and building operation with assumptions used for the emissions estimation.

Response to Data Request 33

Table 4.8-1: Annual Project GHG Emissions (CO_2e) in Metric Tons/Yr	
Source Category	**Project Emissions**
Direct Emissions[1]	
Mobile	156.9
Waste	114.2
Area Source	0.015
Water	8.5
Generator Testing and Maintenance	4,328
Subtotal	4607.6
Indirect Emissions[2]	
Energy Consumption (Maximum Data Center and AMB Electricity Demand)	73,668
Reduction from Mitigated Energy Consumption (Maximum Data Center and AMB Electricity Demand)*	-73,668
Subtotal	0
Total	4607.6
[1]Source: Atmospheric Dynamics. Air Quality Impact Assessment. December 2021. [2] Based on PG&E's 2018 carbon intensity factor of 206 lbs. CO2/MWh. Assumes a conservative scenario where the project operates at maximum capacity (90 MW for Data Center Buildings plus 3 MW for AMB) 24 hours a day 365 days per year. * All electricity emissions will be offset by the Project Design Measure PD GHG-1.	

34. Please verify the floor surface area for each building.

Response to Data Request 34

The building square footages and site plans have been revised slightly and are presented in Appendix GHG DR-34. The square footages of the buildings are: the Advanced Manufacturing Building is 136,573 square feet; Data Center Building SVY05 is 220,012 square feet; and Data Center Building SVY06 is 302,182 square feet. The square footage of the parking structure is 174,751 square feet.

The building floor areas as used in the CalEEMod analysis differ slightly from the values presented in the SPPE application due to last minute updates which were not available at the time of the construction analysis. The table below shows the CalEEMod and the SPPE values.

Bldg ID	CalEEMod Values, ft^2	Revised SPPE Values, ft^2
AMB	135000	136573
SVY05	225000	220012
SVY06	288000	302182
Parking Garage	140100	174751
Totals	788100	833518

The SPPE values represent an increase of approximately 5.7%. The Applicant believes this difference is not significant, and that a re-analysis of construction and miscellaneous operations is not warranted.

35. Please verify the number of emergency backup generators and electricity in megawatts (MW) needed for each data center building.

Response to Data Request 35

There will be a total of thirty-eight (38) emergency backup generators for the TPZ. Thirty-six (36) will each have a maximum generating capacity of 3 MW and two (2) will each have a maximum generating capacity of 1 MW. Building SVY05 will be supported by 16 large generators and 1 of the smaller generators. Building SVY06 will be supported by 20 large generators and 1 of the smaller generators. The AMB will not be supported by any of the emergency backup generators.

Please see Sections 2.2.3 and 2.2.4 of the SPPE Application for a discussion and calculation of the generating capacity of the data center buildings.

BACKGROUND: BUILDING SERVER ROOMS COOLING

The SPPE application does not include information on the cooling system design for the data center or the type of refrigerant that would be used in providing cooling to the data center and the servers.

DATA REQUESTS

36. Please provide a description of the cooling system design for the data center and identify the refrigerant proposed.

Response to Data Request 36

Section 2.3.7.2 of the SPPE Application indicates that each data center building would use air cool chillers as shown on the roofing plan figures 2.2-13 and 2.2-17. The selected air-cooled chillers have been rated for performance at the ASHRAE 20-year maximum. Each unit will come with integral economization, variable flow refrigerant compression (capability of reduced power load management) and variable flow condenser fans to provide the most water and energy efficient system that meets the commercial needs of this critical operation. The chillers will use refrigerant R-134a.

37. Please provide an estimate of annual refrigerant leakage, reported as carbon dioxide equivalent (CO2e) emissions, from the cooling system proposed for the project.

Response to Data Request 37

STACK is working with its design team and potential chiller suppliers to provide annual leakage estimates for purposes of GHG emissions calculation which will be submitted under separate cover.

BACKGROUND: SULFUR HEXAFLUORIDE LEAKAGE RATE

The project would include electrical equipment such as circuit breakers and transformers. Staff needs an estimate of the leakage of sulfur hexafluoride (SF6) from the electrical equipment to include in the GHG analysis.

DATA REQUEST

38. Will SF6 be used as the electrical insulator for any electrical equipment for the project? If yes, please provide an estimate of the quantity used and the amount of annual SF6 leakage.

Response to Data Request 38

SF6 will be used in each (2) of the 1200A 115kV breakers. Each breaker will contain approximately 25 lbs of SF6, for a total of 50 lbs. A conservative and reasonable leak rate of 0.5% wt. was assumed. Emissions of SF6 will be approximately 0.25 lbs/yr. CO2e

equivalent emissions will be approximately 5975 lbs/yr or 2.99 tons/yr (assuming the CARB GWP of 23900).

BACKGROUND: LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN (LEED) CERTIFICATION

The project would be subject to the city of San Jose Private Sector Green Building Policy (Council Policy 6-32), which establishes baseline green building standards for new private-sector construction and provides a framework for the implementation of these standards. This policy requires that applicable projects achieve minimum green building performance levels using the City Council-adopted standards. Since the proposed commercial/industrial project would be greater than 25,000 square feet, the proposed data center buildings would be required to achieve LEED Silver certification, at a minimum. Staff needs to verify that the project would comply with the city of San Jose Private Sector Green Building Policy (Council Policy 6-32).

DATA REQUEST

39. Please confirm that the project would achieve a minimum of LEED Silver certification to comply with the city of San Jose Private Sector Green Building Policy (Council Policy 6-32).

Response to Data Request 39

STACK confirms that the TPZ would achieve LEED Silver certification.

POPULATION AND HOUSING

BACKGROUND: PROJECT CONSTRUCTION

Staff needs to know more about the construction of the SVY Data Center (SVYDC), the SVY Backup Generating Facility (SVYBGF), the AMB, a parking garage, and related utility infrastructure, collectively "the project." The SPPE application notes on page 45 that Phase I activities will last approximately 16 to 19 months and include a construction workforce with a peak number of workers of approximately 150 per month and an average of approximately 100 per month. "Phase II construction would begin as soon as commercially feasible, likely in late 2023 and take approximately 16 months to complete for commercial operation at the beginning of 2025. Phase II construction workforce is estimated to have a peak number of workers of approximately 200 per month with an average of approximately 80 per month." Staff has the following associated questions and requests:

DATA REQUEST

40. Provide the estimated number of workers in the construction workforce by month and occupation for Phase I and Phase II of the project.

Response to Data Request 40

Detailed estimates of the number of workers by month and occupation is beyond the scope necessary for CEQA review of the project and is currently unavailable. Please see the recent FEIRs for the CA3BGF and the SJ02 which only required peak and average construction workforce numbers to support its analysis.

BACKGROUND: PROJECT CONSTRUCTION AND OPERATION WORKFORCE

Staff needs to know the assumptions used for the construction and operations workforce for the project. No assumptions were discussed in the SPPE application. Staff needs to know more about the project's operational employees. The SPPE application notes on page 37, "The total employment anticipated for the entire Trade Zone Park after full site buildout is expected to be approximately 198 (70 employees for the SVYDC and 128 for the AMB)."

DATA REQUESTS

41. Where are the project construction and operation workforce expected to be derived from: locally within the Greater Bay Area or non-locally (beyond a two-hour commute

of the project site for construction workers and one-hour commute for operation workers)?

Response to Data Request 41

Construction workers are expected to be provided by local union halls within the Greater Bay Area. Operation workers are expected to be provided locally as well.

42. What portion of the construction and operation workforce does the applicant anticipate would be local, and what portion would be non-local?

Response to Data Request 42

STACK estimates that all of the construction workforce would be local to the Bay Area. STACK estimates that all of the operation workforce would also be local to the Bay Area, with the operations workforce being largely closer to or within the City of San Jose and the South Bay Area.

43. What would be the occupations of the operational employees? Provide the number of daily shifts required for operation of the project and the average number of workers by occupation for each shift.

Response to Data Request 43

A description of the occupations of the operational employees is beyond the scope necessary for CEQA review of the project's potential impact on population and housing. Please see the recent FEIRs for the CA3BGF and the SJ02 which only required numbers of operational workers to support its analysis. STACK will operate 3 shifts 24hr x 7 days. Minimum 2 technicians to 7 operations technicians.

44. Page 5 of Section 4.11 Land Use and Planning states, "[T]he project would contribute approximately 198 jobs to the City, 125 of which would be associated with the advanced manufacturing facility and 73 of which would be associated with the data center." Please confirm the number of operational employees for the SVYDC and AMB.

Response to Data Request 44

The numbers of direct jobs are confirmed as STACK's best estimates at this time.

PROJECT DESCRIPTION

BACKGROUND: CONSTRUCTION DETAILS

Section 2.2 of the SPPE application discusses the generating facility design, operation, and construction. Sections 2.2.1 and 2.3.4 specifically mention two buildings (referred to as Olympus and Fortune Drive buildings) and mention the demolition of one of the buildings during phase one of construction. Sections 2.3.3 and 2.3.4 discuss parking and project construction, including the employees needed to complete construction.

DATA REQUESTS

45. Please clarify whether the demolition of both buildings, Olympus and Fortune Drive, will be a part of this SPPE project. Also specify the estimated timing of demolition with respect to each building, and identify the phase of construction during which the demolition will take place.

Response to Data Request 45

The Olympus Building will be demolished as part of the TPZ during the first phase of construction. The Fortune Drive Building will be demolished pursuant to a City of San Jose Permit for health and safety and reasons prior to any permits applicable to the TPZ and therefore should not be treated as part of the project for CEQA purposes.

46. Laydown areas for construction materials and construction worker parking are not mentioned. Please clarify whether all construction parking and material laydown would occur on the site. If not please provide details, the location, and a map of any off-site parking and laydown areas.

Response to Data Request 46

As discussed in Response to Data Request 26, STACK anticipates that all laydown areas and construction parking will be on-site.

BACKGROUND

The SPPE application Section 2.3 indicates that the SVYBGF would deliver electricity to SVYDC. The SVYBGF includes an onsite substation with two electrical supply lines that would connect to Pacific Gas and Electric Company (PG&E). Staff requires a complete description of the both the SVYDC interconnection to the

PG&E transmission grid and the reliability of the PG&E grid in order to understand the potential operation of the emergency backup generators.

DATA REQUESTS

47. Please provide a complete one-line diagram for the new onsite substation. Show all equipment ratings, including bay arrangement of the breakers, disconnect switches, buses, redundant transformers or equipment, etc., that would be required for interconnection of the SVYDC project.

Response to Data Request 47

One-line diagrams for SVY05, SVY06 & AMB are provided in Appendix PD DR-47.

48. Please provide a detailed description and a one-line diagram showing how the SVYDC and AMB would be connected to the onsite substation. Please label the name and voltage of the lines and feeders that connect to the onsite substation and both of the SVYDC and the AMB.

Response to Data Request 48

The AMB is not connected to the onsite substation. The AMB will be served by a PG&E Distribution circuit at 20.78 kV. The incoming PG&E feeder will be underground from the existing PG&E distribution system in the area and connected to a pad mounted transformer which will provide 480V utilization power to the AMB.

The on-site substation will be served from PG&E by a 115kV transmission line. The transmission line will be an extension of the Newark-Milpitas #2 115 kV line. The loop will come in overhead along Trade Zone Blvd and then exit the site underground in the Trade Zone right of way. On-site the transmission circuit will feed the 2 substation transformers overhead. Transformers are rated 60/80/100 MVA 65ºC, KNAN/KNAF/KNAF 115kV – 34.5kV, 10%Z. The 34.5 kV output from the transformers will be routed underground to the MV1 and MV2 Main-Tie switchboards. Switchboards are rated 38kV, 200A, 3P, 3W, 16kA, 150 kV BIL. MV1 and MV2 switchboards will be tied together via the Tie breakers in each board. Out of the 34.5 kV switchboards there will be two distribution circuit breakers on each. One breaker each from MV1/2 will be used to create a loop for SVYDC05 building through two 5 Way Switches via underground feeders. 5 Way Switches are rated 34.5 kV, 3P, 3W, 900A, 25 kAIC. The other two breakers in MV1/2 will be used to create a loop for SVYDC06 building through two 5 Way Switches via underground feeders. For each building the two 5 Way Switches will have Way 1 – Incoming feed from substation, Way 2 – Tie feed to the other switch, Way 3 – 1st floor transformer loop, Way 4 – 2nd floor transformer loop, Way 5 – 3rd floor transformer loop.

Each loop out of the 5 Way Switches will feed 35.5 kV – 480 V transformers which will provide utilization voltage at the Data Center.

One-line diagrams responsive to this request are contained in Appendix PD DR-48.

49. Please provide the conductor name, type, current carrying capacity, and the overhead conductor size for the 115 kilovolt (kV) transmission lines that connect the existing PG&E 115 kV Newark-Milpitas #2 line to the onsite substation.

Response to Data Request 49

STACK has requested this information from PG&E and will docket once received.

50. Please provide pole configurations that would support the 115 kV overhead line that would loop into the onsite substation.

Response to Data Request 50

STACK has requested this information from PG&E and will docket once received.

51. Please provide the underground cable name, type, current carrying capacity, and underground cable size for the 115 kV transmission lines that connect the existing PG&E 115 kV Newark-Milpitas #2 line to the onsite substation.

Response to Data Request 51

STACK has requested this information from PG&E and will docket once received.

52. What is the proposed AMB load?

Response to Data Request 52

The AMB load is anticipated to be 3000kVA.

53. Would one of the proposed transformers be able to support both of the SVYDC and the AMB loads when the other transformer is out?

Response to Data Request 53

No. The AMB is electrically isolated from the SVYDC and its backup generating facilities.

54. Please provide information that reviews the frequency and duration of historic outages of the Newark-Milpitas #2 115 kV line and related facilities that would likely trigger the loss of electric service to the proposed onsite substation and could lead to the emergency operations of the diesel-powered emergency backup generators. This response should identify the reliability of service historically provided by PG&E to similar customers in this part of its service territory.

Response to Data Request 54

STACK has requested this information from PG&E and will docket once received.

55. Please explain whether PG&E would need to upgrade its transmission system in order to reliably interconnect the SVYDC and AMB loads.

Response to Data Request 55

STACK has requested this information from PG&E and will docket once received.

56. Please provide the following regarding Public Safety Power Shutoff events:

    a. Would historical Public Safety Power Shutoff events have resulted in the emergency operations at the proposed SVYDC?

    b. Have there been changes to the PG&E system around the SVYDC that would affect the likelihood that future Public Safety Power Shutoff events would result in the operation of emergency backup generators at the proposed SVYDC?

Response to Data Request 56

STACK has requested this information from PG&E and will docket once received. It is important to note that STACK's operational data center located immediately to the east of the TPZ did not experience any outages during any of the PSPS events since the PSPS Program inception.

BACKGROUND

Section 4.1.2.1 page 67 of the SPPE application states that "the project would include an approximately 0.33-mile off-site aboveground 60 kV transmission line extension from the project site…"

DATA REQUEST

57. Please clarify if there would be a 60 kV transmission line that would loop into the proposed substation in addition to the two proposed 115 kV transmission lines. If yes, please provide a complete one-line diagram showing the 60 kV and 115 kV lines interconnection to the proposed onsite substation. Show all equipment ratings, including bay arrangement of the breakers, disconnect switches, buses, redundant transformers or equipment, etc., that would be required for the interconnection of the SVYDC project.

Response to Data Request 57

There is no 60kV transmission line that would loop into the proposed substation. The only transmission lines are the two 115kV transmission lines.

BACKGROUND

Page 34 in the Project Description Section 2 states that to serve the Trade Zone project, PG&E would construct a "looped" transmission interconnection involving two offsite transmission line extensions. The first extension would be supported in part on existing overhead transmission towers, located along the south side of Trade Zone Boulevard, and possibly up to three of the existing seven overhead transmission towers may need to be replaced.

DATA REQUEST

58. Please explain when a determination of if or which existing towers would need to be replaced would be known, and, if towers need to be replaced, when details about their replacement would be provided to staff.

Response to Data Request 58

STACK has requested this information from PG&E and will docket once received.

TRAFFIC AND TRANSPORTATION

BACKGROUND: CITY OF SAN JOSE VEHICLE MILES TRAVELED (VMT) EVALUATION SCREENING TOOL

Section 4.17.2.1 Transportation Project Impacts in the SPPE application, under question b discusses the project's VMT impact. The project's VMT was estimated as 13.57 per employee using the San Jose VMT Evaluation Tool and the Santa Clara County VMT Evaluation Tool. Staff reviewed the VMT findings and found that the square footage in both examples, San Jose VMT Evaluation Tool and the Santa Clara County VMT Evaluation Tool, was not inputted correctly. Square footage was inputted as 661,800 thousand square feet (KSF), which equates to more square footage than the proposed project. Staff ran both the Evaluation Tools using 662 KSF and 135 KSF and found that both reports result in a VMT estimate higher than the industrial threshold of 14.37 VMT.

DATA REQUEST

59. In consultation with the city of San Jose, please submit a transportation analysis using a VMT calculation methodology that is consistent with City Council Policy 5-1 and include proposed mitigation measures as necessary to reduce the project VMT below the industrial VMT threshold (14.37).

Response to Data Request 59

STACK has retained Hexagon Consultants to perform the required VMT analysis. Hexagon has been working with the City of San Jose to confirm an appropriate scope of work and the VMT work is underway. When completed the VMT analysis will be docketed under separate cover.

APPENDIX AIR DR-4

Vender Performance Guarantees

Standard ecoCUBE® Performance for CAT 3516E, 3MW

SCR + DPF

Flow Rate (kg/hr)	Temperature (F)	Loads	NOx Reduction	CO Reduction	VOC Reduction	**PM Reduction
4,545	672	10%	90%	60%	20%	>85%
7,144	915	25%	94%	80%	50%	>85%
15,244	974	50%	90%	80%	50%	>85%
19,422	917	75%	93%	80%	50%	>85%
22,803	901	100%	93%	80%	50%	>85%

**The DPF will provide an 85% PM reduction. Please note that if the level of PM that will result post-DPF for a given load point is less than 0.018 g/bhp-hr, the measurement will likely be within the error bars of EPA Method 5/202 (i.e. Method 5/202 will have difficulty accurately measuring this amount of PM as it is so low). As a result, measurements should be taken as per ISO method 8178-4 or 40 CFR 1065

*** Ammonia Slip will be <10 ppmvd @ 15% O2**

Standard ecoCUBE® Performance for CAT C32, 1MW

SCR + DPF

Flow Rate (kg/hr)	Temperature (F)	Loads	NOx Reduction	CO Reduction	VOC Reduction	**PM Reduction
1,990	491	10%	[2] 79%	50%		>85%
2,889	646	25%	92%	80%	50%	>85%
4,815	770	50%	92%	80%	50%	>85%
6,858	822	75%	92%	80%	50%	>85%
8,115	893	100%	90%	80%	50%	>85%

**The DPF will provide an 85% PM reduction. Please note that if the level of PM that will result post-DPF for a given load point is less than 0.018 g/bhp-hr, the measurement will likely be within the error bars of EPA Method 5/202 (i.e. Method 5/202 will have difficulty accurately measuring this amount of PM as it is so low). As a result, measurements should be taken as per ISO method 8178-4 or 40 CFR 1065

*** Ammonia Slip will be <10 ppmvd @ 15% O2**

[2] Insulation is required between the ecoCUBE and engine. Please note that the above values assume less then 10 degF of heat loss between engine turbo and ecoCUBE® SCR catalyst

APPENDIX AIR DR-16

Screening Load Analysis Results

Stack diam	area (ft2)
20	2.1816616

	T	ACFM	Vel	HS	T	Vel	Diam
	F		f3/sec	m	K	m/s	m
100	901.9	22803	174.202085	18.593	756.379	53.097	0.508
75	917.3	19421.7	148.370857	18.593	764.934	45.223	0.508
50	973.6	15244.3	116.457872	18.593	796.209	35.496	0.508
25	915.3	7143.6	54.5730833	18.593	763.823	16.634	0.508
10	665.4	4507.3	34.4332351	18.593	625.004	10.495	0.508

SO	LOCATION	SVY0501	100	POINT	597739.66	4140089.26	13.7
SO	LOCATION	SVY0501	075	POINT	597739.66	4140089.26	13.7
SO	LOCATION	SVY0501	050	POINT	597739.66	4140089.26	13.7
SO	LOCATION	SVY0501	025	POINT	597739.66	4140089.26	13.7
SO	LOCATION	SVY0501	010	POINT	597739.66	4140089.26	13.7
SO	LOCATION	SVY0601	100	POINT	597748.57	4140053.03	13.7
SO	LOCATION	SVY0601	075	POINT	597748.57	4140053.03	13.7
SO	LOCATION	SVY0601	050	POINT	597748.57	4140053.03	13.7
SO	LOCATION	SVY0601	025	POINT	597748.57	4140053.03	13.7
SO	LOCATION	SVY0601	010	POINT	597748.57	4140053.03	13.7

SO	SRCPARAM	SVY0501	100	1.0000	18.593	756.379	53.097	0.508
SO	SRCPARAM	SVY0501	075	1.0000	18.593	764.934	45.223	0.508
SO	SRCPARAM	SVY0501	050	1.0000	18.593	796.209	35.496	0.508
SO	SRCPARAM	SVY0501	025	1.0000	18.593	763.823	16.634	0.508
SO	SRCPARAM	SVY0501	010	1.0000	18.593	625.004	10.495	0.508
SO	SRCPARAM	SVY0601	100	1.0000	18.593	756.379	53.097	0.508
SO	SRCPARAM	SVY0601	075	1.0000	18.593	764.934	45.223	0.508
SO	SRCPARAM	SVY0601	050	1.0000	18.593	796.209	35.496	0.508
SO	SRCPARAM	SVY0601	025	1.0000	18.593	763.823	16.634	0.508
SO	SRCPARAM	SVY0601	010	1.0000	18.593	625.004	10.495	0.508

SVY0517S	163.80599		SVY0517S	145.23186		SVY0517S	117.84417		SVY0517S	58.28485
SVY0508S	192.09439		SVY0516S	155.63493		SVY0505S	131.93429		SVY0505S	62.37627
SVY0516S	193.33007		SVY0507S	159.71628		SVY0512S	135.85523		SVY0515S	65.73157
SVY0511S	206.53478		SVY0515S	163.1753		SVY0511S	138.73421		SVY0516S	66.10753
SVY0512S	211.15167		SVY0514S	166.03645		SVY0516S	139.92444		SVY0512S	66.62667
SVY0515S	215.66959		SVY0508S	168.57628		SVY0515S	141.28012		SVY0511S	67.29188
SVY0510S	217.86967		SVY0512S	168.74907		SVY0507S	144.0097		SVY0508S	67.31817
SVY0503S	221.79101		SVY0511S	173.60943		SVY0506S	144.7503		SVY0507S	68.33945
SVY0509S	231.11741		SVY0505S	174.11589		SVY0514S	145.50146		SVY0506S	68.52151
SVY0505S	236.75418		SVY0513S	174.90312		SVY0508S	147.8474		SVY0514S	68.78665
SVY0507S	238.33682		SVY0506S	184.91144		SVY0513S	147.92936		SVY0513S	70.29289
SVY0513S	248.22477		SVY0503S	187.45609		SVY0504S	151.86614		SVY0504S	72.24499
SVY0502S	248.53871		SVY0504S	188.11723		SVY0510S	168.40586		SVY0510S	72.7192
SVY0504S	256.91434		SVY0510S	188.67574		SVY0503S	172.98034		SVY0503S	78.68555
SVY0514S	280.1219		SVY0509S	197.2487		SVY0509S	186.59113		SVY0509S	85.64239
SVY0501S	286.87082		SVY0502S	209.84689		SVY0502S	198.71849		SVY0502S	87.84045
SVY0506S	288.19235		SVY0501S	271.60009		SVY0501S	207.35401		SVY0501S	99.28894

SVY0607S	170.2551		SVY0610S	140.26804		SVY0621S	113.2948			
SVY0606S	177.67993		SVY0621S	146.21912		SVY0610S	129.42859		SVY0610S	63.84786
SVY0621S	183.31394		VY0609S	146.994		SVY0609S	136.54287		VY0609S	67.70506
SVY0617S	186.51769		SVY0608S	157.44977		SVY0608S	145.16333		SVY0605S	68.00435
SVY0605S	186.65272		SVY0620S	159.81322		SVY0620S	147.43049		SVY0604S	70.73106
SVY0618S	186.75019		SVY0607S	166.112		SVY0607S	152.35772		SVY0608S	71.90241
SVY0616S	191.16987		SVY0619S	168.04744		SVY0605S	155.52132		SVY0603S	72.33944
SVY0604S	194.1226		SVY0606S	172.61543		SVY0606S	157.23249		SVY0620S	72.5363
SVY0615S	194.6664		SVY0618S	174.70652		SVY0619S	160.28373		SVY0615S	72.81823
SVY0614S	198.54533		SVY0605S	180.93193		SVY0618S	160.72661		SVY0614S	75.2223
SVY0603S	200.63697		SVY0617S	182.52172		SVY0604S	162.17617		SVY0607S	75.47386
SVY0613S	200.69306		SVY0616S	187.14084		SVY0615S	165.0148		SVY0619S	76.30365
SVY0612S	203.72419		SVY0604S	189.07191		SVY0617S	165.81107		SVY0606S	77.03863
SVY0602S	205.35574		SVY0615S	189.32227		SVY0603S	166.25153		SVY0618S	79.54235
SVY0620S	212.30697		SVY0614S	193.30971		SVY0614S	166.25521		SVY0612S	81.42747
SVY0610S	212.50521		SVY0611S	194.12129		SVY0616S	168.76608		SVY0611S	81.43818
SVY0601S	223.93212		SVY0613S	196.05113		SVY0611S	180.97992		SVY0617S	81.92411
SVY0619S	224.58706		SVY0603S	196.62515		SVY0612S	185.09567		SVY0613S	81.96573
VY0609S	227.36876		SVY0612S	196.90464		SVY0613S	186.5846		SVY0616S	83.06919
SVY0611S	229.19738		SVY0602S	200.07868		SVY0601S	187.2449		SVY0602S	83.96743
SVY0608S	234.46663		SVY0601S	201.28003		SVY0602S	187.57716		SVY0601S	84.3204

SV05

NO2

	1-HR	3-HR	8-HR	24-HR
100	94.647	'	'	'
75	88.314	'	'	'
50	68.529	'	'	'
25	52.600	'	'	'
10	31.383	'	'	'

CO

	1-HR	3-HR	8-HR	24-HR
100	94.647	'	68.310	'
75	88.314	'	63.012	'
50	68.529	'	48.032	'
25	52.600	'	35.885	'
10	0.000	'	0.000	'

PM

	1-HR	3-HR	8-HR	24-HR
100	'	'	'	0.978
75	'	'	'	0.900
50	'	'	'	0.728
25	'	'	'	0.512
10	'	'	'	0.278

SV06

NO2

	1-HR	3-HR	8-HR	24-HR
100	73.234	'	'	'
75	69.543	'	'	'
50	46.222	'	'	'
25	33.605	'	'	'
10	19.931	'	'	'

CO

	1-HR	3-HR	8-HR	24-HR
100	73.234	'	61.494	'
75	69.543	'	54.541	'
50	46.222	'	41.796	'
25	33.605	'	28.108	'
10	0.000	'	0.000	'

PM

	1-HR	3-HR	8-HR	24-HR
100	'	'	'	0.832
75	'	'	'	0.746
50	'	'	'	0.564
25	'	'	'	0.390
10	'	'	'	0.235

HP	4023	3347	2294	1236	590
Load %	100	75	50	25	10
	g/bhp	lb/hr	lb/hr	lb/hr	lb/hr
NO2	0.5	0.5	0.5	0.5	0.5
CO	0.5	0.5	0.5	0.5	0.5
Particulate	0.015	0.015	0.015	0.015	0.015

	NO2	CO	Particulate
	g/s	g/s	g/s
100	0.5588	0.5588	0.0168
75	0.4649	0.4649	0.0139
50	0.3186	0.3186	0.0096
25	0.1717	0.1717	0.0052
10	0.0819	0.0000	0.0025

1-HR

S0501100	HIGH	1ST	HIGH	VALUE	IS	169.39113
S0501075	HIGH	1ST	HIGH	VALUE	IS	189.97888
S0501050	HIGH	1ST	HIGH	VALUE	IS	215.08676
S0501025	HIGH	1ST	HIGH	VALUE	IS	306.40681
S0501010	HIGH	1ST	HIGH	VALUE	IS	382.973
S0601100	HIGH	1ST	HIGH	VALUE	IS	131.06757
S0601075	HIGH	1ST	HIGH	VALUE	IS	149.59962
S0601050	HIGH	1ST	HIGH	VALUE	IS	145.0742
S0601025	HIGH	1ST	HIGH	VALUE	IS	195.75872
S0601010	HIGH	1ST	HIGH	VALUE	IS	243.2272

3-HR

S0501100	HIGH	1ST	HIGH	VALUE	IS	159.707
S0501075	HIGH	1ST	HIGH	VALUE	IS	175.84161
S0501050	HIGH	1ST	HIGH	VALUE	IS	203.15647
S0501025	HIGH	1ST	HIGH	VALUE	IS	282.31854
S0501010	HIGH	1ST	HIGH	VALUE	IS	329.16629
S0601100	HIGH	1ST	HIGH	VALUE	IS	118.51233
S0601075	HIGH	1ST	HIGH	VALUE	IS	126.54627
S0601050	HIGH	1ST	HIGH	VALUE	IS	141.14153
S0601025	HIGH	1ST	HIGH	VALUE	IS	190.33918
S0601010	HIGH	1ST	HIGH	VALUE	IS	229.08055

8-HR

S0501100	HIGH	1ST	HIGH	VALUE	IS	122.25546
S0501075	HIGH	1ST	HIGH	VALUE	IS	135.5512
S0501050	HIGH	1ST	HIGH	VALUE	IS	150.75383
S0501025	HIGH	1ST	HIGH	VALUE	IS	209.03824
S0501010	HIGH	1ST	HIGH	VALUE	IS	251.87185
S0601100	HIGH	1ST	HIGH	VALUE	IS	110.05593
S0601075	HIGH	1ST	HIGH	VALUE	IS	117.32804
S0601050	HIGH	1ST	HIGH	VALUE	IS	131.18112
S0601025	HIGH	1ST	HIGH	VALUE	IS	163.73815
S0601010	HIGH	1ST	HIGH	VALUE	IS	197.18725

24-HR

S0501100	HIGH	1ST	HIGH	VALUE	IS	58.36357
S0501075	HIGH	1ST	HIGH	VALUE	IS	64.56198
S0501050	HIGH	1ST	HIGH	VALUE	IS	76.15563
S0501025	HIGH	1ST	HIGH	VALUE	IS	99.38924
S0501010	HIGH	1ST	HIGH	VALUE	IS	112.99035
S0601100	HIGH	1ST	HIGH	VALUE	IS	49.62168
S0601075	HIGH	1ST	HIGH	VALUE	IS	53.52166
S0601050	HIGH	1ST	HIGH	VALUE	IS	58.95857
S0601025	HIGH	1ST	HIGH	VALUE	IS	75.80499
S0601010	HIGH	1ST	HIGH	VALUE	IS	95.68859

APPENDIX AIR DR-17

Parapet Wall Diagram


ADVANCED MANUFACTURING
84'
RINGWOOD AVE.
SUBSTATION
PARKING GARAGE
56'
SVY 05
84'
53'
100'
53'
100'
SVY 06
84'
FORTUNE DR.
CHILLER
CHILLER PLATFORM
ROOF BELOW
TOP GEN STACK LOCATION
UPPER GEN PLATFORM
4140200
4140150
4140100
4140050
4140000
4139950
597700
597750
597800
597850
597900
UTM Northing (NAD 1983, Zone 10)
UTM Easting (NAD 1983, Zone 10)

APPENDIX AIR DR-18

Construction Equipment Types Stack Parameters Survey

Construction Equipment Stack Height Data Survey conducted by ADI.
Mfg website data: 7-5-11 through 7-6-11.

	Equipment Type	Model #	Stk Height Ft. AGL	Stk Diam inches*	Exh Temp > 700 F
Caterpillar					
	Backhoe	416E	9	4	Yes
	Soil Compactor	825H	12	6	Yes
	Hydraulic Excavator	321D	9.75	6	Yes
	Industrial Loader	414E	9	4	Yes
	Motor Grader	14M	10.7	6	Yes
	Off-Hwy Truck	770	10.33	6	Yes
	Asphalt Paver	AP500E	12.6	6	Yes
	Small Track Loader	953D	9.13	4	Yes
	Large Track Loader	973D	9.9	6	Yes
	Medium Wheel Dozer	814F	10.92	4	Yes
	Large Wheel Dozer	844H	15.5	6	Yes
	Wheeled Excavator	M316D	6.25	6	Yes
	Mid Size Wheel Loader	962H	11.08	4	Yes
	Large Wheel Loader		13.42	6	Yes
	Wheel Scraper	623G	11.23	6	Yes
	Forklift	15000 lbs	7.94	6	Yes
	Articulated Truck		13.1	6	Yes
	Track Dozer	D7E	11	6	Yes
	Track Dozer	D8T	11.25	6	Yes
	Track Dozer	D9T	13	6	Yes
	Track Dozer	D10T	14.78	6	Yes
Komatsu					
	Grader	GD555-3	10.16	6	Yes
	Backhoe	WB156PS-5	9.67	6	Yes
	Frontend Loader		10.7	6	Yes
	Excavator	PC200LC-8HD	9	6	Yes
	Track Dozer	D65EX-16	10.16	6	Yes
	Scraper	WS162-2	9.9	6	Yes
	Forklift (15000 lbs Cap)	DX50	8	4	Yes
Case					
	Med Track Dozer	650L	8.5	6	Yes
	Lrg Track Dozer	1850K	10.42	6	Yes
	Track Excavator	CX350C	9.14	4	Yes
	Track Excavator	CX700B	11	6	Yes
	Backhoe	580M	8.5	4	Yes
	Motor Grader	865B VHP	10.6	6	Yes
	Med Wheel Loader	721E	10	6	Yes
	Lrg Wheel Loader	1221E	12.25	6	Yes
	Articulated Truck	335B	12.25	6	Yes
	Compactor	PT240	10	4	Yes
	Rough Terrain Forklift	TX842	7.1	4	Yes

Hitachi					
	Med Track Excavator	2X200LC-3	7.9	4	Yes
	Lrg Track Excavator	350LC-5	9.7	6	Yes
	Wheel Excavator	190W-3	7.83	4	Yes
Deere					
	Med Motor Grader	672 GP	10.16	4	Yes
	Med Class Excavator	290G-LC	9.44	4	Yes
	Lrg Class Excavator	450D-LC	11.54	6	Yes
	Med Track Dozer	850K, WT	10.33	6	Yes
	Lrg Track Dozer	950J-WH	11.2	6	Yes
	Scraper Puller Tractor	9430	11.3	6	Yes
Terex					
	Small Wheel Crane	AC-40	7.2	4	Yes
	All Terrain Crane	AC 80-2	10.24	4	Yes
	Med Crawler Crane	TCC 60	9.5	6	Yes
	Lrg Crawler Crane	CC2000-10	10.32	6	Yes
	Avg Exhaust Stack Ht AGL (Ft):		10.3		
	(m):		3.14		

The average stack diameter is calculated at 5.4". For modeling purposes use an overall stack diameter of 6" as stack piping materials are typically not supplied at 5.4" diameters.

Notes:

This survey was conducted by AEROWEST to gather data for modeling purposes for construction site equipment used on large commerical and industrial construction projects, such a power plant construction, t-line projects, etc.

1. It was not the intent of the survey to include every piece of equipment from a certain mfg, but rather to include those pieces which would be expected to be used in the types of construction projects noted above.
2. The predominant equipment mfg's were Caterpillar, Komatsu, Case, Hitachi, and Deere.
3. Hitachi equipment was limited to excavators, as this is their main product line.
4. Only a small sample of engines were researched to get data on exhaust exit temperatures, but this data showed that all the engines had exhaust temps well above the default value of 700 deg F.
5. Bucyrus-Erie (now owned by CAT), does not make construction type equipment but rather large mining type of machines.
6. All of the inventoried models are diesel powered.
7. Virutally all of the mfg's had brochures/spec sheets on past models. Some of these were consulted to see if stack heights changed significantly when compared to newer models. The comparison showed little difference in overall average stack heights.
8. Terex cranes were used as they had a wide range of crane types and sizes which were assumed to be representative of the overall crane population.

AEROWEST assumes no liability, in any form, for the use of the data in the survey.

APPENDIX BIO DR-25

Gerry Haas, Program Manager, Santa Clara Valley Habitat Agency. Email Communication. December 12, 2017

Michael Lisenbee

From: Gerry Haas <gerry.haas@scv-habitatagency.org>
Sent: Tuesday, December 12, 2017 11:24 AM
To: Stan Ketchum
Cc: Michael Lisenbee; Edmund Sullivan
Subject: RE: Olam Foods Processing Equipment Initial Study discussion of nitrogen deposition & SCVHP

Follow Up Flag: Follow up
Flag Status: Flagged

Hi Stan,

Yes, the wording below is what I expected to see after I had spoken to Mike about it. The conclusion of LTS will likely be sufficient, and I don't see much risk in relying on it. However, a challenging entity could point out that, without an actual payment of fees, the impacts may not really be mitigated by the project. Clearly, the complication here is that the project generates neither new vehicle trips nor new residences. Those are the only two metrics we can use to arrive at a standard Nitrogen Fee. In fact, Chapter 9 prevents us from assessing nitrogen fees on industry per the following:

"While nitrogen emissions come from a variety of sources that include vehicles, it is not feasible at this time to charge a fee on major non-vehicle sources of nitrogen (e.g., point sources such as new power plants and industry)."

Mike and I discussed that a project-specific NOx emission figure generated through the CalEEMod analysis could be calculated to arrive at an appropriate Nitrogen Fee. The inclusion of a fee would support the LTS conclusion and make the document more defensible. However, that would be a voluntary action by the applicant, should they chose that route.

I'm happy to talk further on this if you would like.

Gerry Haas

Principal Planner
Santa Clara Valley Habitat Agency
669-253-6127
www.scv-habitatagency.org

From: Stan Ketchum [mailto:Stan.Ketchum@ci.gilroy.ca.us]
Sent: Thursday, December 07, 2017 1:29 PM
To: Gerry Haas <gerry.haas@scv-habitatagency.org>

Cc: Michael Lisenbee (mlisenbee@davidjpowers.com) <mlisenbee@davidjpowers.com>
Subject: Olam Foods Processing Equipment Initial Study discussion of nitrogen deposition & SCVHP

Hi, Gerry. I believe that Michael Lisenbee at David J. Powers & Assoc. has had a preliminary discussion with you about our Olam Foods project that is converting from steam power to natural gas power to operate their food dryers. The Initial Study identified the issue of an increase in nitrogen oxide emissions from the increased natural gas consumption. I wanted to share with you the content (see below) we are including in our Initial Study regarding this issue and to ask if you have any concerns or questions. Michael and I would be happy to discuss. I am off tomorrow and back either Monday or Tuesday. Let me know if you want to chat and I'll coordinate with Michael and we'll get back to you to set a time. Thanks, Stan

Santa Clara Valley Habitat Plan/Natural Community Conservation Plan

The Santa Clara Valley Habitat Plan/Natural Community Conservation Plan (SCVHP) covers an area of 519,506 acres, or approximately 62 percent of Santa Clara County. It was developed and adopted through a partnership between Santa Clara County, the Cities of San José, Morgan Hill, and Gilroy, Santa Clara Valley Water District (SCVWD), Santa Clara Valley Transportation Authority (VTA), US Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW). The SCVHP is intended to promote the recovery of endangered species and enhance ecological diversity and function, while accommodating planned growth in approximately 500,000 acres of southern Santa Clara County. The Santa Clara Valley Habitat Agency is responsible for implementing the plan.

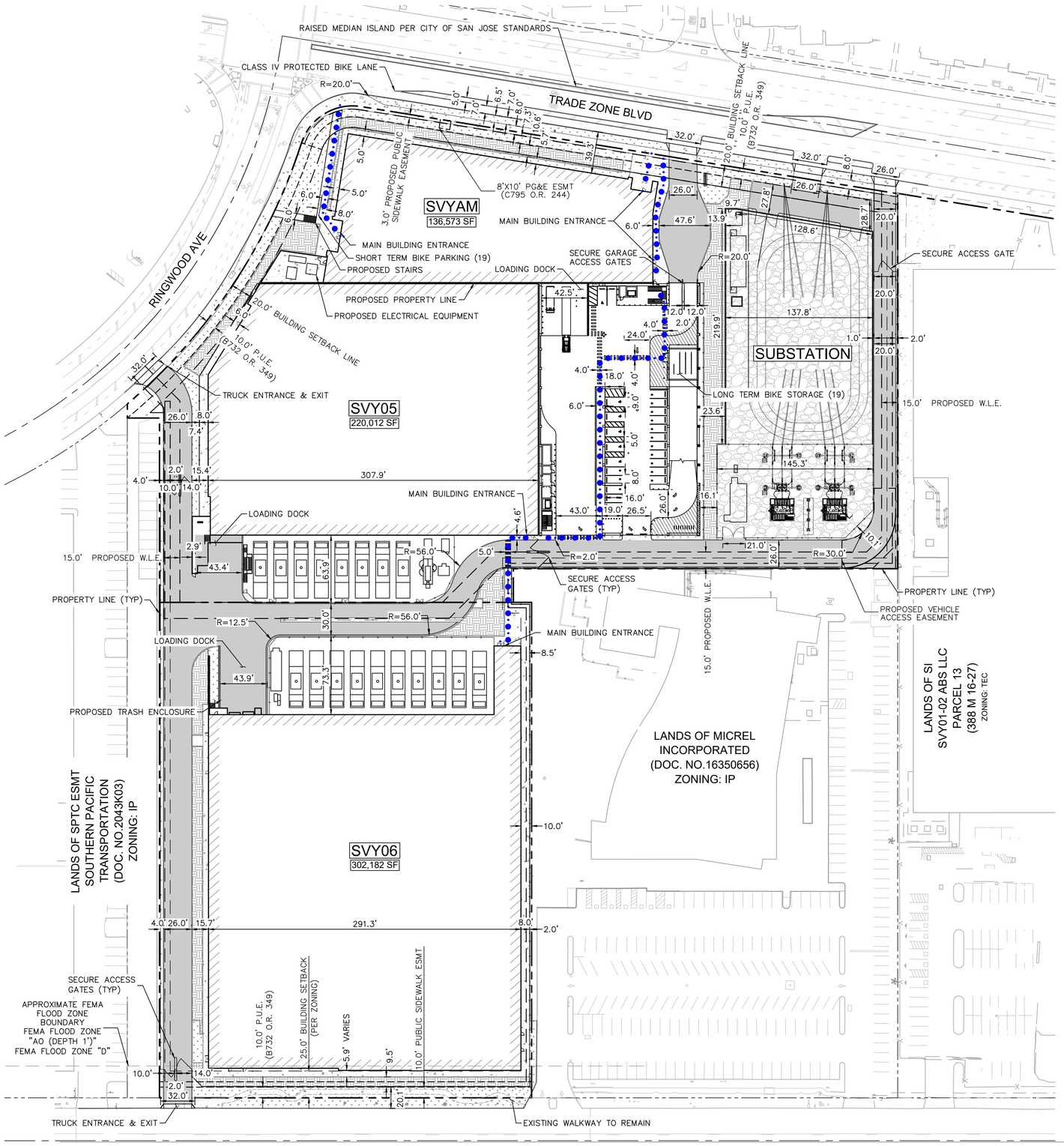
Although the project would not include physical development or an increase in vehicle trips, the increase in natural gas consumption proposed by the project would result in an increase in nitrogen oxides (NOx) emissions from the site of up to 10 tons per year (refer to Section 4.3 Air Quality). A certain amount of airborne nitrogen is converted into forms that fall to earth as depositional nitrogen. Increased nitrogen in serpentine soils has been shown to favor the growth of nonnative annual grasses over native serpentine species. Invasive non-native species, if left unmanaged, have the potential to overtake the native serpentine species, which are host plants for larval bay checkerspot butterfly.

The contribution of nitrogen deposition to impacts on serpentine habitat in Santa Clara County was estimated as a part of the development of the SCVHP. The SCVHP accounts for both the existing and future indirect impacts of nitrogen deposition from all sources (i.e. stationary, industrial, mobile etc.), both inside and outside the SCVHP area. The SCVHP identifies measures to conserve and manage serpentine habitat areas over the term of the SCVHP. These measures are funded through the collection of nitrogen deposition fees from all projects generating mobile source emissions (i.e. new vehicle trips). Through collection of mobile source emission fees and implementation of conservation and management measures, cumulative impacts to serpentine habitat and associated special-status species are reduced to a less than significant level.

Although the proposed project is considered a covered project under the SCVHP, the SCVHP does not require stationary/industrial sources such as the project to pay the nitrogen deposition impact fee. As described previously, however, the SCVHP conservation strategies for serpentine habitats account for nitrogen deposition from all sources, including stationary sources such as the proposed project. Through collection of nitrogen deposition fees by Gilroy and other local partners from mobile source projects within the SCVHP area, nitrogen deposition impacts from all sources are reduced by the Habitat Agency's conservation activities, including managed grazing programs on serpentine soils, to a less than significant level. Project implementation, therefore, would not result in significant impacts to special status species or habitat, nor would it conflict with the SCVHP. (Less Than Significant Impact).

APPENDIX GHG DR-34

Revised Site Drawings



PROPOSED PROPERTY INFORMATION

ADDRESS: NORTH OF FORTUNE DR. LOCATED AT THE CORNER OF RINGWOOD AVE & TRADE ZONE BLVD.
APN: 224-17-009
PROJECT SIZE: ±9.78 AC
ZONING: INDUSTRIAL PARK (IP)

SVY05 SF: 136,573 SF
SVY06 SF: 220,012 SF
SVYAM SF: 302,182 SF

PROPOSED NUMBER OF DWELLING UNITS: 0
PROPOSED RESIDENTIAL DENSITY: 0 UNITS / ACRE

CALGREEN PARKING REQUIREMENTS

STALL TYPE	REQUIRED	PROVIDED
EV STANDARD ADA STALL	1	1
EV AMBULATORY ADA STALL	1	1
EV VAN ACCESSIBLE STALL	1	1
EV STALL	34	37
CLEAN AIR/VANPOOL STALL/EV STALL	41	44
SHORT TERM BIKE PARKING	19	19
LONG TERM BIKE PARKING	19	19

SEE ARCHITECTURAL PARKING GARAGE PLANS FOR DETAILS

CALIFORNIA BUILDING CODE PARKING REQUIREMENTS

STALL TYPE	REQUIRED	PROVIDED
STANDARD ACCESSIBLE	6	8
VAN ACCESSIBLE	2	2
TOTAL	8	10

LEGEND

- PROPERTY LINE
- CENTER LINE
- EASEMENT LINE
- SETBACK LINE
- PROPOSED FENCE
- ADA PATH OF TRAVEL
- PROPOSED BUILDING
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED STRIPING
- PROPOSED FLOW THROUGH PLANTER
- PROPOSED GRAVEL

SVYAM - PARKING SUMMARY

OCCUPANCY TYPE	REQUIRED PARKING RATIO	REQUIRED PARKING STALLS	PROPOSED PARKING RATIO	PROPOSED PARKING STALLS
MANUFACTURING	1 STALL / 350 SF + 1 STALL / COMPANY VEHICLE	377	1 / 500 SF	239

SVY05 - PARKING SUMMARY

OCCUPANCY TYPE	REQUIRED PARKING RATIO	REQUIRED PARKING STALLS	PROPOSED PARKING RATIO	PROPOSED PARKING STALLS
DATA CENTER	1 STALL / 250 SF OFFICE/MEETING/TECHNICIAN SPACE	62	50 STALLS / DATA CENTER	50
	1 STALL / 5000 SF FLOOR AREA FOR COMPUTER EQUIPMENT SPACE	7		

SVY06 - PARKING SUMMARY

OCCUPANCY TYPE	REQUIRED PARKING RATIO	REQUIRED PARKING STALLS	PROPOSED PARKING RATIO	PROPOSED PARKING STALLS
DATA CENTER	1 STALL / 250 SF OFFICE/MEETING/TECHNICIAN SPACE	55	50 STALLS / DATA CENTER	50
	1 STALL / 5000 SF FLOOR AREA FOR COMPUTER EQUIPMENT SPACE	12		

TOTAL PROPOSED PARKING: 339

PARKING NOTE

SEE SHEET 3.2 COMPREHENSIVE SITE PLAN FOR PROPOSED PARKING GARAGE FLOOR LAYOUTS.

PROPOSED OFFSITE IMPROVEMENTS

CONSTRUCT 15' DETACHED SIDEWALK WITH CURB, GUTTER, 6.5' PARKSTRIP, AND 8' SIDEWALK ALONG TRADE ZONE BOULEVARD FRONTAGE.

CONSTRUCT 10' ATTACHED SIDEWALK WITH CURB AND GUTTER AND TREE WELLS AT THE BACK OF CURB ALONG RINGWOOD AVENUE.

NO OFFSITE IMPROVEMENTS ARE TO BE MADE ALONG FORTUNE DRIVE.

SEE SHEETS 4.3-4.5 FOR TYPICAL FRONTAGE SECTIONS

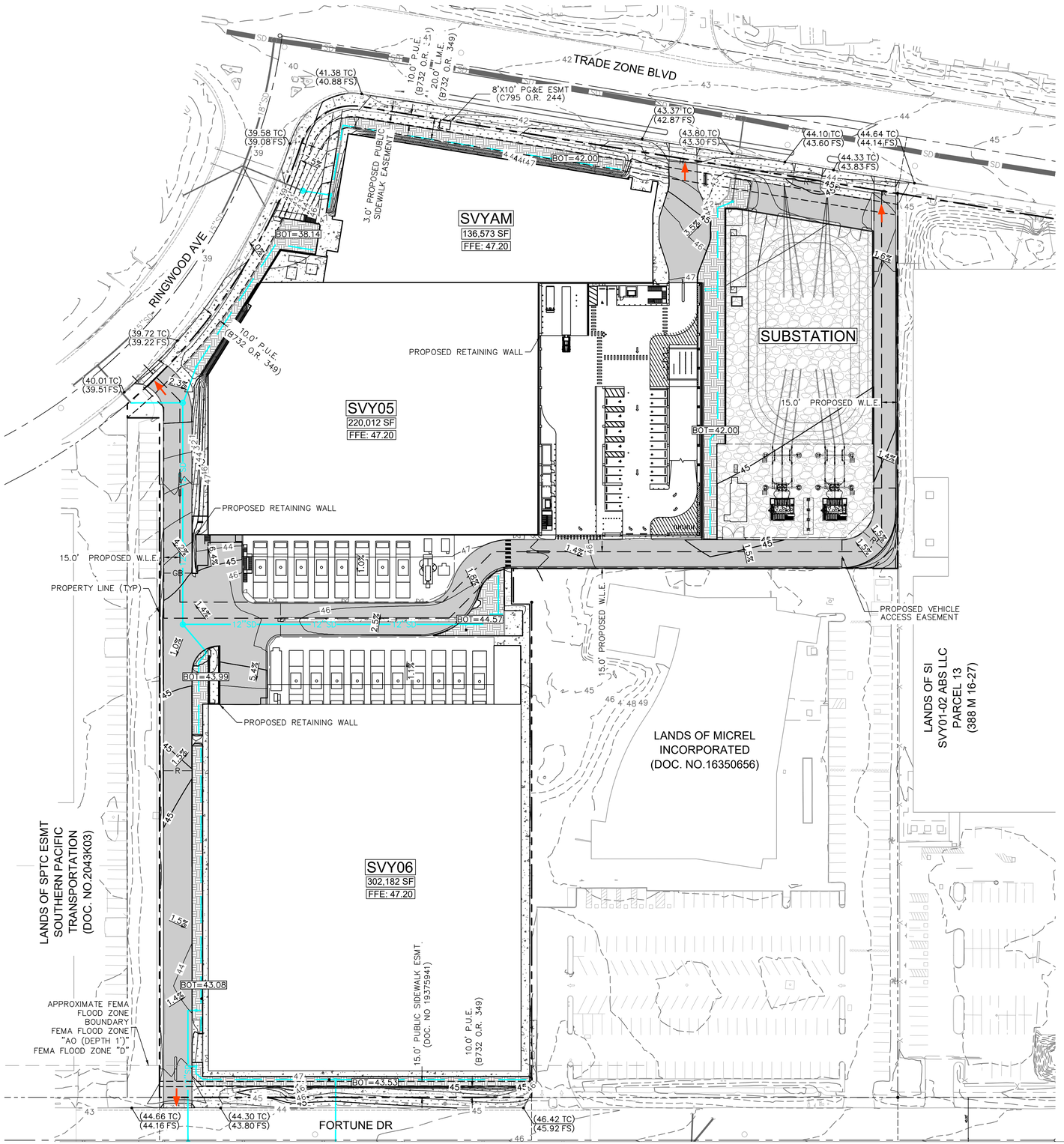
PROPOSED SITE COVERAGE

COVERAGE TYPE	PERCENTAGE
BUILDING	48.0%
PARKING	8.2%
LANDSCAPING	7.7%
OTHER HARDSCAPE	36.1%
TOTAL	100.0%

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

3.1 - COMPREHENSIVE PROPOSED SITE PLAN



LEGEND

	PROPERTY LINE
	EASEMENT/SETBACK LINE
R R R R	RIDGE LINE
GB GB GB	GRADE BREAK LINE
	FLOW LINE
SD	STORM DRAIN LINE
	PERFORATED PIPE
LP	LOW POINT
HP	HIGH POINT
BSM	BIO-SOIL MIX
■	DROP INLET
	ULTIMATE OVERLAND RELEASE
X	PROPOSED CONTOUR
X	EXISTING CONTOUR
	PROPOSED LANDSCAPING
	PROPOSED CONCRETE
	PROPOSED ASPHALT
	PROPOSED STRIPING
	PROPOSED FLOW THROUGH PLANTER
	PROPOSED GRAVEL

FEMA FLOODPLAIN NOTE

CITY OF SAN JOSE REQUIRES NEW BUILDINGS WITHIN FEMA FLOODPLAIN AO TO BE RAISED 1' ABOVE THE EXISTING CONDITION HIGHEST ADJACENT GRADE. EXISTING HIGHEST ADJACENT GRADE IS ±46.2'. PROPOSED BUILDING FFE WILL BE 47.2'.

LANDSCAPING NOTE

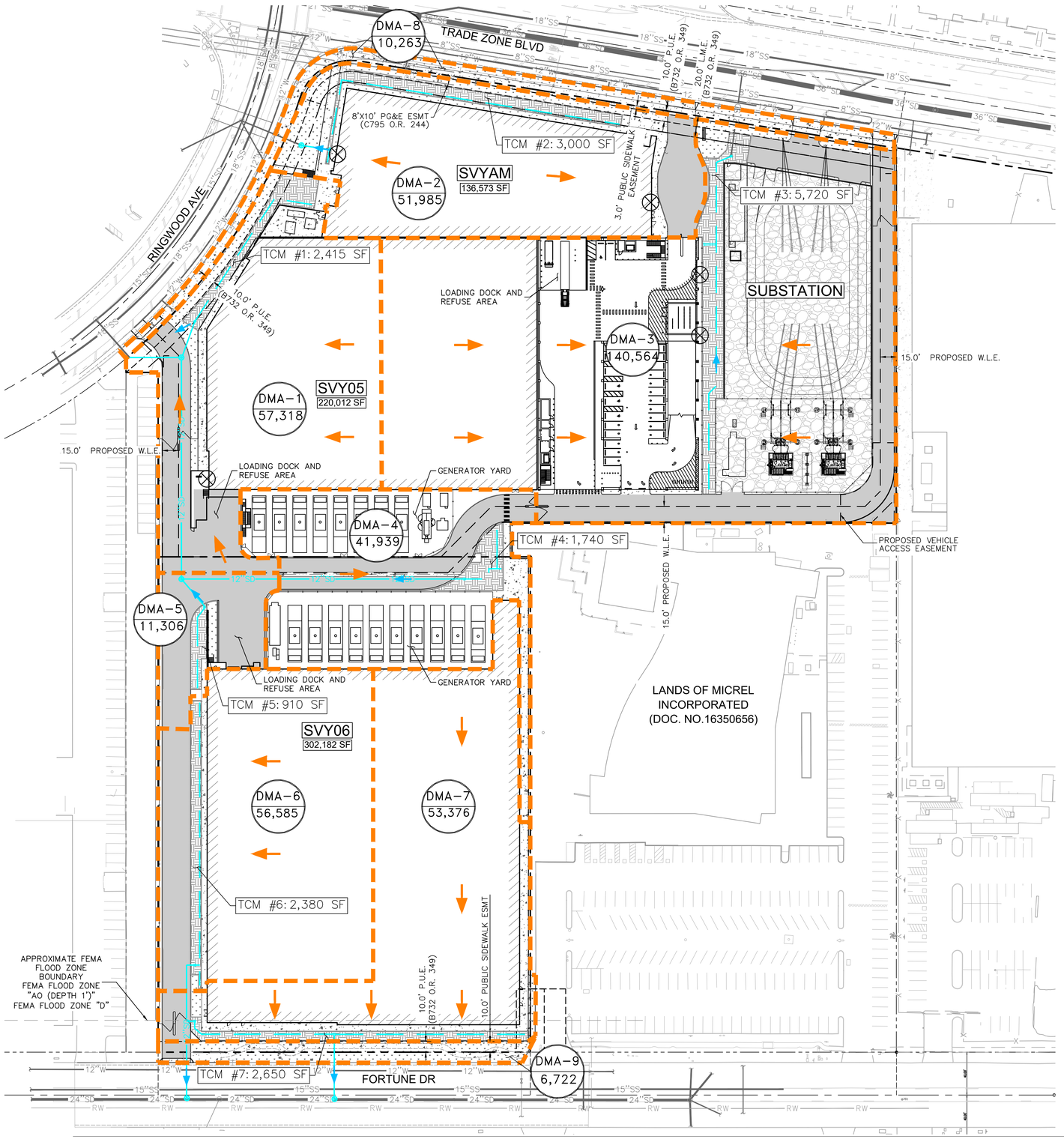
SEE SHEET 10.0 FOR ALL EXISTING AND PROPOSED LANDSCAPING AND TREE REMOVAL.

GRAPHIC SCALE IN FEET
0 25 50 100
NORTH

4.0 - GRADING AND DRAINAGE PLAN

STACK INFRASTRUCTURE | SKS | Kimley»Horn Expect More. Experience Better.

kw mission critical engineering | PARADIGM structural engineers | CORGAN



LEGEND

- PROPERTY LINE
- CENTER LINE
- EASEMENT LINE
- SETBACK LINE
- PROPOSED FENCE
- PROPOSED BUILDING
- PROPOSED LANDSCAPING
- PROPOSED CONCRETE
- PROPOSED ASPHALT
- PROPOSED STRIPING
- PROPOSED FLOW THROUGH PLANTER
- PROPOSED GRAVEL
- DMA-1 / 100 — DENOTES DMA DESIGNATION
- DENOTES DRAINAGE AREA IN S.F.
- DENOTES DRAINAGE MANAGEMENT AREA (DMA) BOUNDARY
- PROPOSED BIORETENTION AREA
- PROPOSED PIPE SLOPE DIRECTION
- PROPOSED SURFACE FLOW DIRECTION
- X" SD — PROPOSED STORM DRAIN LINE
- X" SD — EXISTING STORM DRAIN LINE
- ST — SELF TREATING AREA
- APPROXIMATE ROOF DOWNSPOUT LOCATION

EARTHWORK

CUT:	7,136 CY
FILL:	19,091 CY
NET:	11,955 CY (FILL)

THE ABOVE QUANTITIES ARE APPROXIMATE IN PLACE VOLUMES CALCULATED FROM THE EXISTING GROUND TO THE PROPOSED FINISHED GRADE. EXISTING GROUND IS DEFINED BY THE CONTOURS AND SPOT GRADES ON THE BASE SURVEY. PROPOSED FINISHED GRADE IS DEFINED AS THE FINAL GRADE AS INDICATED ON THE GRADING PLAN(S).

THE EARTHWORK QUANTITIES ABOVE ARE FOR PERMIT PURPOSES ONLY. THEY HAVE NOT BEEN FACTORED TO ACCOUNT FOR CHANGES IN VOLUME DUE TO BULKING, CLEARING AND GRUBBING, SHRINKAGE, OVER- EXCAVATION AND RE-COMPACTION, AND CONSTRUCTION METHODS. NOR DO THEY ACCOUNT FOR THE THICKNESS OF PAVEMENT SECTIONS, FOOTINGS, SLABS, REUSE OF PULVERIZED MATERIALS THAT WILL UNDERLIE NEW PAVEMENTS, ETC. THE CONTRACTOR SHALL RELY ON THEIR OWN EARTHWORK ESTIMATES FOR BIDDING PURPOSES.

HYDROMODIFICATION APPLICABILITY

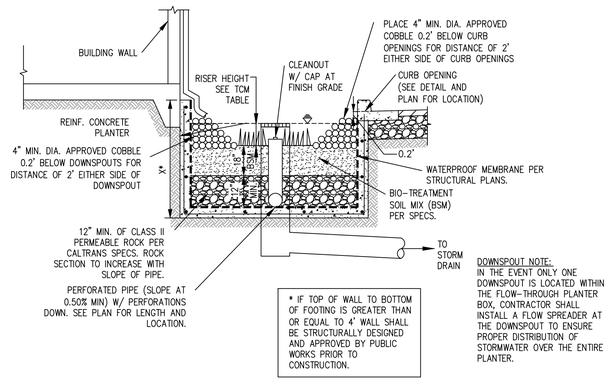
1. PER THE HYDROMODIFICATION MANAGEMENT PLAN (HMP) APPLICABILITY MAP FOR THE CITY OF SAN JOSE, THIS PROJECT IS NOT IN THE AREA CONSIDERED "SUBWATERSHEDS LESS THAN 65% IMPERVIOUS" THEREFORE HYDROMODIFICFICATION IS NOT REQUIRED FOR THIS PROJECT.

IMPERVIOUS VS PERVIOUS AREA

	TOTAL PROPERTY AREA (SF)	PERVIOUS AREA (SF)	IMPERVIOUS AREA (SF)	PERCENT PERVIOUS
EXISTING	430,129	84,807	345,322	19.72%
PROPOSED	430,129	37,780	392,349	8.78%

DMA SURFACE BREAKDOWN

DMA #	TOTAL AREA (SF)	IMPERVIOUS AREA (SF)	ROOFTOP AREA (SF)	SIDEWALK (SF)	STREET (SF)	OTHER HARDSCAPE
DMA-1	57,389	52,289	36,000	1,860	13,029	1,400
DMA-2	51,985	42,135	34,200	2,995	4,000	940
DMA-3	140,564	132,764	68,500	978	19,356	43,930
DMA-4	41,939	40,339	0	3,186	7,244	29,909
DMA-5	11,306	9,906	0	0	9,906	0
DMA-6	56,585	54,205	46,250	1,540	6,415	0
DMA-7	53,376	52,674	48,008	2,600	2,066	0
DMA-8	10,263	7,463	0	7,463	0	0
DMA-9	6,722	574	0	270	304	0
TOTAL	430,129	392,349	232,958	20892	62320	76179



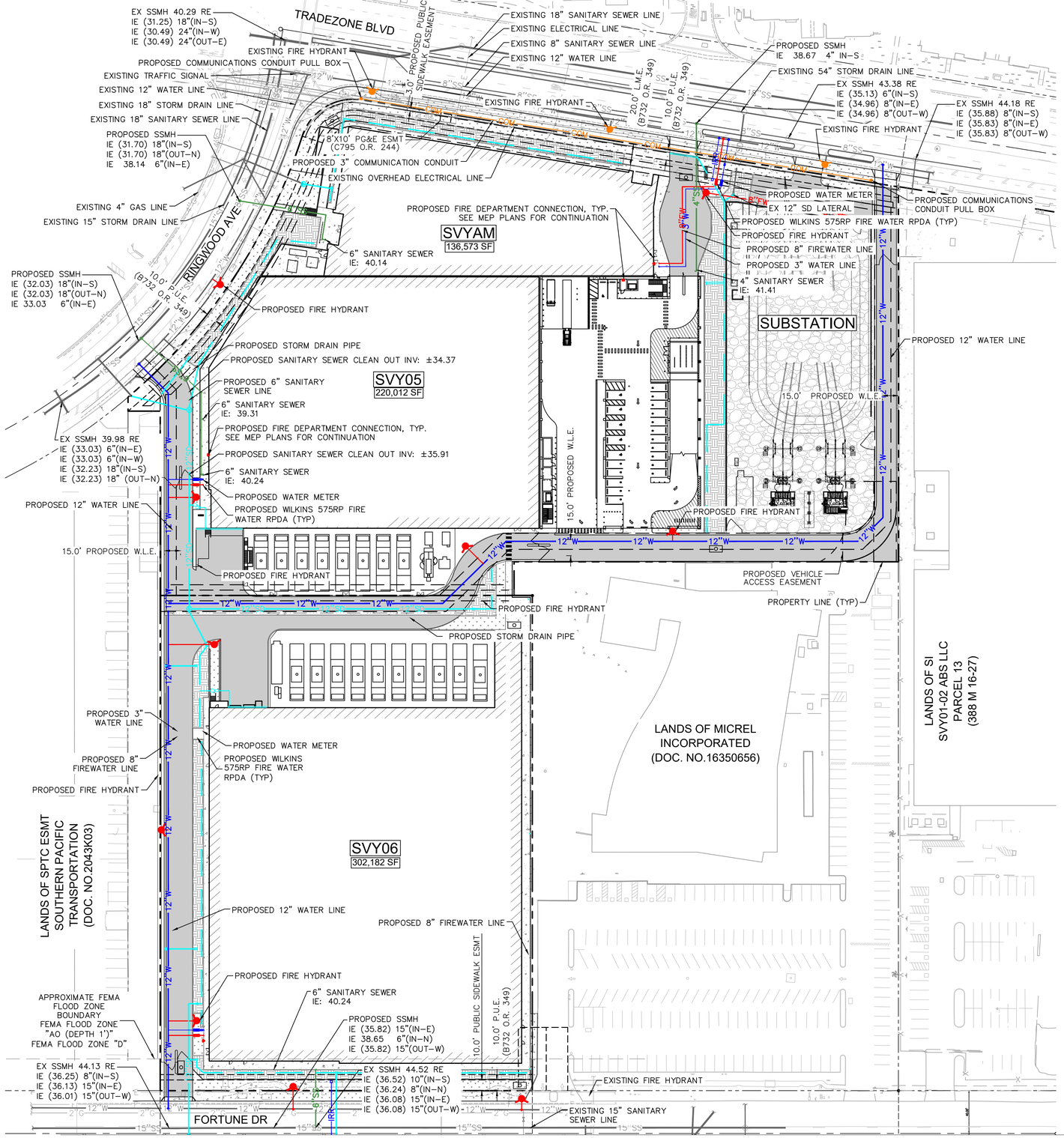
FLOW-THROUGH PLANTER (BELOW GRADE) — 1

NTS

GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

5.0 - STORMWATER CONTROL PLAN



LEGEND

PROPERTY LINE	EXISTING FIRE HYDRANT
X" FW — PROPOSED X" PVC FIRE WATER PIPE	PROPOSED FIRE HYDRANT
X" W — PROPOSED X" PVC WATER PIPE	STORM DRAIN MANHOLE
X" SD — PROPOSED X" STORM DRAIN PIPE	SANITARY SEWER MANHOLE
X" SS — PROPOSED X" SANITARY SEWER PIPE	STORM DRAIN OVERFLOW INLET
X" IRR — PROPOSED IRRIGATION PIPE	PROPOSED BUILDING
COM — PROPOSED 3" COMMUNICATION CONDUIT	PROPOSED LANDSCAPING
X" W — EXISTING X" WATER LINE	PROPOSED CONCRETE
X" SS — EXISTING X" SEWER LINE	PROPOSED ASPHALT
X" SD — EXISTING X" STORM DRAIN LINE	PROPOSED STRIPING
X" E — EXISTING X" ELECTRICAL LINE	PROPOSED FLOW THROUGH PLANTER
OH — EXISTING OVERHEAD ELECTRICAL LINE	PROPOSED GRAVEL
X" F — EXISTING X" FIBER LINE	
X" G — EXISTING X" GAS LINE	

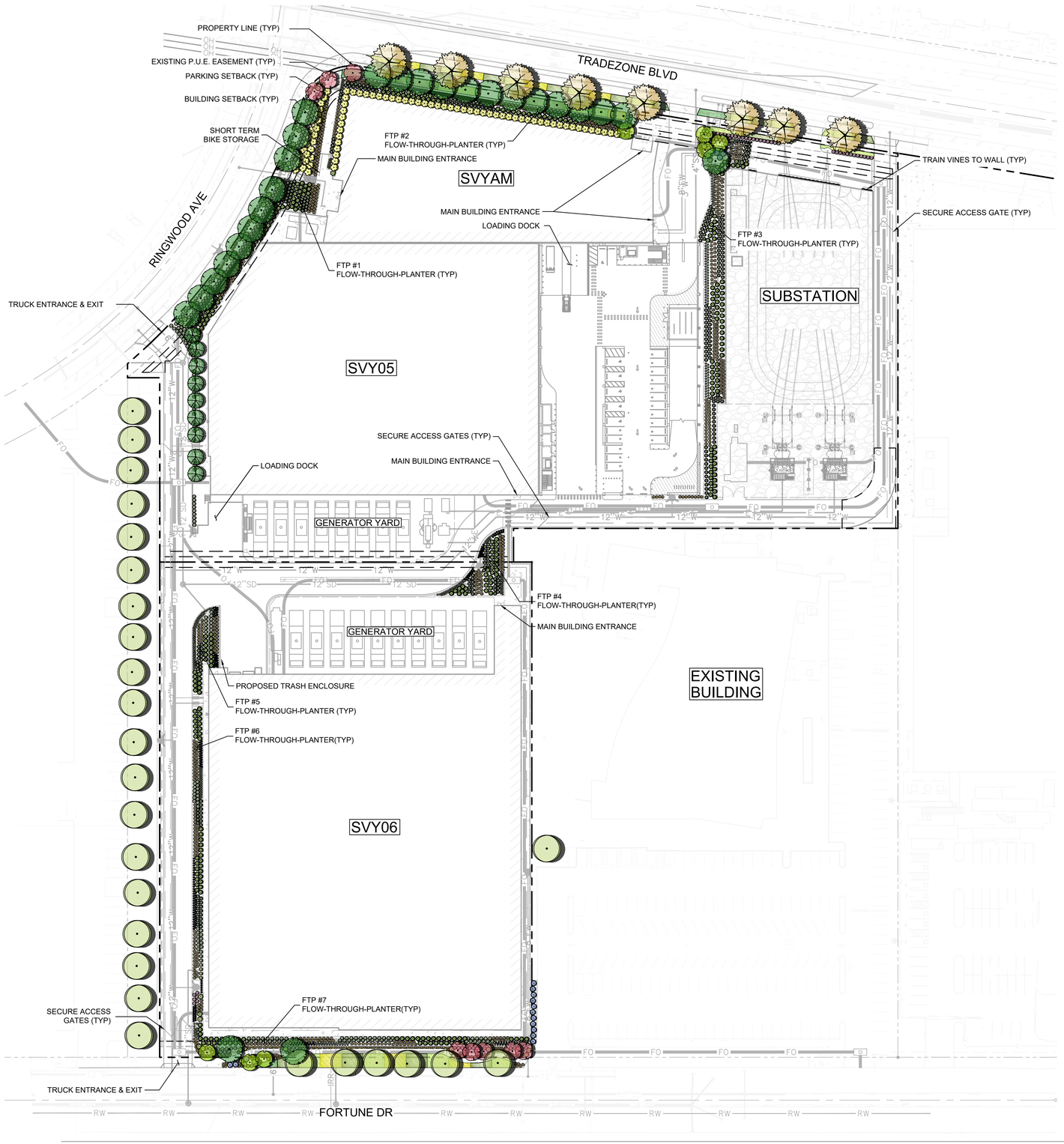
GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

6.0 - UTILITY PLAN

STACK INFRASTRUCTURE | SKS | Kimley»Horn Expect More. Experience Better.

kw mission critical engineering | PARADIGM structural engineers | CORGAN



PLANT LEGEND

TREES	CODE	BOTANICAL / COMMON NAME
	CW	CERCIS OCCIDENTALIS / WESTERN REDBUD MULTI-TRUNK
	CL	CHILOPSIS LINEARIS / DESERT WILLOW
	EX	EXISTING TO REMAIN
	FV	FRAXINUS VELUTINA `MODESTO` / MODESTO VELVET ASH
	MO	MAGNOLIA GRANDIFLORA `ALTA` / ALTA MAGNOLIA
	PA	PLATANUS X ACERIFOLIA / LONDON PLANE TREE

SHRUBS	CODE	BOTANICAL / COMMON NAME
	AA	AGAVE ATTENUATA / FOXTAIL AGAVE
	AF	ASCLEPIAS FASCICULARIS / NARROWLEAF MILKWEED
	CB	CAREX BARBARAE / SANTA BARBARA SEDGE
	CD	CAREX DIVULSA / EUROPEAN GREY SEDGE
	CG	CEANOTHUS GLORIOSUS / POINT REYES CEANOTHUS
	CE	CHONDROPETALUM ELEPHANTINUM / LARGE CAPE RUSH
	CC	CHONDROPETALUM TECTORUM / CAPE RUSH
	EC	ERIOPHYLLUM CONFERTIFLORUM / GOLDEN YARROW
	JP	JUNCUS PATENS / CALIFORNIA GRAY RUSH
	MC	MUHLENBERGIA CAPILLARIS / PINK MUHLY
	MR	MUHLENBERGIA RIGENS / DEER GRASS
	RC	RHAMNUS CALIFORNICA / CALIFORNIA COFFEEBERRY
	SN	STIPA ARUNDINACEA / NEW ZEALAND WIND GRASS

VINES	CODE	BOTANICAL / COMMON NAME
	VC	VITIS CALIFORNICA X VINIFERA `ROGER`S RED` / ROGER`S RED GRAPE

GROUND COVERS	CODE	BOTANICAL / COMMON NAME
	AE	ARCTOSTAPHYLOS X 'EMERALD CARPET' / EMERALD CARPET MANZANITA
	BP	BACCHARIS PILULARIS 'PIGEON POINT' / PIGEON POINT COYOTE BRUSH
	CH	CEANOTHUS X 'CENTENNIAL' / CENTENNIAL WILD LILAC
	MP	MYOPORUM PARVIFOLIUM / TRAILING MYOPORUM

STREET TREE NOTE

STREET TREES SHOWN IN THE PUBLIC RIGHT-OF-WAY ARE FOR INFORMATION ONLY. THE PLANNING PERMIT DOES NOT AUTHORIZE THE INSTALLATION OR REMOVAL OF TREES IN THE PUBLIC RIGHT OF WAY. ACTUAL STREET TREE LOCATION WILL BE DETERMINED BY PUBLIC WORKS AT THE IMPLEMENTATION STAGE ON THE PUBLIC IMPROVEMENT PLAN. THE INSTALLATION OR REMOVAL OF THE STREET TREES REQUIRES A PERMIT FROM THE DEPARTMENT OF TRANSPORTATION.THE CITY ARBORIST WILL SPECIFY THE SPECIES.

NOTE TO CONTRACTOR

1. FOR INFORMATION REGARDING TREES TO BE REMOVED,REFER TO TREE DISPOSITION PLANS ON SHEETS L101
2. FOR FULL PLANT SCHEDULE AND ADDITIONAL INFORMATION ON PROPOSED PLANT MATERIAL SEE SHEET L200
3. ALL PROPOSED TREES SHALL MEET THE REQUIRED SPACING REQUIREMENTS FROM ELECTRICAL CONDUIT AS SPECIFIED BY SD1235 TREE PLANTING REQUIREMENTS.
4. ALL PROPOSED STORMWATER TREATMENT LANDSCAPE ARE FROM THE APPROVED PLANT SPECIES LIST IN APPENDIX D OF SCVURPP C.3 STORMWATER HANDBOOK.
5. FOR NATIONAL CRIME PREVENTION STANDARDS REFER TO SHEET 10.6, NOTE # 24.
6. INCLUDE 3 INCHES OF COMPOSTED, NON-FLOATABLE MULCH IN AREAS BETWEEN STORMWATER TREATMENT PLANTING AND SIDE SLOPES

ALERT TO CONTRACTOR:

1. WHEN PERFORMING GRADING OPERATIONS DURING PERIODS OF WET WEATHER, PROVIDE ADEQUATE DEWATERING, DRAINAGE AND GROUND WATER MANAGEMENT TO CONTROL MOISTURE OF SOILS. REFER TO MASTER SITE SPECIFICATIONS.
2. ALL GENERAL CONTRACTOR WORK TO BE COMPLETED (EARTHWORK, FINAL UTILITIES, AND FINAL GRADING) BY THE MILESTONE DATE IN PROJECT DOCUMENTS.

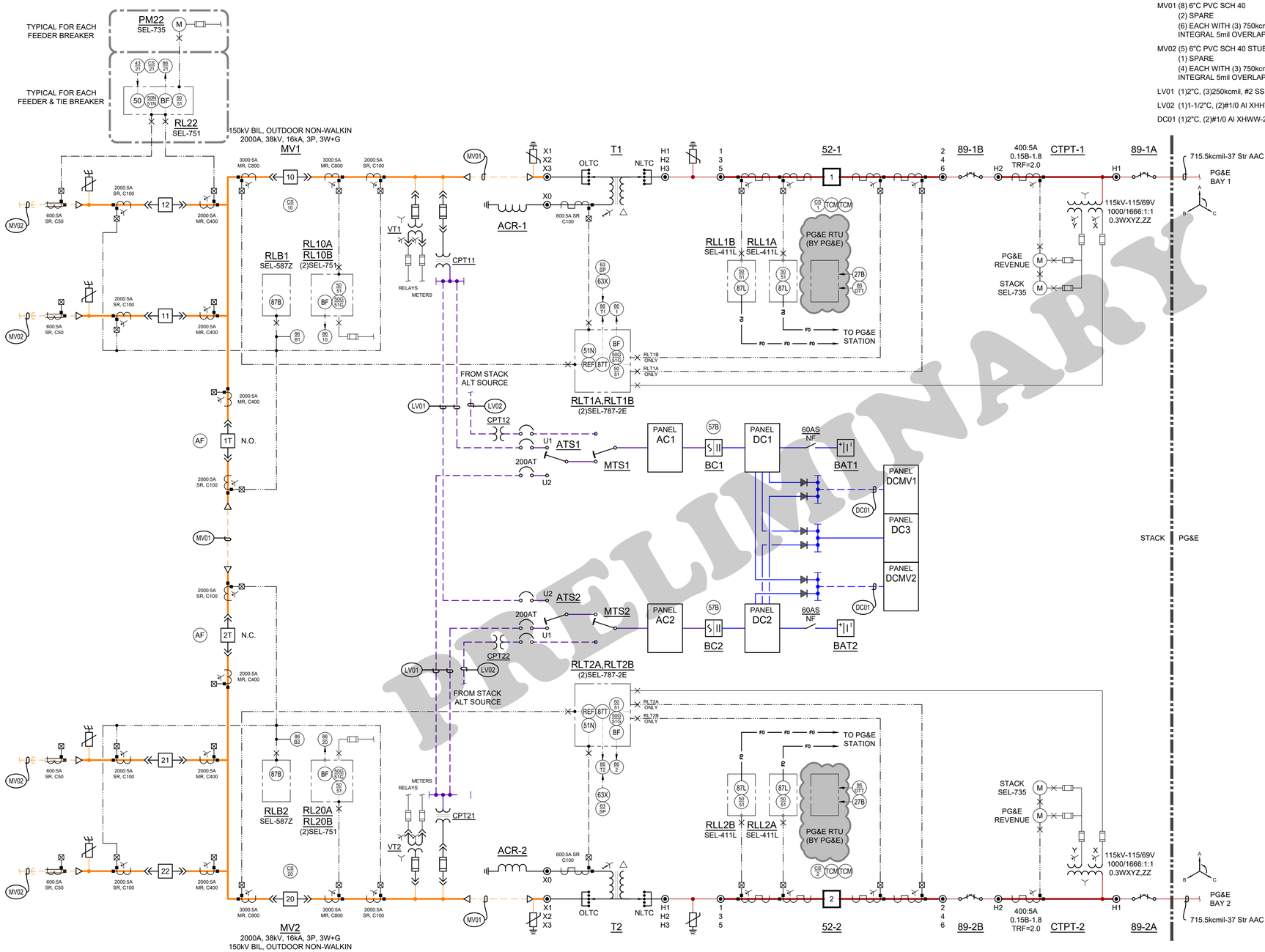
GRAPHIC SCALE IN FEET
0 25 50 100

NORTH

10.8 - LANDSCAPE PLAN

APPENDIX PD DR-47

Substation One-Line Diagram



FEEDERS

MV01 (8) 6"C PVC SCH 40
(2) SPARE
(6) EACH WITH (3) 750kcmil Al 35kV 133% EPR MV-105 W/ INTEGRAL 5mil OVERLAPPED Cu TAPE SHIELD.

MV02 (5) 6"C PVC SCH 40 STUB 5 FEET BEYOND SUB FENCE
(1) SPARE
(4) EACH WITH (3) 750kcmil Al 35kV 133% EPR MV-105 W/ INTEGRAL 5mil OVERLAPPED Cu TAPE SHIELD.

LV01 (1)2"C, (3)250kcmil, #2 SSBJ Al XHHW-2

LV02 (1)1-1/2"C, (2)#1/0 Al XHHW-2, #8 Cu THWN-2

DC01 (1)2"C, (2)#1/0 Al XHWW-2

GENERAL NOTES

1. ALL AC BREAKERS AND DISCONNECTS ARE 3-POLE UON
2. ALL DC BREAKERS AND DISCONNECTS ARE 2-POLE UON

SYMBOLS

REFER TO SWITCHING DIAGRAM LEGEND FOR MAJOR EQUIPMENT

- BUS — 115kVAC
- FEEDER — 34.5kVAC
- FEEDER UNDERGROUND — 208VAC
- CONDUIT CAP — 125VDC
- CONTINUATION
- LOW VOLTAGE LUG TERMINATION. 2-HOLE WHERE POSSIBLE
- PT WIRING
- LOW VOLTAGE CONTROL WIRING
- 1 PHASE CT WIRING
- 3 PHASE CT WIRING
- FO — FIBER OPTIC
- SCOPE OF WORK BOUNDARY
- EQUIPMENT BOUNDARY (WHERE SHOWN)
- BUSHING TYPE CURRENT TRANSFORMER 2000:5A MR, C800 U.O.N.
- DRY-TYPE MULTI-RATIO BUSHING CURRENT TRANSFORMER
- CORE BALANCE CURRENT TRANSFORMER
- SHORTING TERMINAL BLOCK
- EQUIPMENT BOUNDARY (WHERE SHOWN)
- EARTH & FRAME GROUND
- 2-WINDING CONTROL POWER TRANSFORMER 480-240/120V, 37.5kVA
- BATTERY CHARGER, 240VAC/25A-130VDC/20A
- LEAD-ACID BATTERY, 125VDC,150Ah, (20)3-CELL
- BEST BATTERY SELECTOR, 100A
- FIXED MOUNTED CIRCUIT BREAKER
- 600VAC HEAVY DUTY DISCONNECT SWITCH
- PANEL ABC — PANELBOARD
- TRANSFER SWITCH 150A, 240/120V, 2P, 3W+G 10kA WCR, NEMA 1

ABBREVIATIONS

REFER TO SWITCHING DIAGRAM ABBREVIATIONS WHERE NOT INDICATED HERE.

MR MULTI RATIO
SR SINGLE RATIO

ANSI NUMBERS

43	SELECTOR SWITCH FOR MAINTENANCE MODE ENABLE DEFINITE TIME OVERCURRENT ELEMENT
50/51	PHASE INSTANTANEOUS AND TIME OVERCURRENT
50G/51G	GROUND INSTANTANEOUS AND TIME OVERCURRENT
50N/51N	NEUTRAL INSTANTANEOUS AND TIME OVERCURRENT
57B	HYDROGEN DETECTOR
63/SP	SUDDEN PRESSURE RELAY
63X	SEAL-IN RELAY
86	HAND RESET LOCKOUT RELAY
87	DIFFERENTIAL RELAY
AF	ARC FLASH RELAY
BF	BREAKER FAILURE RELAY
CC	CLOSE COIL
CS	BREAKER CONTROL SWITCH
DTT	DIRECT TRANSFER TRIP
M	METER
REF	RESTRICTED EARTH FAULT
TC	TRIP COIL
TCM	TRIP COIL MONITOR

REVISION HISTORY			STAMP	ENGINEERING SERVICES	EPC CONTRACTOR	CUSTOMER	PROJECT	SHEET TITLE	SHEET NUMBER
No.	DESCRIPTION	DATE	REGISTERED PROFESSIONAL ENGINEER DANIEL BORESCH No. E18955 ELECTRICAL STATE OF CALIFORNIA	PHASE X ENGINEERING	CUPERTINO ELECTRIC INC. 1132 North Seventh St San Jose, California 95112 Phone: 1.408.808.8000 Fax: 1.408.275.8575 www.cei.com	STACK INFRASTRUCTURE	TRADE ZONE SUBSTATION 2400 RINGWOOD AVE SAN JOSE, CA 95131	SINGLE LINE DIAGRAM	E1.11
	PROGRESS	*03.29.22*							PROJECT No ----

APPENDIX PD DR-48

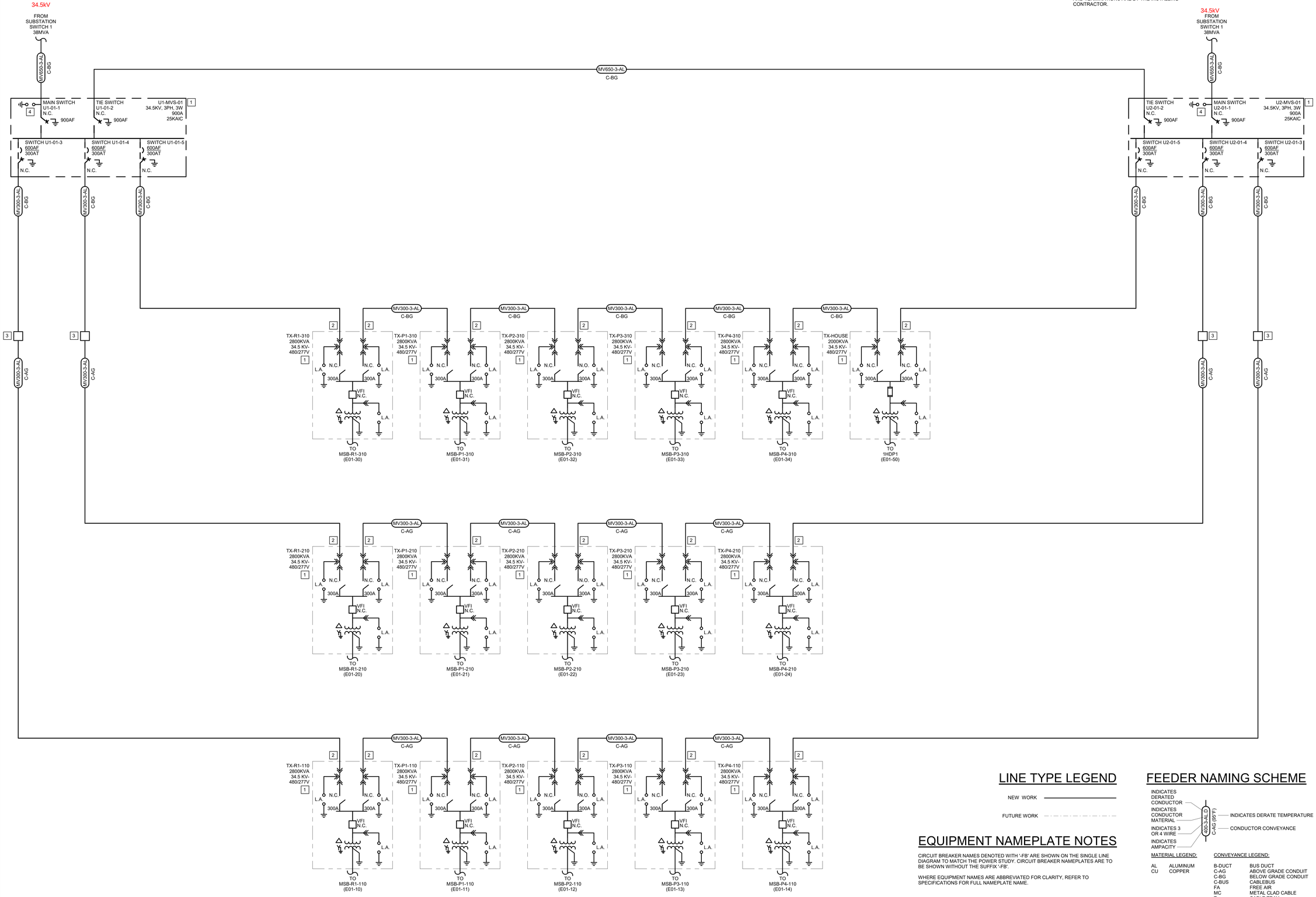
Data Centers and AMB One-Line Diagrams

KEYED NOTES

1. OWNER PRE-PURCHASED EQUIPMENT. CONTRACTOR TO RECEIVE, COORDINATE, INSTALL AND TEST.
2. ELECTRICAL CONTRACTOR SHALL PROVIDE (3) FAULT INDICATORS AT LOCATIONS INDICATED. FAULT INDICATORS SHALL BE COMPATIBLE WITH THE CONDUCTOR SIZE AT THE INPUT SWITCHES OF EACH TRANSFORMER. FAULT INDICATOR SHALL BE COOPER POWER SERIES TYPE S.T.A.R. CURRENT RESET FAULTED CIRCUIT INDICATOR, NO SUBSTITUTIONS.
3. PROVIDE 12"X12"X96" PULLBOX FOR TRANSITION FROM UNDERGROUND TO OVERHEAD. MAKE TRANSITIONS WITHOUT SPLICING OF CONDUCTORS.
4. PROVIDE COOPER M.O.V.E. SURGE ARRESTOR (30KV, 24.4 MCOV), (1) PER PHASE, OR APPROVED EQUAL. ARRESTOR AND TERMINATIONS ARE BY THE INSTALLING CONTRACTOR.

GENERAL NOTES

1. REFER TO FEEDER SCHEDULES ON SHEET E01-00 FOR FEEDER INFORMATION.
2. ALL EQUIPMENT AND FEEDERS DENOTED AS HALFTONE AND DASHED INDICATE FUTURE EQUIPMENT. ALL DUCTBANKS ARE PROVIDED IN THE DAY 1 SCOPE OF WORK.
3. REFER TO LV SINGLE LINE DIAGRAMS FOR ADDITIONAL TRANSFORMER DETAILS AND TRANSFORMER SECONDARY CONNECTIONS.
4. EQUIPMENT SHORT CIRCUIT RATINGS ARE NOTED WITH ##KAIC. EQUIPMENT CALCULATED CURRENTS ARE NOTED WITH ##KAISC.
5. ACCESS AND WORKING SPACE MUST BE PROVIDED ABOUT ELECTRICAL EQUIPMENT REQUIRING OPERATION AND MAINTENANCE PER CEC 110.26.



LINE TYPE LEGEND

NEW WORK

FUTURE WORK

EQUIPMENT NAMEPLATE NOTES

CIRCUIT BREAKER NAMES DENOTED WITH '-FB' ARE SHOWN ON THE SINGLE LINE DIAGRAM TO MATCH THE POWER STUDY. CIRCUIT BREAKER NAMEPLATES ARE TO BE SHOWN WITHOUT THE SUFFIX '-FB'.

WHERE EQUIPMENT NAMES ARE ABBREVIATED FOR CLARITY, REFER TO SPECIFICATIONS FOR FULL NAMEPLATE NAME.

FEEDER NAMING SCHEME

MATERIAL LEGEND:

AL	ALUMINUM
CU	COPPER

CONVEYANCE LEGEND:

B-DUCT	BUS DUCT
C-AG	ABOVE GRADE CONDUIT
C-BG	BELOW GRADE CONDUIT
C-BUS	CABLEBUS
FA	FREE AIR
MC	METAL CLAD CABLE
T	CABLE TRAY

CORGAN

kW Mission Critical Engineering, d.p.c.
233 N Water St, 6th Floor Milwaukee, WI 53202

Paradigm Structural Engineers
639 Front St, 4th Floor, San Francisco, CA 94111

Kimley Horn
10 S. Almaden Blvd, #1250, San Jose, CA 95113

	ISSUES	
1	09/23/2021	DESIGN DEVELOPMENT
2	04/27/2022	60% CD

REVISIONS

Contact: Dan Herrmann Phone: 414.617.0382

NOT FOR CONSTRUCTION

STACK - SVY05

2400 Ringwood Avenue San Jose, CA 95131

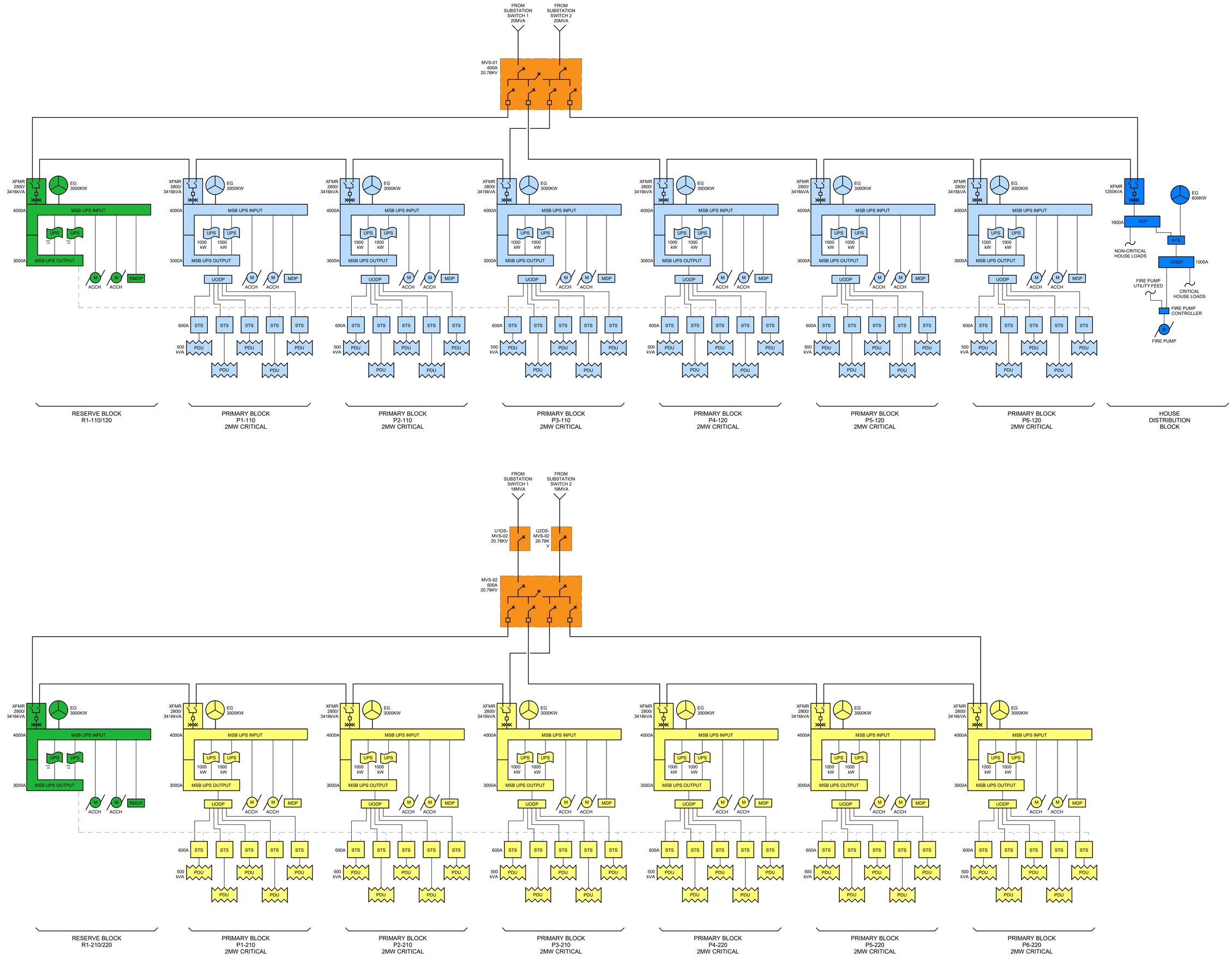
STACK INFRASTRUCTURE

MEDIUM VOLTAGE ONE LINE DIAGRAM

JOB 21.241
DATE 04/27/2022
SHEET

05-E01-01

4/27/2022 11:30:24 AM 05-E01-0MEDIUM VOLTAGE ONE LINE DIAGRAM



6/25/2021 9:34:15 AM E00-51 BLOCK DIAGRAM

CORGAN

kW Mission Critical Engineering, d.p.c.
233 N Water St, 6th Floor Milwaukee, WI 53202

Paradigm Structural Engineers
639 Front St, 4th Floor, San Francisco, CA 94111

Kimley Horn
10 S. Almaden Blvd, #1250, San Jose, CA 95113

ISSUES		
1	06/25/2021	SCHEMATIC DESIGN

REVISIONS

Contact: Dan Herrmann Phone: 414.617.0382

NOT FOR CONSTRUCTION

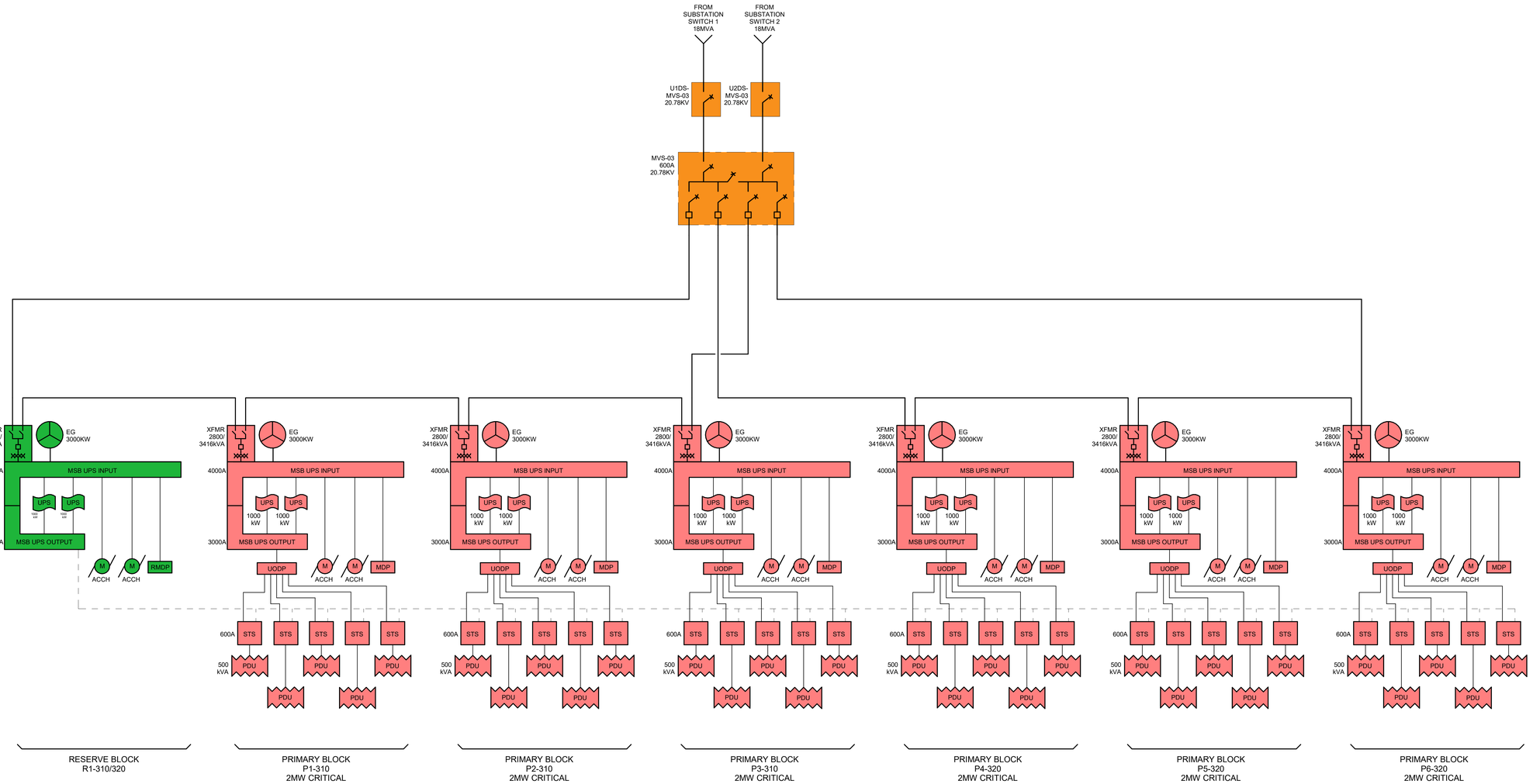
STACK - SVY05
1849 Fortune Drive
San Jose, CA 95131

STACK INFRASTRUCTURE

BLOCK DIAGRAM

JOB 21.118
DATE 06/25/2021
SHEET

E00-51



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Paradigm Structural Engineers
639 Front St, 4th Floor, San Francisco, CA 94111

Kimley Horn
10 S. Almaden Blvd, #1250, San Jose, CA 95113

ISSUES

1	06/25/2021	SCHEMATIC DESIGN

REVISIONS

Contact: Dan Herrmann Phone: 414.617.0382

NOT FOR CONSTRUCTION

STACK - SVY05
1840 Fortune Drive
San Jose, CA 95131

STACK INFRASTRUCTURE

BLOCK DIAGRAM

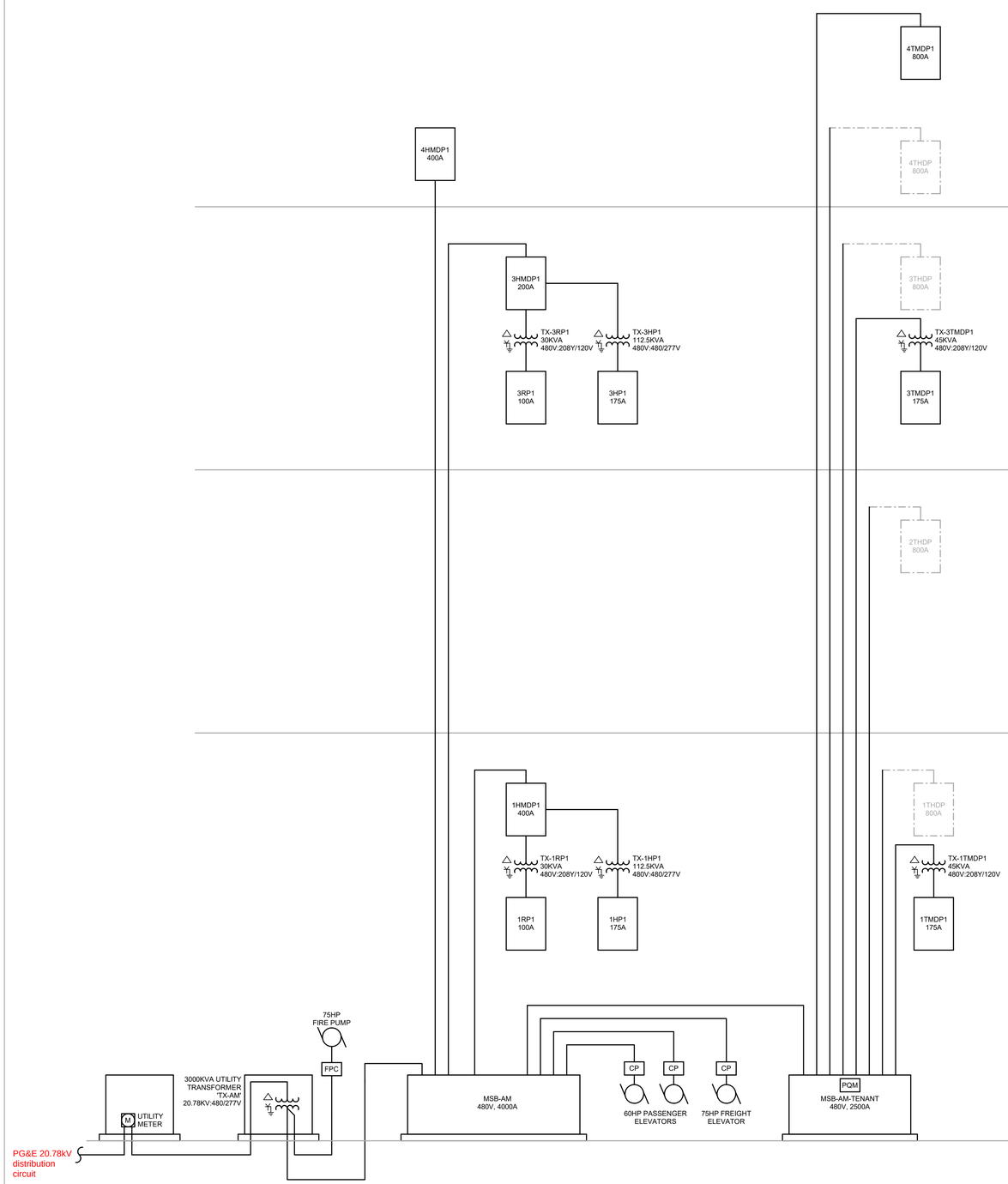
JOB 21.118
DATE 06/25/21
SHEET

E00-52

6/25/2021 9:34:16 AM E00-52 BLOCK DIAGRAM

GENERAL NOTES:

1. DRAWING IS FOR REFERENCE OF THE GENERAL BUILDING ELECTRICAL LAYOUT ONLY. REFER TO SINGLE LINE DIAGRAM ON SHEET AM-E01-05 FOR ADDITIONAL INFORMATION.



LINE TYPE LEGEND

OWNER BUILDOUT

PARKING GARAGE SCOPE

CORGAN

kW Mission Critical Engineering, d.p.c.

233 N Water St, 6th Floor Milwaukee, WI 53202

Paradigm Structural Engineers

639 Front St, 4th Floor, San Francisco, CA 94111

Kimley Horn

10 S. Almaden Blvd, #1250, San Jose, CA 95113

	ISSUES	
1	06/25/2021	SCHEMATIC DESIGN
2	09/16/2021	DESIGN DEVELOPMENT
3	04/27/2022	60% CD

	REVISIONS	

Contact: Dan Herrmann Phone: 414.617.0382

NOT FOR CONSTRUCTION

STACK - SVYAM

2000 Trade Zone
San Jose, CA 95131

STACK INFRASTRUCTURE

ELECTRICAL
RISER DIAGRAM

JOB 21.243
DATE 04/27/2022
SHEET

AM-E00-50

4/27/2022 3:27:27 PM AM-E00-ELECTRICAL RISER DIAGRAM