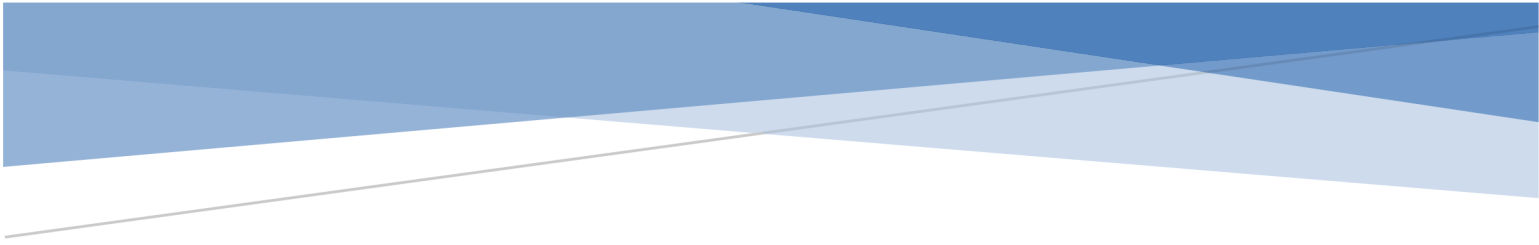


DOCKETED

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RESPONSE TO CEC STAFF DATA REQUEST SET 1 (1-30)

CA3 Backup Generating Facility (21-SPPE-01)

SUBMITTED TO: CALIFORNIA ENERGY COMMISSION

SUBMITTED BY: **Vantage Data Centers**

June 15, 2021



INTRODUCTION

Attached are Vantage Data Centers (VDC) responses to California Energy Commission (CEC) Staff Data Request Set No. 1 (1-30) for the CA3 Backup Generation Facility (CA3BGF) Application for Small Power Plant Exemption (SPPE) (21-SPPE-01). Staff issued Data Request Set No. 1 on June 7, 2021.

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 (1-30). 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

VDC objects to all data requests that require analysis beyond which is necessary to comply with the California Environmental Quality Act (CEQA) or which require VDC to provide data that is in the control of third parties and not reasonably available to VDC. Notwithstanding this objection, VDC has worked diligently to provide these responses swiftly to allow the CEC Staff to prepare the Initial Study/Mitigated Negative Declaration (IS/MND).

BIOLOGICAL RESOURCES

BACKGROUND: Recommendations for Modifications to PD BIO-1

In the SPPE application, the applicant proposed project design measure, PD BIO-1, requiring pre-construction raptor surveys if trees would be removed during the breeding season. The results of the pre-construction surveys would be provided in a report submitted the City of Santa Clara's Director of Planning and Inspection.

The applicant's proposed design measure (PD BIO-1) would not reduce potential impacts to nesting birds to less than significant levels. CEC staff is proposing changes to the applicant's design measures for the following reasons:

- Surveys were only required prior to tree removal; however, surveys should be conducted prior to initiation of any construction-related activities during the breeding season, including demolition and grading or construction, as these activities could also cause disturbance of nesting birds located in trees to remain onsite.***
- Pre-construction surveys were only required to find raptor nests; however, these surveys should cover all bird species protected under the Federal Migratory Bird Treaty Act and California Fish and Game Code.***
- Birds may complete a nest within a 14-day window during May to August. Therefore, a 30-day window for conducting pre-construction surveys is too long. This 30-day window would allow for a bird to potentially build a nest and lay eggs after a survey had been conducted and prior to initiation of demolition or construction activities, including tree removal, which could cause project delays.***
- Standard buffers for raptors are 500 feet and may be modified based on consultation with the appropriate agencies. In addition, while buffers were mentioned there are no details regarding how the buffers would be enforced or monitored.***
- There were no details provided regarding the contents of the report and the timing for submittal.***
- Per the City of Santa Clara's current procedures, survey reports are required to be submitted for review and approval to the City of Santa Clara's Director of Community Development, instead of Director of Planning and Inspection, prior to the issuance of a demolition permit and/or tree removal permit.***

DATA REQUEST

1. Staff proposes the following modifications to the language of **PD BIO-1**. New language is in **bold text** and deleted language is in ~~strike-through text~~)

Please provide the final version of **PD BIO-1** with a statement that the applicant will accept these changes and incorporate the revised version of **PD BIO-1** into the project. If the applicant disagrees with any of these changes, please propose alternate language using **bold text** for new language and ~~strike-through text~~ for deleted language.

PD BIO-1: The project will incorporate the following measures to reduce impacts to nesting birds.

- **If possible, demolition and construction activities, including removal of trees and vegetation clearing shall take place between September and January.** If demolition or **construction activities, including** removal of the trees on-site would take place between January and September, a pre-construction survey for nesting raptors **and other protected native or migratory birds** shall be conducted by a qualified ornithologist, **approved by the City of Santa Clara,** to identify active ~~nesting raptor~~ nests that may be disturbed during project implementation. ~~Between January and April (inclusive) p~~ **Pre-construction surveys shall be conducted no more than 14 days prior to the initiation of demolition or construction activities or tree relocation or removal. Between May and August (inclusive), pre-construction surveys shall be conducted no more than 30 days prior to the initiation of these activities. Surveys shall be repeated if project activities are suspended or delayed for more than 14 days during the nesting season.** The surveying ornithologist shall inspect all trees in and immediately adjacent to the construction area to be disturbed by these activities, and the ornithologist shall, in consultation with the State of California, Department of Fish and Wildlife (CDFW), designate a construction-free buffer zone (typically 250 feet **for non-raptors to 500 feet for raptors**) around the nest until the end of the nesting activity. **Any changes to a buffer zone must be approved by the City of Santa Clara, in consultation with CDFW. The nests and buffers will be field checked weekly by the approved ornithologist. The approved buffer zone will be marked in the field with exclusion fencing, within which no construction, tree removal, or vegetation clearing will commence until the ornithologist verifies that the nest(s) are no longer active. If an active bird nest is discovered during demolition or construction, then a buffer zone shall be established under the guidelines specified.**

The applicant shall submit a report indicating the results of the survey and any designated buffer zones to the satisfaction of the ~~Director of Planning and Inspection~~ **City of Santa Clara's Director of Community Development** prior to the issuance of a tree removal permit by the City Arborist. **The report(s) shall contain maps showing the location of all nests, species nesting, status of the nest (e.g. incubation of eggs, feeding of young, near fledging), and the buffer size around each nest (including reasoning behind any alterations to the initial buffer size). The report shall be provided within 10 days of completing a pre-construction nest survey.**

RESPONSE TO DATA REQUEST 1

VDC has reviewed and agrees with the modifications to PD-1 proposed by Staff.

CULTURAL RESOURCES

BACKGROUND

CEC staff has received via confidential filing the Phase I Cultural Resources Assessment (CRA) prepared by First Carbon Solutions (FCS)(FCS 2021). The information and analysis contained in section 4.5 of the SPPE application relies on the CRA. The SPPE application states on page 4-44 that a records search was conducted on March 3, 2021 at the Northwest Information Center (NWIC) for the project site and a 0.5-mile radius surrounding it. In reviewing the records search results, results maps, and the correspondence with the Native American Heritage Commission and tribes, staff has determined that the project site location used for the records search is incorrect. The records search and 0.5-mile-radius buffer appears to be based on the properties at 651, 725, and 825 Mathew Street in Santa Clara. The project site is located at 2590 Walsh Avenue, approximately 1.6 miles northwest of the location used for the March 3, 2021, NWIC records search.

DATA REQUESTS

2. Please obtain a records search from the NWIC with a 0.5-mile-radius buffer for the project site located at 2590 Walsh Avenue, using the same parameters as the search conducted for 651, 725, and 825 Mathew Street (see NWIC File No. 20-1637 for guidance).

RESPONSE TO DATA REQUEST 2

Staff previously alerted VDC to the mistake in the CRA. First Carbon corrected the error and prepared a Revised CRA. Counsel docketed the Revised CRA with the new NWIC records search on May 28, 2021 with a new Application For Confidential Designation.

3. Based upon the results of the new records search, please update the environmental analysis and impacts of the project on cultural and tribal cultural resources in both Section 4.5 of the SPPE application and the confidential CRA and resubmit the information to CEC docket 21-SPPE-01.

RESPONSE TO DATA REQUEST 3

VDC agrees that modifications to Section 4.5 of the SPPE Application are warranted and will make the changes after it has performed the additional work requested by Staff in Data Requests 5 through 7. VDC is targeting submission of revised Section 4.5 of the

SPPE Application along with the work requested in Data Requests 5 through 7 on or before June 28, 2021.

BACKGROUND

The supporting documentation from the NWIC records search was not provided to CEC cultural resources staff with the initial submittal of the CRA. Independent analysis of the project cannot proceed without this vital information, as none of the background information provided by the previous studies is included in the SPPE Cultural Resources/Tribal Cultural Resources Section 4.5 or the CRA. The SPPE application states on page 4-45 that none of the structures located on or adjacent to the project site are more than 45 years old, are therefore ineligible for the California Register of Historical Resources, and should not be considered further as potential historical resources under the California Environmental Quality Act (CEQA). Staff is aware of at least one adjacent parcel containing structures that are 45 years or older, the Uranium Substation at 2705 Bowers Avenue (Smart Permit 2021). The original alignment of tracks for the Southern Pacific Railroad Monterey Line is also adjacent to the project site, possibly dating to 1889 or earlier (TRC 2020, page 10; USGS 1889). The tracks are now in operation as part of the CalTrain system. CEC cultural staff applies a minimum one-parcel built environment study area as the Project Area of Analysis (PAA) for urban projects.

DATA REQUESTS

4. Please provide copies of the maps, reports, and resource records of the literature search that provide the background for the revised CRA for 2590 Walsh Avenue (see NWIC File No. 20-1637 for guidance). Please ensure that the results include the summary of the information requested by the applicant's consultant, and the search area radius indicated on maps as provided by the NWIC or prepared by the consultant using shape files provided by the NWIC.

RESPONSE TO DATA REQUEST 4

The Revised CRA includes reference to the correct maps, reports and resource records examined during the literatures search. Copies responsive to this request will be docketed with a renewed Application For Confidential Designation on or before June 18, 2021.

5. Please provide a description of the PAA, including the project site, the observed adjacent parcels, and any linear routes and include a map depicting those areas analyzed for the project, including parcel numbers where applicable. Identify those parcels containing cultural resources that are 45 years or older.

RESPONSE TO DATA REQUEST 5

First Carbon will provide a supplemental response to this data request after the work requested by Data Request 6 is completed. VDC anticipates this supplemental data request can be docketed on or before June 28, 2021.

6. Please provide an evaluation of any parcels adjacent to the project site with structures, buildings or objects that are 45 years or older on California Department of Parks and Recreation 523 series forms for their eligibility for listing on the CRHR or as a local landmark.

RESPONSE TO DATA REQUEST 6

VDC has engaged First Carbon to perform the work requested in this data request and anticipates docketing it on or before June 28, 2021.

7. Please update Section 2.2 of the CRA to include a history of the project site following subsection 2.2.4.

RESPONSE TO DATA REQUEST 7

First Carbon will revise the CRA to include the history of the project as instructed by this data request after the work performed pursuant to Data Request 6 is completed. VDC anticipates docketing the Revised CRA on or before June 28, 2021.

HAZARDS AND HAZARDOUS MATERIALS

BACKGROUND: Fuel Tank Replenishment Strategies

On page 2-7 of the SPPE application, the project description specifies that each emergency generator would have a separate diesel fuel tank. Each diesel engine would be readiness tested on a regular schedule, consuming a portion of its fuel.

DATA REQUEST

8. Please provide the fuel tank replenishment strategy and frequency, and the estimated frequency and number of fuel trucks needing to visit the facility for refueling per year.

RESPONSE TO DATA REQUEST 8

Each generator size has a fuel tank with a capacity of approximately 5000 gallons. Based on the maintenance and testing schedule anticipated, the average Fuel consumption for each generator per month would be approximately 174 gallons. It is anticipated that every 3 months, VDC will schedule fuel replenishment of approximately one fuel truck to “top off” the generator fuel tanks. VDC anticipates approximately 4 deliveries per year.

BACKGROUND: Urea or Diesel Exhaust Fluid (DEF)

On page 2-8, the project description calls for two 55-gallon drums of diesel exhaust fluid (DEF) to be stored within each generator enclosure to be used by the selective catalytic reduction equipment. On page 4-93, the project description states each generator would be required to run for a total of four hours per year under maximum load consuming a portion of the DEF.

DATA REQUESTS

9. Please provide a safety data sheet for the DEF and confirm the estimated shelf life of the DEF.

RESPONSE TO DATA REQUEST 9

Please see Attachment HAZ DR-9. The estimated shelf life is dependent on ambient temperature. For the Santa Clara area the shelf life of the DEF is approximately 12-18 months, according to information provided by Peterson Caterpillar.

10. Please provide an estimate of how much DEF would be used in a year per diesel engine.

RESPONSE TO DATA REQUEST 10

Each generator has 110 gallons of DEF storage (two 55 gal drums). The maximum consumption is 13 gallons per hour, resulting in 8 hours of run time. Barrels can be replenished quickly should an event extend longer than 8 hours. This will minimize waste of DEF and provide the freshest possible DEF for the SCR. Based on the maintenance and testing schedule anticipated (i.e., 35 hours per year per generator), the upper bound of DEF consumption per generator would be 455 gallons per year.

11. Please provide a DEF replenishment strategy and frequency, and how any excess or degraded DEF, if any, would be disposed of properly.

RESPONSE TO DATA REQUEST 11

Based on the testing and maintenance schedule VDC does not anticipate the need for replacement of degraded DEF. The replacement strategy is to have Valley Oil either replenish the DEF supply by adding DEF from a bulk tanker or bulk tank to the existing 55-gallon drums in the genset enclosure or ideally just swap the drums of old DEF out for new.

12. Please provide a schematic showing if the DEF is in a secondary containment.

RESPONSE TO DATA REQUEST 12

Please see Attachment HAZ DR-12.

PROJECT DESCRIPTION

BACKGROUND

The SPPE application indicates that the CA3DC would be supported from the new onsite substation to accommodate electricity to be delivered from Silicon Valley Power (SVP). Staff requires a complete description of both the CA3DC interconnection to the SVP transmission grid and the reliability of the SVP grid to understand the potential operation of the back-up generators.

DATA REQUESTS

13. Please provide a detailed description and drawing of the proposed 60 kilovolt (kV) transmission line route, length, possible interconnection points to the existing SVP system, and possible pole locations. Please provide a legend and label the drawing to show the proposed line route, pole locations, and the existing transmission facilities.

RESPONSE TO DATA REQUEST 13

Please see Attachment PD DR-13.

14. Please provide the pole configurations that would be used to support the transmission lines from the SVP 60 kV system to the CD3DC. Show proposed pole structure configurations and measurements.

RESPONSE TO DATA REQUEST 14

The design of the transmission system upgrades has not yet been completed by SVP. However, it is anticipated that the transmission poles will be similar in configuration as those contained in the photographs in Attachment PD DR-14.

15. Please explain whether the Uranium Substation or the Walsh Substation could provide 100 percent power to the CD3DC in the event one of the substations is unable to.

RESPONSE TO DATA REQUEST 15

VDC has requested this information from SVP and will provide as soon as it is received. VDC anticipates docketing this information on or before June 21, 2021.

16. SVP has divided its 60 kV system into “loops” each with its own name; please clarify which loop the CA3DC on-site substation would be interconnected to.

RESPONSE TO DATA REQUEST 16

The CA3DC will be on SVP’s Central Loop.

17. Please explain whether the additional load associated with CA3DC would cause overloads on the SVP transmission system that would require upgrades to the existing system.

RESPONSE TO DATA REQUEST 17

VDC has requested this information from SVP and will provide as soon as it is received. VDC anticipates docketing this information on or before June 21, 2021.

18. Please provide for the 60 kV loop on the SVP system that would serve the CA3DC:
 - a. A physical description
 - b. The interconnection points to SVP service
 - c. The breakers and isolation devices and use protocols
 - d. A list of other connected loads and type of customers
 - e. A written description of the redundant features that allow the system to provide continuous service during maintenance and fault conditions

RESPONSE TO DATA REQUEST 18

VDC has requested this information from SVP and will provide as soon as it is received. VDC anticipates docketing this information on or before June 21, 2021.

19. Please describe any outages or service interruptions on the 60 kV systems that would serve the CA3DC:
 - a. How many 60 kV lines serve data centers in SVP, and how many data centers are on each?
 - b. What is the frequency of these outages and how would they require the use of backup generators?
 - c. How long were outages and what were their causes?

- d. Are there breakers on the 60 kV line or disconnect switch(es) and did they isolate the faults?
- e. What was the response to the outage(s) by the existing data centers (i.e., initiated operation of some or all back up generation equipment, data offshoring, data center planned shutdown, etc.)?

RESPONSE TO DATA REQUEST 19

VDC has requested this information from SVP and will provide as soon as it is received. VDC anticipates docketing this information on or before June 21. 2021.

- 20. Please provide the following regarding Public Safety Power Shutoff (PSPS) events:
 - a. Would historical PSPS events have resulted in the emergency operations of the backup generators at the proposed CA3DC?
 - b. Have there been changes to the SVP and PG&E system around the CA3DC that would affect the likelihood that future PSPS events would result in the operation of emergency generators at the proposed CA3DC?

RESPONSE TO DATA REQUEST 20

VDC has requested this information from SVP and will provide as soon as it is received. VDC anticipates docketing this information on or before June 21. 2021.

TRANSPORTATION

BACKGROUND: CITY OF SANTA CLARA VEHICLE MILES TRAVELED (VMT) POLICY AND PROJECT VMT ANALYSIS

Section 4.17 Transportation of the SPPE application explains a trip generation analysis was conducted to determine the change in the number of trips the project would generate. The trip generation was determined based on average rates provided by the Institute of Transportation Engineer's (ITE) Trip Generation Manual, 10th Edition. The project applicant compared trip rates based on the site's former land use, General Office Building (ITE Land Use 710), to the site's proposed use, Data Center (ITE Land Use 160). The General Office Building land use would generate approximately 1,125 daily trips and the Data Center land use would generate approximately 467 daily trips; thus, the applicant concluded the project would generate a net new -658 daily trips which is less than the 110-daily trip threshold and that the net decrease in trips would reduce VMT; therefore, a VMT analysis would not be required for the project.

CEC staff solicited feedback from City of Santa Clara Public Works staff, Carol Shariat, a Principal Transportation planner, to determine if this was an acceptable application of the city's transportation policy. Ms. Shariat explained a project could forgo a VMT analysis if a project meets the policy's exemption criteria; however, the project does not meet the exemption criteria because the project's estimated daily trips, according to the ITE Land Use Code 160, would generate approximately 467 daily trips, 357 more trips than the 110-daily trip threshold required for the VMT analysis exemption. Each project is evaluated independently to determine if the threshold is reached, irrespective of the previous daily trips estimate of any project that it might replace. Therefore, the project does not qualify for an exemption under the City's VMT Policy.

In addition, the project has not yet gone through the city's Project Clearance Committee (PCC) process. The PCC process is part of the city's development review process. The PCC process needs to be commenced now so that the planning team can determine if a Transportation Demand Management (TDM) plan would be required. Therefore, the applicant is required to conduct a comprehensive VMT analysis in accordance with the city's Transportation Analysis Policy following the project's PCC process and review.

DATA REQUESTS

21. Please coordinate with the City of Santa Clara to begin the PCC process.

RESPONSE TO DATA REQUEST 21

VDC filed its request for PCC review on May 10, 2021. Attachment TRANS DR-21 includes the complete PCC drawing set and the letter requesting review. The City of Santa Clara has begun its review and comments are expected shortly after its internal meeting scheduled on June 22, 2021.

22. Please prepare and submit a revised VMT analysis for the project in accordance with City of Santa Clara's VMT Policy. Include a TDM plan, if required.

RESPONSE TO DATA REQUEST 22

VDC spoke with the City of Santa Clara about the VMT policy and has engaged Kimley Horn who is developing the VMT analysis. VDC estimates the VMT report can be finalized by the end of June and will be docketed under separate cover at that time.

BACKGROUND: CONSTRUCTION AND DEMOLITION TRIPS

For construction traffic, a qualitative analysis of VMT impacts (instead of a more detailed quantitative analysis) is often appropriate (CANRA 2018; see also CEQA Guidelines section 15064.3(b)). The SPPE application states the site requires demolition of the existing building, ground preparation and grading, and the removal of 10,000 cubic yards of soil and undocumented fill from the site. The application does not provide the maximum and average number of daily trips for construction or the removal of undocumented fill.

DATA REQUEST

23. Please provide the maximum and average number of daily trips for construction and the removal of undocumented fill during both Phase 1 and Phase 2 of the project.

RESPONSE TO DATA REQUEST 23

VDC has not yet retained a contractor for construction of the CA3DC and therefore does not have a complete construction timing and staging plan. Also, it is possible that the 10,000 cubic yards of fill material can be part of a balanced cut and fill approach. However, based on experience at other sites, if all the material cannot be used on site, it is estimated that the undocumented fill could be transported from the site with a frequency average about 25 trucks per day.

BACKGROUND: Alterations to Public Roadways

Section 2.3.8 Utility Interconnections (page 2-14) states the construction of the new building would require connections to domestic water, fire water, sanitary sewer, fiber, and natural gas. A 12-inch diameter domestic water line, located along the Walsh Avenue frontage of the site, would serve as the primary source of water for the project. There is also a recycled water pipeline located at the intersection of Walsh Avenue and Northwestern Parkway, approximately 500 feet to the southeast of the project site. The applicant plans to extend the recycled water line to use as the project's secondary source of water.

DATA REQUEST

24. Would project construction (onsite and offsite) or operations temporarily alter any public roadways or intersections? If so, please identify which roadway and/or intersection would be affected, describe the alteration, and provide the duration of activities on the affected roadway and/or intersection.

RESPONSE TO DATA REQUEST 24

There will be some underground trenching necessary in Walsh Avenue to install project service laterals (water, sanitary sewer and storm drain, and fiber interconnections). Walsh Avenue is a 2-lane each way street with a double left turn lane. These trenches would be generally 3.0' wide running perpendicular to Walsh Ave as they exit the project site to connect to public mains. With the existing street geometry, it is anticipated that a single temporary lane closure would be required (allowing thru traffic at all times by way of the adjacent lanes) during a 3-week time frame. It is anticipated that the lanes would be open nightly with steel plates being installed by the contractor. The project storm drain lateral would need to extend longitudinally in Walsh Avenue for approximately 140 feet extending beyond the CA3DC project property line in the northwest corner. This would require similar temporary lane closure as previously described – including steel plate installation for nightly openings. The installation of the recycled water pipeline extension will be in Walsh Avenue up to the intersection with Northwestern Parkway for a connection to the existing RW line - location to be determined by the City of Santa Clara. However, VDC estimates the recycled water pipeline construction could also be done with minimal lane closures as noted above and would not exceed a duration of 120 days.

BACKGROUND: Thermal Plumes

According to the SPPE application, the project would have emergency generators and air-cooled chillers and the project site is located 1.75-miles west of the Norman Y. Mineta San Jose International Airport. Therefore, staff will require the following information in order to complete its evaluation of thermal plumes from the proposed CA3BGF and the CA3DC building/server chilling units to ensure air traffic safety and analyze any potentially significant impacts from such plumes.

DATA REQUESTS

25. Please perform a thermal plume modeling of the project's emergency generators for the CA3BGF and provide modeling files with all calculations embedded in.

RESPONSE TO DATA REQUEST 25

VDC engaged Ramboll to conduct the analysis responsive to this data request. The thermal plume analysis is included as Attachment TRANS DR-25. It is not possible to docket modeling files with all calculations embedded as the docket system will not accept such files. Please set up a Sharepoint or similar document transfer system and VDC will upload the modeling files and spreadsheets.

26. Please perform thermal plume modeling of the equipment used to cool the building and data servers at the CA3DC and provide modeling files with all calculations embedded in.

RESPONSE TO DATA REQUEST 26

VDC engaged Ramboll to conduct the analysis responsive to this data request. The thermal plume analysis is included as Attachment TRANS DR-25. It is not possible to docket modeling files with all calculations embedded as the docket system will not accept such files. Please set up a Sharepoint or similar document transfer system and VDC will upload the modeling files and spreadsheets.

27. Please describe in detail the HVAC equipment, including the chiller units, with enough detail to confirm the thermal plume modeling.

RESPONSE TO DATA REQUEST 27

The facility is equipped with 48 economizing air-cooled chillers with evaporative dry bulb suppression. There are 8 redundant units across the entire roof allowing all chillers to operating uniformly at 83% under normal operation. In addition to the 48 chillers, 5 Direct Outside Air Systems (DOAS) will be located on the roof to distribute conditioned ventilation air throughout the building. As the project develops, 2 additional DOAS units will be located on the lower roof to address the administration building as well as a small number of condensing units which will be provided to serve the variable refrigerant flow system.

28. Please provide a schematic, showing all mechanical equipment on the roof of the CA3DC.

RESPONSE TO DATA REQUEST 28

Attachment TRANS DR-28 includes a drawing of the roof plan as requested.

29. Please provide the following to support the thermal plume analysis (provide equivalent data if necessary):
- a. Stack Height (m) for the CA3DC chiller units and CA3BGF emergency engines
 - b. Exhaust Temp (K) for both the chiller units and emergency engines
 - c. Exit Velocity (m/s) for both the chiller units and the emergency engines.
 - d. Stack Diameter (m) for the chiller units and the emergency engines
 - e. Number of chiller unit stacks
 - f. Arrangement and distance between the chiller unit stacks (m)

RESPONSE TO DATA REQUEST 29

This information is contained in Attachment TRANS DR-25.

BACKGROUND: Communication with Union Pacific Railroad

Union Pacific Railroad tracks run in an east-west direction adjacent to the southern side of the project site.

DATA REQUEST

30. Please state:

- a. Whether Union Pacific has been notified of the project;
- b. Methods of notification used, and person contacted; and
- c. Any comments received from Union Pacific

RESPONSE TO DATA REQUEST 30

VDC has not notified Union of the project because the project will not utilize any Union Pacific land nor will it affect any railroad facilities.

ATTACHMENT HAZ DR-9

DEF Safety Data Sheet



Safety Data Sheet

1. Product Identifier and Company Identification

Product name	: Urea Solution – High Purity 32.5 %	
HBCC SDS number	: CU02460M0	
Synonym	: Urea Solution; Urea liquor; Diesel Exhaust Fluid (DEF),	
Product use and Restrictions	: Refer to label or call	
Manufacturer	: Corporate Headquarters	Corporate Safety & Compliance
Contact Address	Hill Brothers Chemical Company 1675 North Main Street Orange, California 92867 714-998-8800 800-821-7234	Hill Brothers Chemical Company 7121 West Bell Road, Suite 250 Glendale, Arizona 85308 623-535-9955 - Office 623-535-9944 - Fax
Emergency telephone Number (Chemtrec)	: 800-424-9300	
Website	: http://hillbrothers.com	

2. Hazard Identification

Classification	: None
Signal Word	: None
Pictogram(s)	: None
Hazard Statements	: None

Precautionary Statements

Response	: None
Prevention	: None
Storage	: None
Disposal	: None

3. Composition / Information on Ingredients

CAS Number	Ingredient Name	Weight %
57-13-6	Urea	31-33%
7732-18-5	Water	67-69%
7664-41-7	Ammonia	≤0.15%

4. First Aid Measures

Summary of First Aid Measures

Ingestion	: Do not induce vomiting. Get medical attention immediately.
Inhalation	: Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin	: Remove contaminated clothing. Rinse immediately with plenty of water. Obtain medical attention if irritation develops or persists. Wash contaminated clothing before reuse.
Eyes	: Immediately flush with large amounts of water, including under the eyelids. If pain or irritation persists seek medical attention. Speed and thoroughness in rinsing eyes are important to avoid permanent injury.
Medical Conditions	
<u>Effects of Acute and Delayed Exposure</u>	
Inhalation	: May cause respiratory irritation.
Skin Contact	: May cause skin irritation.
Eye Contact	: May cause eye irritation.
Ingestion	: Do not induce vomiting. Get medical attention immediately.
Chronic Symptoms	: None expected under normal conditions of use.
Indication of Any Immediate Medical Attention and Special Treatment Needed	: If exposed and feeling unwell, seek medical advice (show the label where possible).

5. Fire Fighting Measures

Extinguishing	: Use extinguishing media appropriate for surrounding fire. Unsuitable Extinguishing Media: Do not use heavy water stream. Use of Heavy water stream of water may spread fire.
Special Exposure Hazards	: Fire Hazard: Not combustible but may decompose at high temperatures. Explosion Hazard: Product is not explosive. Reactivity: Hazardous reactions will not occur under normal conditions.
Special Protective	: Do not enter fire area without proper protective equipment, including Respiratory protection.
Fire Fighting Procedures	: Precautionary Measures Fire: Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present. Firefighting Instructions: Use water spray or fog for cooling exposed containers.
NFPA Rating	: Health - 1 Flammability - 0 Instability - 0



0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

6. Accidental Release Measures

- Personal Precautions** : Equip Cleanup crew with proper protection.
- Emergency Procedures** : Ventilate area.
- Methods of Containment And Clean-Up** : Contain any spills to prevent migration and entry into sewers or streams. Clean up spills immediately and dispose of safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities as appropriate after a spill.
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

7. Handling and Storage

- Safe Handling** : Store in compliance with all Federal, State, and local regulations. Store in a well-ventilated area, away from incompatible materials or sources of heat and ignition. Empty containers may contain residue and can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, flames, sparks or other sources of ignition; they may evolve noxious fumes.
- Storage** : Store in compliance with all Federal, State, and local regulations.
- Work / Hygienic Practices** : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

8. Exposure Controls / Personal Protection

Occupational Exposure Limits :

Chemical Name: Urea Solution – High Purity 32.5 %				
Exposure Limits (TWAs) in Air				
CAS Number	Chemical	ACGIH TLV	OSHA PEL	STEL
57-13-6	Urea	N/A	N/A	N/A
7664-41-7	Ammonia	25	50	35

Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available but not required.

- Protective Equipment** : Safety glasses, gloves and general work clothing are recommended. Where Ventilation is insufficient, wear respiratory protection. Wearing of appropriate protective clothing and gloves is suggested if epidermal sensitivity develops. Wear chemically resistant protective gloves.
- Eye Protection** : Safety glasses.
- Respiratory** : Use a NIOSH-approved respirator or self-contained breathing apparatus whenever exposure may exceed established Occupational Exposure Limits.

9. Physical and Chemical Properties

Appearance: Colorless liquid	Odor: slight ammonia odor
Odor Threshold: Not available	pH: 7.5-10
Melting Point/Freezing Point: 11.5F	Initial Boiling Point/Range: 219°F
Flash Point: Not applicable	Evaporation Rate (BuAc=1): Not available
Flammability: Not applicable	Lower/Upper Explosive Limit: Not applicable
Vapor Pressure (mmHg): Not available	Vapor Density (Air=1): Not available
Specific Gravity @ 20°C: 1.09cc (9.1 lb/gal)	Solubility in Water: 100%
Heat of Solution in H₂O: Not available	Heat Capacity at 25° C (77° F): Not available
Decomposition Temperature: 135°C (275°F) Urea	Density at 25° C (77° F): 9.1 Lbs./Gal
% Volatiles: Not available	Loose Bulk Density: Not available
Molecular Weight: 60.07 (100% Urea)	VOC: Not available

10. Stability and Reactivity

Reactivity	: Hazardous reactions will not occur under normal conditions.
Chemical Stability	: Stable under recommended handling and storage conditions (see section 7).
Possibility of Hazardous Reactions or Polymerizations	: Hazardous polymerization will not occur.
Conditions to Avoid	: Avoid exposing containers to heat or flame. Keep separated from incompatible materials.
Incompatible Materials	: Nitric acid. Gallium. Perchlorates. Strong oxidizers. Caustic products. Alkalis.
Hazardous Decomposition Products	: Ammonia. Nitrogen oxides.

11. Toxicological Information

Acute and Chronic Effects	: Not classified
<u>Routes of Exposure</u>	
Inhalation	: Yes
Ingestion	: Yes
Skin	: Yes
Eyes	: Yes
Symptoms related to Physical, Chemical & Toxicological Characteristics	: Not classified
Numerical Measures of Toxicity (Urea)	: LD50 Oral Rat = 8471 mg/kg

Numerical Measures of Toxicity (Ammonia) : LD50 Inhalation Rat = 5.1 mg/l (exposure time 1 h)
LD50 Inhalation Rat = 2000 ppm/4h (exposure time 4 h)

Chronic Toxicity : None expected under normal conditions of use.

Carcinogenicity :

Product Name: Urea Solution – High Purity 32.5%					
ACGIH	IARC	EPA	NIOSH	NTP	OSHA
-	-	-	-	-	-

TARGET ORGANS : N/A

12. Ecological Information

Ecotoxicity : **Urea**
LC50 Fish 1 = 16200 -18300 mg/l (exposure time 96 h – Species: Poecilia reticulata)
EC50 Daphnia 1 = 3910 mg/l (exposure time 48 h – Species: Daphnia magna [static])
Ammonia
LC50 Fish 1 = 0.44 mg/l (exposure time 96 h – Species: Cyprinus carpio)
EC50 Daphnia 1 = 25.4 mg/l (exposure 48 h – Species: Daphnia magna)
LC50 Fish 2 = 0.26 - 4.6 mg/l (exposure 96 h – Species: Lepomis macrochirus)

Persistence and Degradability : Not available

Bioaccumulative Potential :	Product/ Ingredient	Log _{P_{ow}}	BCF	Potential
	Urea	-1.59 (at 25°C)	<10	-

Mobility in Soil : Not available

13. Disposal Considerations

Dispose of waste material in accordance with all local, regional, national, and international regulations.
Additional Information: Spilled chemical can be used as fertilizer.

14. Transport Information

This product is not regulated for transport as a hazardous material, substance or dangerous good.

15. Regulatory Information

SARA 302 Extremely Hazardous Substances (EHS) : No chemical in this product is listed as an Extremely Hazardous Substance (EHS) under Section 302 of EPCRA.

SARA 304 Extremely Hazardous Substances (EHS) Release Notification : No chemical in this product is listed as an Extremely Hazardous Substance (EHS) which, if released to the environment in quantities at or above the substance's Reportable Quantity (RQ), would require reporting to the SERC and LEPC under Section 304 of EPCRA.

SARA 311/312 Hazards

:

SARA 311/312 Hazards				
Acute	Chronic	Flammability	Pressure	Reactivity
No	No	No	No	No

SARA 313 Reportable Chemicals

: No chemical in this product is subject to annual emissions, transfers, or waste management reporting under the Community-Right-to-Know provisions of EPCRA Section 313, also known as the Toxic Release Inventory (TRI) Report or Form R.

CERCLA Hazardous Substances

: No chemical in this product is listed as a CERCLA hazardous substance subject to the National Response Center (NRC) release reporting requirements.

Clean Air Act (CAA) Section 112(r) Air Pollutants

: No chemical in this product is listed as an air pollutant under the U.S. Clean Air Act, Section 112(r) (40 CFR 61).

California Prop 65 Chemicals

: This product does not contain any chemicals known to the state of California to cause cancer and birth defects or other reproductive harm.

Hazard Label Warning

: This product does not require hazard label warnings.

TSCA (Toxic Substances Control Act)

: All chemical substances in this product are listed on the U.S. TSCA Inventory List.

ACRONYMS:

CAS # – Chemical Abstract Services Registry Number

CFR – Code of Federal Regulations

CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act

EPCRA – Emergency Planning and Community Right-to-Know Act

LEPC – Local Emergency Planning Committee

SERC – State Emergency Response Commission

16. Other Information**Revision date**

:

Supersedes

:

First Issue

: 09/28/2017

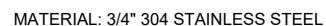
Section(s) changed since last revision

: First Issue SDS

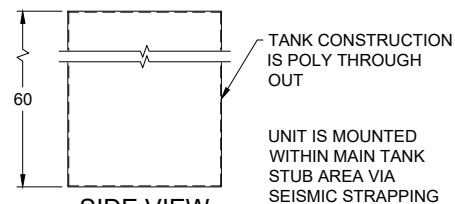
IMPORTANT! Read this SDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure. This SDS has been prepared in accordance with the Globally Harmonized System of Chemical and Labeling of Chemicals (GHS) Fifth Edition and the OSHA Hazard Communication Standard [29 CFR 1910.1200]. The SDS information is based on sources believed to be reliable. Available data, safety standards, and government regulations are subject to change and the conditions of handling and use, or misuse are beyond our control; **Hill Brothers Chemical Company** makes no warranty, either expressed or implied, with respect to the completeness or continuing accuracy

ATTACHMENT HAZ DR-12

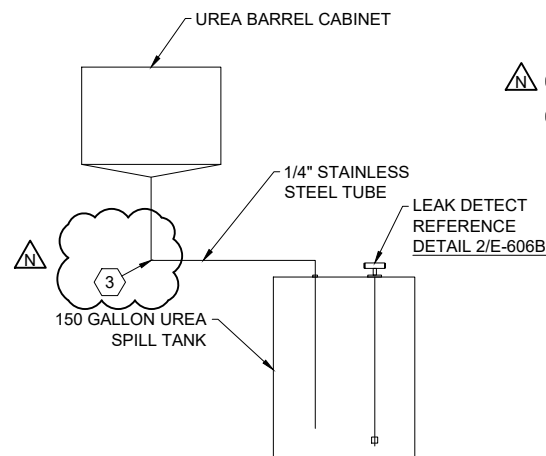
Generator Schematic with DEF Tank and Secondary Containment



24
TOP VIEW



SIDE VIEW



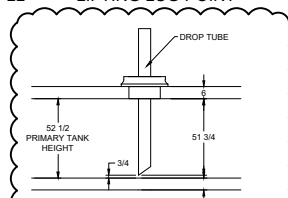
4 UREA SPILL BASIN DIAGRAM
SCALE = 1:1

NOTES:

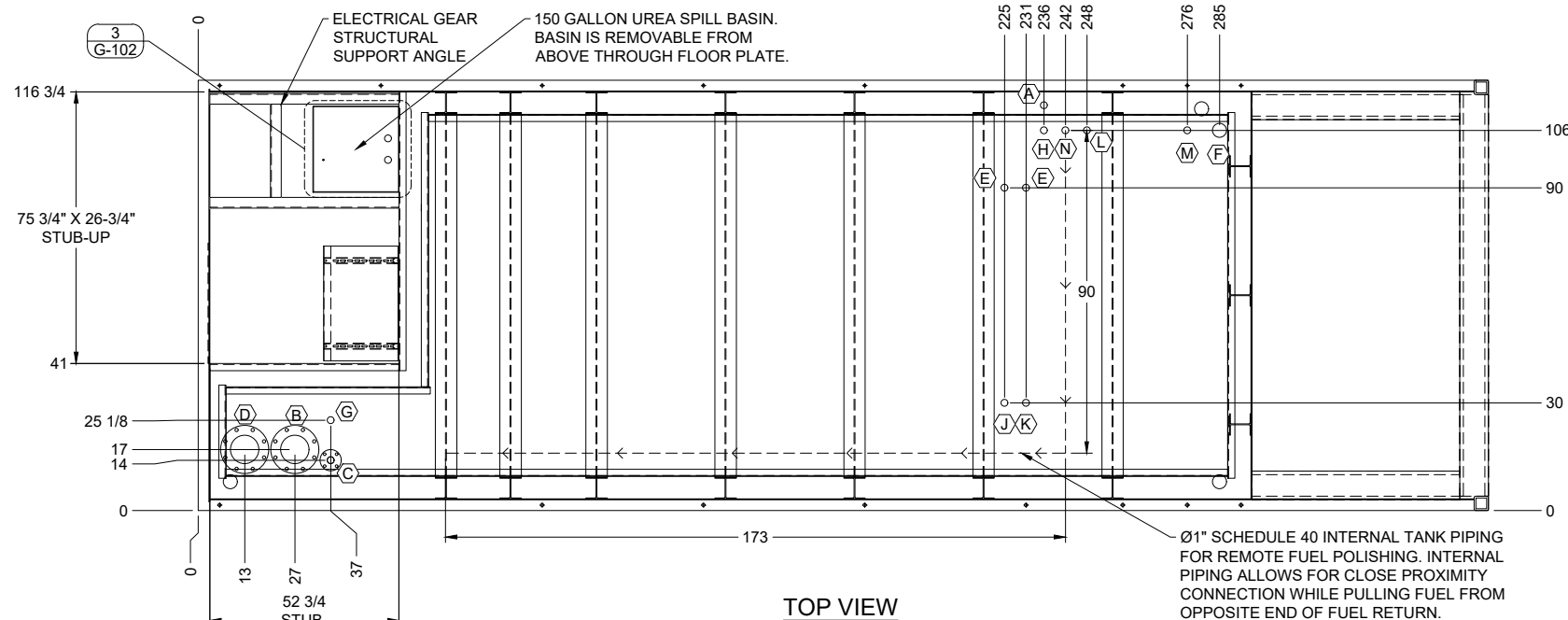
- 1.) TANK IS PAINTED BLACK.
- 2.) DON'T USE MOUNTING HOLE ARRANGEMENT FOR RPE DRILLING ANCHORAGE FOR THE TANK. USE ACTUAL TANK FLANGE AS A TEMPLATE.
- 3.) 1/4" UREA DRAIN WILL HAVE SECONDARY DRAIN PAN TO ENSURE CONTAINMENT DRAIN PAN EMPTIES INTO 150 GALLON UREA SPILL TANK

LEGEND

- =ENCLOSURE TO TANK MOUNTING HOLES
- =TANK TO FOUNDATION MOUNTING HOLES
- =ENCLOSURE TIE DOWN HOLES
- =LIFTING LUG POINT

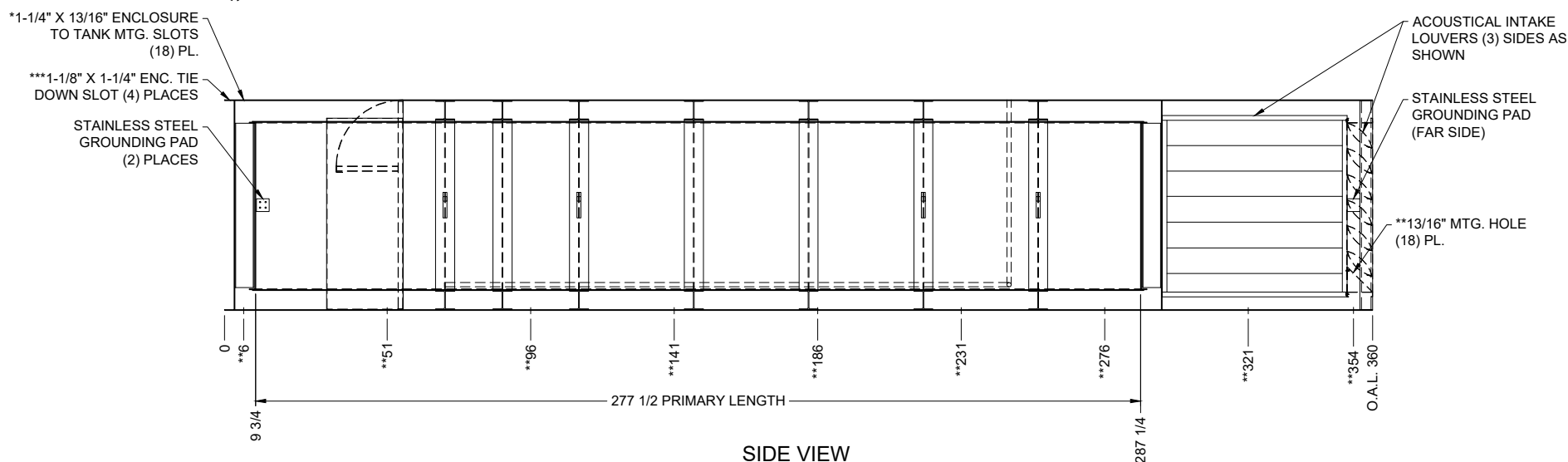


5 OPU INSTALLATION
SCALE = N.T.S.

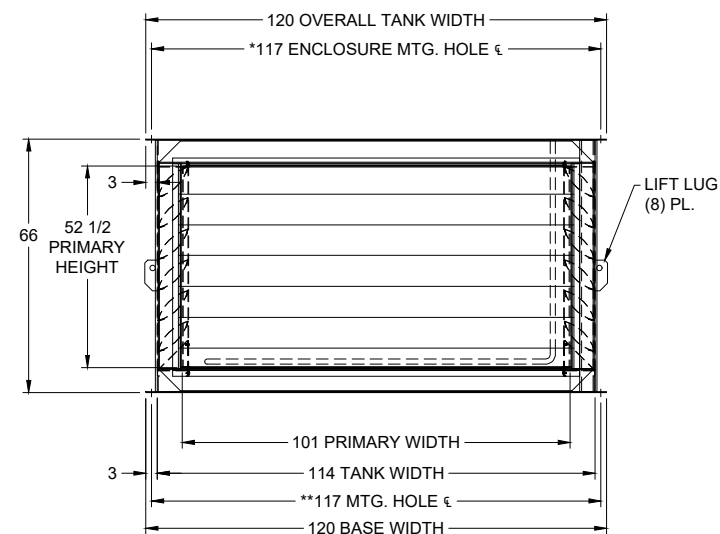


TOP VIEW

Ø1" SCHEDULE 40 INTERNAL TANK PIPING FOR REMOTE FUEL POLISHING. INTERNAL PIPING ALLOWS FOR CLOSE PROXIMITY CONNECTION WHILE PULLING FUEL FROM OPPOSITE END OF FUEL RETURN.



SIDE VIEW



END VIEW

FITTING LIST			
ITEM	QTY	DESCRIPTION	
A	1	2" LEAK DETECT	
B	1	8" SEC. E-VENT @	391,500 Cubic FT/Hr
C	1	2" NORMAL VENT	
D	1	8" PRI. E-VENT @	343,200 Cubic FT/Hr
ALL		VENT(S) EXT. =	2' Above Enclosure & A Minimum of 12' AFG
E	2	2" EXTRA FITTING PORT	
F	1	4"x2" FILL W/LOCKING CAP AND DROP TUBE & MORRISON BROS. LIMITER 95%	
G	1	2" MECH. FUEL GAUGE (ROCHESTER)	
H	1	2" 90% HIGH/ 30% LOW ALARM	
J	1	2"x1-1/4" SUPPLY W/DROP TUBE & CHECK VALVE	
K	1	2"x1-1/4" RETURN W/DROP TUBE	
L	1	2" PRIMARY TANK DRAIN 1-1/2" DROP TUBE	
M	1	2"x1" FUEL POLISHER (OPTIONAL/REMOTE) SUPPLY W/FOOT VALVE	
N	1	2"x1" FUEL POLISHER (OPTIONAL/REMOTE) RETURN W/ INTERNAL PIPING TO OPPOSITE END OF TANK	
P	1	2" UREA SPILL TANK INSPECTION PORT	
Q	1	2" UREA SPILL TANK LEAK DETECTION PORT	
R	1	1" X 1/4" UREA SPILL TANK CONNECTION PORT	
		-	
FUEL CAPACITY			
5,408		GAL. AT 100%	
5,138		GAL. AT 95% FUEL SHUT OFF	
4,732		GAL. AT 87-1/2% FUEL LEVEL	
5,086		USABLE GAL. TO GENERATOR AT 95% FUEL SHUT-OFF (DROP TUBE LOSS)	
WEIGHT OF TANK			
50,000		LBS. DRY WEIGHT	



MH 26349
UL 2085

**JOHNSON
THERMAL
SYSTEMS**

REV	DATE	BY	DESCRIPTION:	APP BY:	DATE:
C	08-11-20	SC	ADDED RADIATOR INTERCONNECT	RR	08-11-20
D	08-18-20	SC	UPDATED PER CUSTOMER COMMENTS	RR	08-21-20
E	08-27-20	SC	UPDATED PER CUSTOMER COMMENTS	RR	08-27-20
F	08-28-20	SC	UPDATED PER CUSTOMER COMMENTS	RR	08-28-20
G	09-23-20	SC	UPDATED PER CUSTOMER COMMENTS	RR	09-23-20
H	10-02-20	SC	UPDATED PER CUSTOMER COMMENTS	RR	10-02-20
J	10-08-20	SC	UPDATED PROJECT ONE-LINE DIAGRAM	RR	10-08-20
K	01-08-21	SC	UPDATED EXHAUST SYSTEM	RR	01-08-21
L	01-24-21	SC	UPDATED PER CUSTOMER COMMENTS	RR	01-24-21
M	02-15-21	SC	UPDATES PER CUSTOMER COMMENTS	RR	02-15-21
N	05-05-21	JS	UPDATES PER CUSTOMER COMMENTS	RR	02-15-21

**ISSUED FOR
APPROVAL**

THE INFORMATION ON THIS DOCUMENT IS INTENDED TO CONVEY AND DOCUMENT THAT THE CONTRACT SPECIFICATION HAS BEEN ACCURATELY INTERPRETED AND MAY NOT BE ACCURATE FOR CONSTRUCTION PURPOSES.

CONSTRUCTION PURPOSES.
PROPRIETARY NOTICE

THIS DRAWING CONTAINS DESIGNS AND OTHER INFORMATION WHICH ARE THE PROPERTY OF JTS, LLC. EXCEPT FOR THE RIGHTS GRANTED EXPRESSLY BY CONTRACT, THIS DRAWING MAY NOT BE DISCLOSED OR DUPLICATED IN WHOLE OR IN PART OR USED FOR MANUFACTURE OF DESIGNS DISCLOSED HEREIN WITHOUT THE PRIOR WRITTEN PERMISSION OF JTS, LLC.

UNLESS OTHERWISE SPECIFIED

ALL DIMENSIONS ARE IN INCHES

DO NOT SCALE

DRAWN BY:	DATE:
SC	06 20 20

SC	06-29-20
CHECKED BY	DATE

CHECKED BY: SC	DATE: 06-29-20
-------------------	-------------------

SC	06-29-20
APPROVED BY:	DATE:

APPROVED BY: RR	DATE: 06-29-20
--------------------	-------------------

PROJECT NAME:

CA23
STANDBY

PROJECT LOCATION:
SANTA CLARA

CLIENT NAME:

PETERSON POWER

QUOTE NUMBER

CUSTOMER PO NUMBER:

JOB NUMBER:

DRAWING DESCRIPTION:

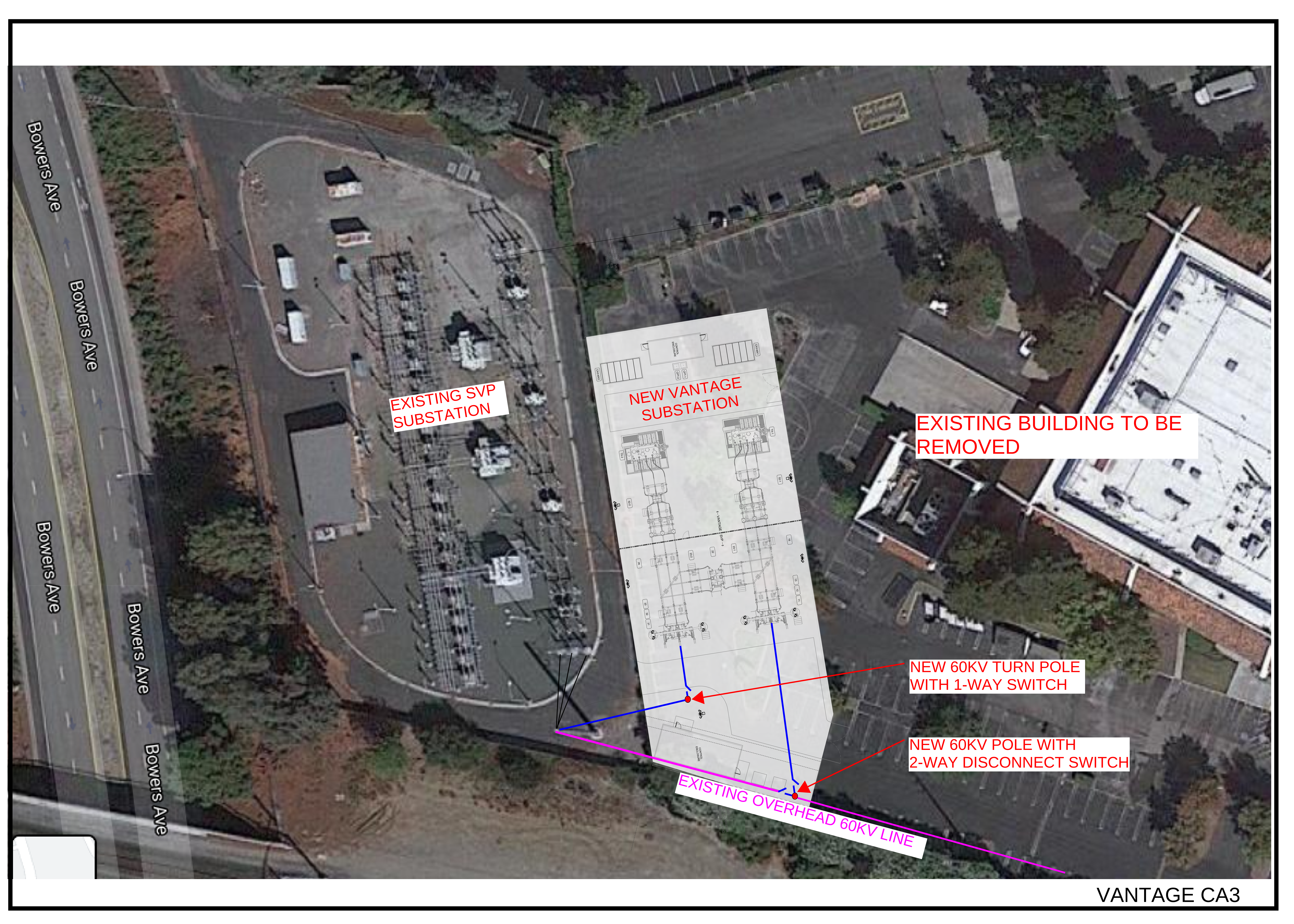
5,408 GALLON UL-2085
FUEL TANK

DRAWING NO: G-102	REV: N
-----------------------------	------------------

SHEET 7 OF 25

ATTACHMENT PD DR-13

Substation and Transmission Line Drawing



Bowers Ave

Bowers Ave

Bowers Ave

Bowers Ave

Bowers Ave

EXISTING SVP
SUBSTATION

NEW VANTAGE
SUBSTATION

EXISTING BUILDING TO BE
REMOVED

NEW 60KV TURN POLE
WITH 1-WAY SWITCH

NEW 60KV POLE WITH
2-WAY DISCONNECT SWITCH

EXISTING OVERHEAD 60KV LINE

ATTACHMENT PD DR-14

Transmission Line Pole Photographs









ATTACHMENT TRANS DR-21

PCC Submittal CA3DC

May 10, 2021

Duane Hill, Associate Principal
Sheehan Nagle Hartray Architects
130 East Randolph Street, Suite 3100
Chicago, Illinois 60601

Re: 2590 Walsh Avenue (CA31) Proposed Project – Issue for PCC Review

Dear Planning Clearance Committee,

The project located at 2590 Walsh Avenue is one (4) story building totaling 469,467 square feet being built in two phases. The proposed CA31 site encompasses approximately 6.69 acres. The property is zoned ML-Light Industrial zoning. Currently existing on the site, is an approximately 115,000 square foot single-story office and warehouse building and associated paved surface parking and loading dock. The existing building construction consists of concrete, wood, and stucco. The building facade consists of mission style stucco archways with sloping tile roof. The proposed project would demolish the existing single-story office and warehouse building. The property is irregularly shaped and is generally bound to the Northwest by an existing microelectronics testing facility, to the Northeast by a software research and development facility, to the South by an existing railroad line operated by CalTrain, to the East by Walsh Avenue, and to the West by an existing Silicon Valley Power (SVP) substation (Uranium Substation). The Vantage Santa Clara Data Center Campus CA1 is located to the east of the site across Walsh Avenue.

In addition to the enclosed drawing set and report, the following narrative summarizes key project design elements.

Narrative summary of key design elements:

- Reduction of the sound levels has been a critical aspect in the design development of this project. Vantage Data Center's goal has been to not only meet the City's sound requirements, but to exceed the sound requirements. The comprehensive and extensive sound mitigation measures, referenced herein, all of which significantly contribute towards the sound attenuation of this campus, have not been proposed on any other data center projects in Santa Clara.

Out of this extensive review process, several different mechanical systems and acoustical measure were analyzed. In particular (3) different types of mechanical systems with differing acoustical enhancements were reviewed, the results of which can be summarized as follows:

- a. Air-cooled chillers w/ NoiseBlock stacks – The projects Mechanical plant consists of (48) air-cooled chillers on top of a building dunnage platform. Each chiller has a self-supported acoustic “chimney” above the condenser fans, to funnel noise up and away from nearby residences. The chimney is also made up of an absorptive material to decrease the overall energy of the sound produced by the chiller condenser fans. Each chiller is equipped with adiabatic pads for ambient dry bulb suppression during peak temperatures of 80°F DB and above
 - i. This option uses the least amount of water annually, with estimated expected annual consumption of 1,388,400 gallons (~4.3AFY) of water. This value is for the mechanical plant only and include makeup water requirements for both evaporation and effluent from water treatment systems.

- b.** Water-cooled chillers & hybrid evaporative dry coolers – The project Mechanical plant consists of (32) containerized water-cooled chillers and (32) hybrid evaporative dry coolers for heat rejection. Each dry cooler has adiabatic pads for ambient dry bulb suppression during peak temperatures when the dry-cooler sees inlet temperatures of 89°F and above.
 - i.** This option uses roughly 340% more water than option 1, with estimated expected consumption of 6,120,000 gallons (~19 AFY) of water. This value is for the mechanical plant only and include makeup water requirements for both evaporation and effluent from water treatment systems.
- c.** Water-cooled chillers & open cooling towers – The project Mechanical plant consists of (32) containerized water-cooled chillers and (24) open circuit cooling towers atop the building dunnage platform. Cooling towers were optimized for largest blade diameter and lowest fan speeds to decrease noise production from tower fans.
 - i.** This option uses the most amount of water annually, with an estimated expected annual consumption of 487,802,112 gallons (~1,500 AFY) of water. Limiting the Cooling Towers to a maximum of 2.5 Cycles of Concentration as dictated by California's Title 24, Part 6 also requires roughly 195,120,845 gallons annual effluent (~600 AFY). This translates to a roughly 3,500% increase in water consumption over option 1.

In summary, Air-cooled chillers w/NoiseBlock stacks utilize the least amount of water; approximately 5x less than water cooled chillers and 251x less than cooling towers and are therefore the optimum choice from an environmental perspective.

In analyzing the sound levels, Air-cooled chillers w/ Noiseblock stacks had the best acoustical performance. In addition to the base mechanical system a number of different acoustical measures are being incorporated to further reduce the sound as follows:

- a.** Roof layout was optimized in regard to the dry cooler/chiller orientation for acoustical performance.
- b.** Air-cooled chillers fitted with noise mitigation packages provided as a factory option.
- c.** Acoustical louver extending to top of chiller fans attached to dunnage platform traveling the full length of the south side of the platform and continuing halfway up the east and west sides of the platform.
- d.** 8-foot-high solid sound barrier wall along the northwest property line measuring 60 feet in length

Other site measures have been added to the project to address acoustical concerns beyond just the mechanical system as follows, all of which are designed to provide a project with the highest possible sound attenuation:

- a.** The backup generators have been moved to the front of the project (Walsh Avenue elevation) to allow the building to create an acoustical block to the surrounding neighbors.
- b.** Back-up generators housed in acoustically enhanced enclosures to reduce noise.
- c.** Louvers extending to the top of chiller fans attached to the dunnage platform traveling the full length of the north side of the platform and continuing halfway down the east and west sides of the platform.

d. 15-foot-high sound wall was installed around the substation.

The combination of these different elements will achieve a sound reduction of approximately 10% when compared to code required maximum nighttime level at the nearest residence of 50 dBA. We are continuing to refine these measures with our suppliers and manufactures to further reduce the acoustical properties.

- The project would provide a total of 36 parking spaces on site including 1 accessible and 1 van accessible parking space. Of the 36 on-site parking spaces, 4 spaces will contain EV charging stations and 9 spaces will be reserved for Clean Air vehicles. Additionally, up to 96 parking places will be provided for CA31 across Walsh Avenue on Vantage's CA1 existing campus. The additional parking is provided to meet City requirements, but Vantage's experience has demonstrated that the 36 on-site parking spaces will be sufficient on their own to support CA31 operations.
- The data center building will be approximately 87.5 feet in height to the top of parapet. The mechanical equipment screen on the roof of the building will extend to a height of 102.25 feet from the top of the ground floor slab. The building will be located in the center of the site and will be set back at a minimum of 109 feet from the side yard to the north (Walsh Avenue), a minimum of 59 feet from the side yard to the west (adjacent to a non-residential zone), a minimum of 40 feet from the side yard to the east (adjacent to a non-residential zone), and a minimum of 45 feet from the rear yard to the east (medium density residential zone; railroad tracks).

Sincerely,



Duane Hill, AIA
Associate Principal



PLANNING APPLICATION

CITY OF SANTA CLARA, PLANNING DIVISION

1500 Warburton Avenue, Santa Clara, California 95050

(408) 615-2450 Fax: (408) 247-9857

E-mail Planning@santaclaraca.gov

Website: www.santaclaraca.gov

APPLICATION FOR:

(Please check all applicable boxes)

- ☐ VARIANCE
☐ USE PERMIT
☐ ZONING CHANGE
☐ TENTATIVE MAP
☐ TENTATIVE PARCEL MAP
☐ LOT LINE ADJUSTMENT
☐ MODIFICATION
☐ SPECIAL PERMIT
☐ HISTORICAL & LANDMARKS COMMISSION
☐ GENERAL PLAN AMENDMENT
☐ OFF-SITE PARKING PERMIT
☐ (OTHER):

ARCHITECTURAL REVIEW FOR:

- ☐ RESIDENTIAL
☒ NON-RESIDENTIAL
☐ MIXED-USE
☐ LANDSCAPE
☐ SIGNS
☐ TEMPORARY SIGNS

FOR PLANNING STAFF USE ONLY

Checked in by: _____ on _____

Fee: _____ Receipt number: _____

PCC-SC meeting date: _____

Tentative Commission date: _____

Tentative AC meeting date: _____

File number(s): _____

ENVIRONMENTAL REVIEW:

☐ EXEMPT ☐ NEG DEC ☐ EIR

Fax to: _____

Fax #: _____

Project Address: 2590 Walsh Ave. Santa Clara, CA 95051

County Assessor's Parcel Number (APN): 216 - 28 - 112

Building area: 469,467 SF square feet

Gross lot area: 6.7 Acres / 291,616 SF acres / square feet

Development Project Description: A four-story data center project consisting of 8 data halls, mechanical penthouse, backup generators, power equipment centers and administrative functions. The project will be constructed in phases, starting with the core and shell with future interior build outs on each of the four floors.

Hazardous Wastes and Substances Statement (Calif. Gov. Code 65962.5):

- ☐ This site is **not** included on the Hazardous Wastes and Substances Sites List
☐ This site is on the Hazardous Wastes and Substances Sites List.

(Copies of the applicable Lists are available online at these addresses:

<https://www.envirostor.dtsc.ca.gov/public/> and <https://geotracker.waterboards.ca.gov/>)

Date of list: _____

Regulatory ID #: _____

☐ **Urban Runoff Pollution Prevention Program (URPPP)** information provided to applicant ([C3. data form](#))

Please print all information legibly, including correct zip code.

Applicant: Simon Casey Mailing address: 2820 Northwestern Parkway Day phone: (415) 299-1151

Company: Vantage Data Centers City: Santa Clara Zip code: 95051

Signature: _____ E-Mail: scasey@vantage-dc.com

Vantage Data Centers Management Company
Property Owner: _____ Mailing address: 2820 Northwestern Parkway Day phone: (415) 299-1151

Company: Vantage Data Centers City: Santa Clara Zip code: 95051

Signature: _____ E-Mail: scasey@vantage-dc.com

NOTE: Please attach the names and full addresses, including zip codes, of all other involved parties to which you would like agendas and minutes sent.

Statement of justification for the above APPLICATION:

This statement will be included in the staff report to the Planning Commission; a separate statement may be attached, if necessary): Contact staff for assistance on preparing a statement. _____

Tentative Map / Tentative Parcel Map / Lot-Line Adjustment application only:

Engineering firm: _____ Engineer's name: _____

Address: _____ Phone: _____

E-Mail: _____ Engineer's signature _____

STAFF COMMENTS: _____

TO BE COMPLETE, IN ADDITION TO FILING THE APPROPRIATE APPLICATION FEES AND ANY REQUIRED ENVIRONMENTAL INFORMATION, THE FOLLOWING PLANS AND ADDITIONAL INFORMATION MUST ACCOMPANY THE PLANNING APPLICATION, BASED UPON THE TYPE OF REQUEST BEING MADE:

Note: All submittals must be black line drawings. Please provide only one copy of the required plans in color, if applicable. All plans shall be folded, except plans over 20 sheets, which must be rolled individually.

<u>TYPE OF APPLICATION REQUEST</u>	<u>REQUIRED MATERIALS TO BE SUBMITTED (stapled and collated)</u>
VARIANCE, USE PERMIT, or ZONING CHANGE.....	10 COPIES of B; 10 COPIES of C; 10 COPIES of D; 1 COPY of A
MODIFICATION.....	4 COPIES of B; 4 COPIES of C; 4 COPIES of D
TENTATIVE MAP, TENTATIVE PARCEL MAP, or LOT-LINE ADJUSTMENT.....	10 COPIES of B; One (1) 8 ½" x 11" reduction of B
HISTORICAL and LANDMARKS COMMISSION.....	4 COPIES of O; One (1) copy of A
SPECIAL PERMIT, GENERAL PLAN AMENDMENT, or TEMPORARY SIGN PERMIT, OFF-SITE PARKING PERMIT	(See Planning Division Personnel)

Architectural Review for:

SINGLE-FAMILY RESIDENTIAL.....	4 COPIES of O
RESIDENTIAL, NON-RESIDENTIAL, or MIXED-USE.....	10 COPIES of B; 10 COPIES of C; 10 COPIES of D
LANDSCAPING.....	4 COPIES of E
SIGNS.....	4 COPIES of B; 4 COPIES of L

REQUIRED ADDITIONAL APPLICATION MATERIALS:

- ☐ A non-refundable filing fee must accompany this application, when applicable; checks payable to the City of Santa Clara.
- ☐ Extra copies of these materials and/or additional information, such as photos or exterior-surface-material samples, may be requested by staff based upon pre-application discussions or upon review of application.
- ☐ All applications and materials, including reductions, must be **LEGIBLE** in order for the application to be deemed complete.
- ☐ Electronic copy of complete plan set submitted on a USB drive.
- ☒ A completed [PCC submittal checklist](#) for **ALL** projects going to **Project Clearance Committee (PCC)**
- ☐ 10 copies of the completed PCC submittal checklist.
- ☐ An application may be deemed incomplete and its review delayed if *any* of the required materials are not provided.

An application **may be deemed incomplete and its review delayed if **any** of the **required materials** are not provided.*

REQUIRED PLANS:

See the [PCC submittal checklist](#) for required information to be shown on all plan sheets.

- A. ☐ **One 8 ½" X 11" reduction** of the full plan set.
- B. ☒ Fully dimensioned **SITE PLAN**
- C. ☒ Fully dimensioned **FLOOR PLANS**
- D. ☒ Fully dimensioned **ELEVATIONS**
- E. ☒ Fully dimensioned **LANDSCAPE SITE PLAN and PLANTING PLAN**
- F. ☒ **Green Building Checklist**
- G. ☒ **Engineering Division Plan Requirements**
- H. ☒ **Utility Department Plan Requirements**
- I. ☒ **Fire Department Plan Requirements**
- J. ☒ **Street Department Plan Requirements**
- 3rd party review - will be done as a PCC comment response ☒ [Completed C.3. data form](#)
- ☐ 3rd party verification letter for C.3 plan proposal
- N/A K. ☐ **Parks and Recreation Department Requirements**
- N/A L. ☐ **Fully dimensioned SIGN ELEVATIONS, if applicable, showing:**
 - Each sign, existing and proposed, showing materials and colors
 - The building face or marquee with proposed signs attached (except for free-standing signs)
 - Square footage of all existing and proposed signs

REQUIRED PLANS AND APPLICATION MATERIALS FOR A SINGLE-FAMILY RESIDENCE:

- N/A M. ☐ Property owner signed and completed planning application
- N. ☐ All required fees paid
- O. ☐ Plan set (fully dimensioned and to scale) including, but not limited to:
 - ☐ Site Plans
 - ☐ Floor Plans
 - ☐ Elevations
- P. ☐ Other additional information if requested

E

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C

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G000.00

CIVIL

LANSCAPE

ARCHITECTURALELECTRICAL

An architectural rendering of a proposed new building for the University of the Pacific. The main building is a large, rectangular structure with a flat roof, featuring a grid of small, rectangular units. A smaller, multi-story building with a more complex, angular design is located to the right. The rendering includes a parking lot and a road in the foreground, and a large, curved, light-colored area on the left. The image is a black and white line drawing with some shading.

NEW PROJECT CONSISTING OF 8 DATA HALLS, MECHANICAL PENTHOUSE, BACKUP GENERATORS, POWER EQUIPMENT CENTERS AND ADMINISTRATIVE FUNCTIONS. THE SITE IS CURRENTLY DEVELOPED WITH AN APPROXIMATELY 115,000 SQUARE FOOT SINGLE-STORY OFFICE AND WAREHOUSE BUILDING AND ASSOCIATED PAVED SURFACE AREAS WHICH WILL BE DEMOLISHED. THE SCOPE OF WORK WITHIN THESE DOCUMENTS CONSISTS OF ALL ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, AND PLUMBING WORK TO SUPPORT THE CONSTRUCTION OF THE CORE AND SHELL OF THE BUILDING AND THE TENANT BUILD OUT OF THE DATA HALL.

[illegible]

BUILDING GSF: 469,467 SF
OCCUPANCY GROUP: NON-SEPERATED MIXED
OCCUPANCY(B,S-2, AND A-2)
USE: ELECTRONIC DATA PROCESSING
TYPE OF CONSTRUCTION: TYPE I-B
NUMBER OF STORIES: 4 STORIES
BUILDING HEIGHT: 87.5'
TYPE OF FIRE SPRINKLERS SYSTEM PROVIDED:
BUILDING EQUIPPED THROUGHOUT WITH AN AUTOMATED
NFPA13 SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH
SECTION 903.3.1.1
NUMBER OF PARKING SPACES:36 SPACES PROVIDED ON SITE*
*SEE SHEET AS100.02 FOR ADDITIONAL PARKING INFORMATION

OWNER



ARCHITECT

**SHEEHAN
NAGLE
HARTRAY
ARCHITECTS**

SHEEHAN NAGLE HARTRAY ARCHITECTS
60 WEST MONROE, SUITE 900
CHICAGO, IL 60603

MEP ENGINEER



KW
Mission Critical Engineering
40 E. Rio Salado
Parkway, 4th Floor
602.568.3144



**UPERTINO
ELECTRIC**
132 NORTH 7TH STREET
SAN JOSE, CA 95112
(408) 808-8000
C-10 LIC. NO. 174637

STRUCTURAL ENGINEER

PEOPLES ASSOCIATES
STRUCTURAL ENGINEERS
408-957-9220 • www.pase.com
San Jose, California Pleasanton, California

CIVIL ENGINEER



1570 Oakland Road (408) 487-2200
San Jose, CA 95131 HMHca.com



REED ASSOCIATES
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477 SOUTH TAFFEE STREET
SUNNYVALE, CALIFORNIA 94086
PHONE: 408-481-9020

PROGRESS SET
NOT FOR CONSTRUCTION

[illegible]

VANTAGE CA31
2590 WALSH AVENUE
ANTA CLARA, CA 95051

ISSUE FOR PCC REVIEW

COVER SHEET

3000.00

SCALE: AS NOTED

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A



PROJECT BOUNDARY
EASEMENT
CURB AND GUTTER
SIDEWALK
CENTERLINE
SANITARY SEWER
STORM DRAIN LINE
DRIVEWAY
WATER MAIN
GAS

REED ASSOCIATE
LANDSCAPE ARCHITECTS
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VANTAGE CA31

C1

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[illegible]

VANTAGE CA31
2590 WALSH AVENUE
SANTA CLARA, CA 95051

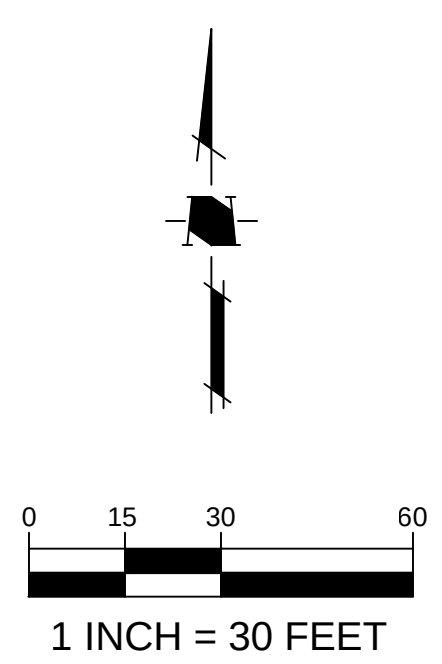
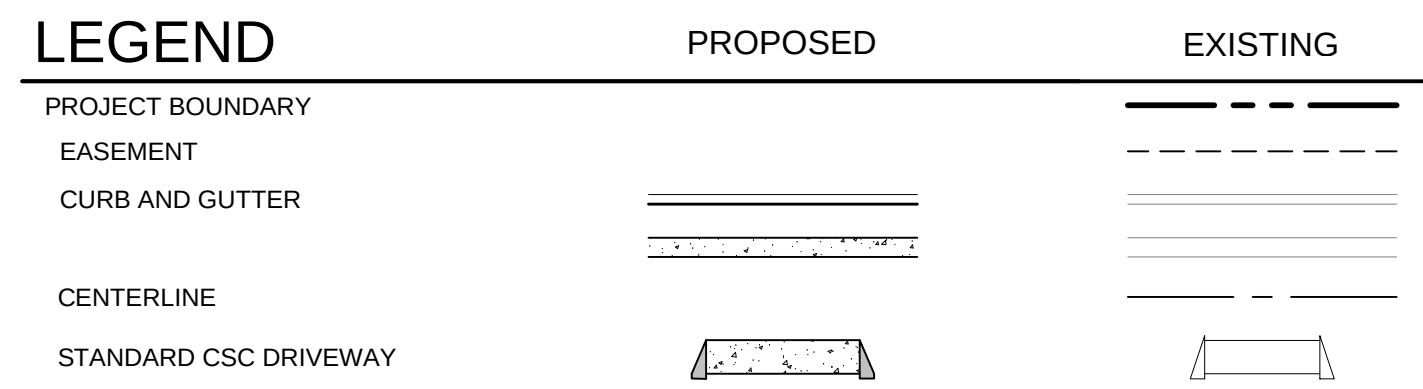
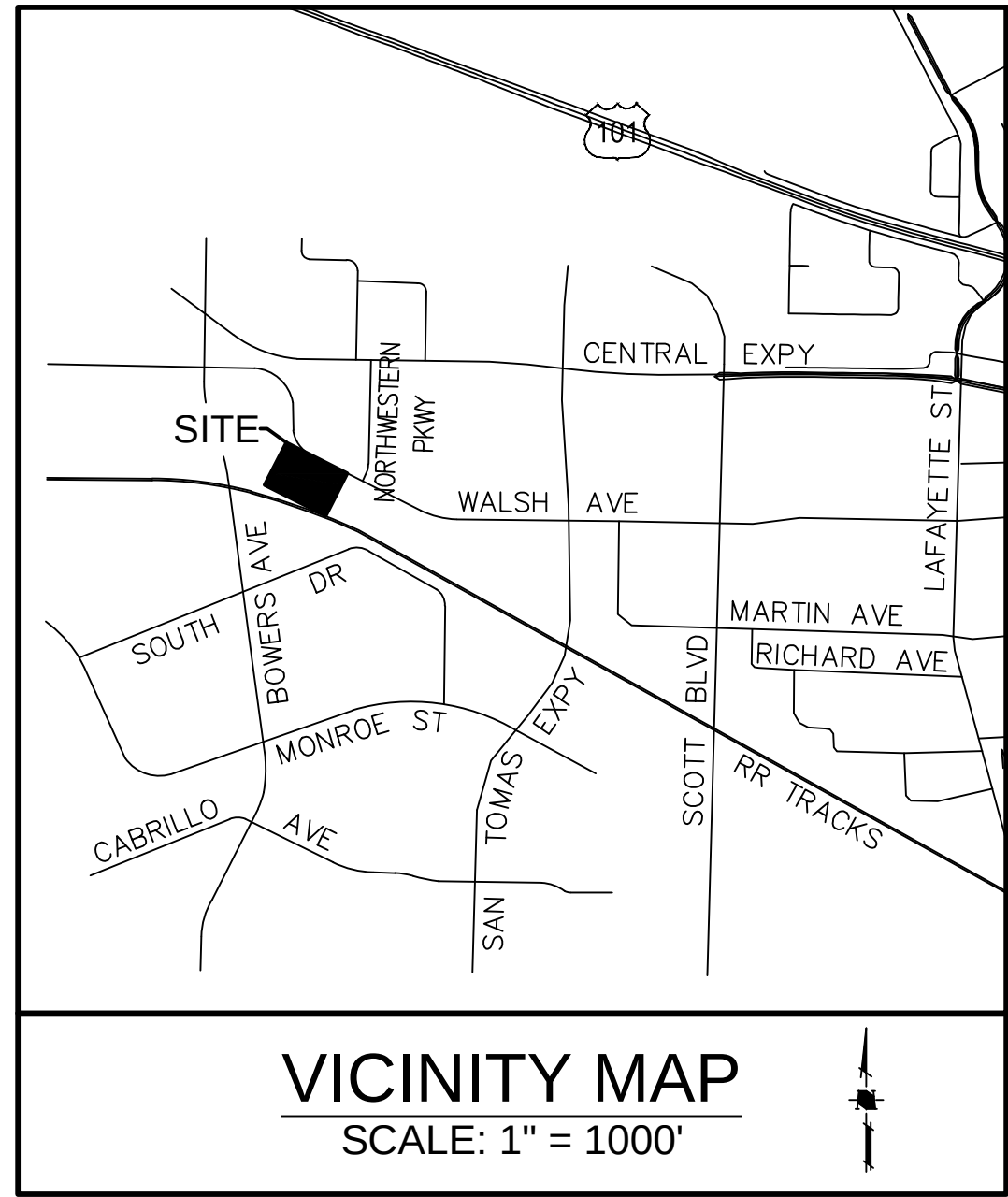
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SITE PLAN

C2

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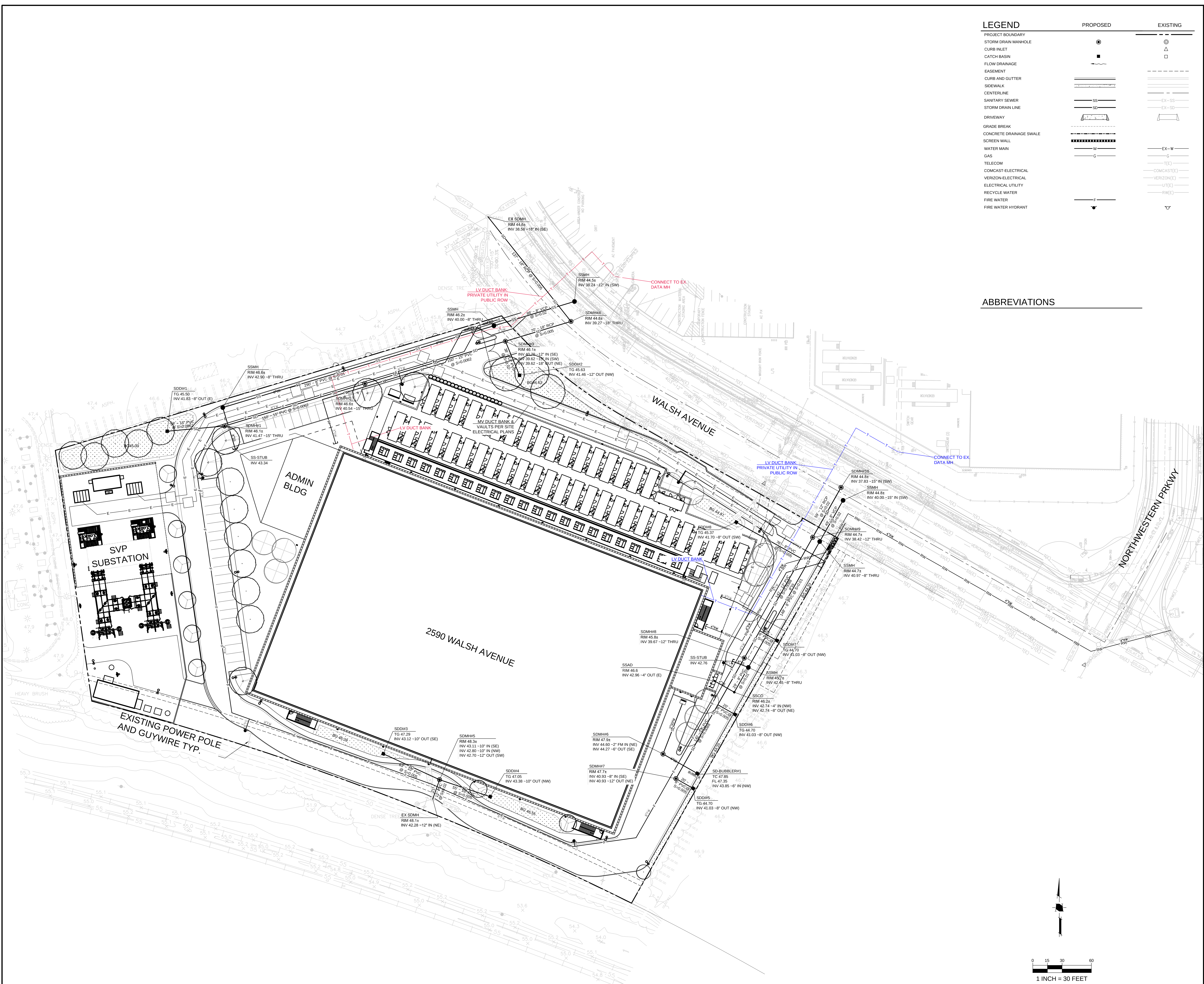
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A



LEGEND

	PROPOSED	EXISTING
PROJECT BOUNDARY		
STORM DRAIN MANHOLE		
CURB INLET		
CATCH BASIN		
FLOW DRAINAGE		
EASEMENT		
CURB AND GUTTER		
CENTERLINE		
SANITARY SEWER		
STORM DRAIN LINE		
DRIVEWAY		
GRADE BREAK		
CONCRETE DRAINAGE SWALE		
SCREEN WALL		
WATER MAIN		
GAS		
TELECOM		
COMCAST-ELECTRICAL		
VERIZON-ELECTRICAL		
ELECTRICAL UTILITY		
RECYCLE WATER		
FIRE WATER		
FIRE WATER HYDRANT		

ABBREVIATIONS

OWNER



ARCHITECT

**SHEEHAN
NAGLE
HARTRAY
ARCHITECTS**

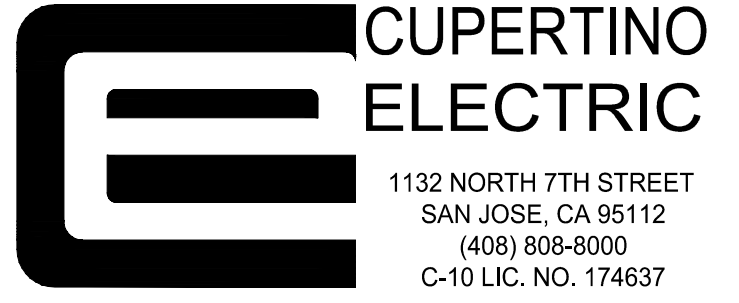
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MEP ENGINEER



KW
Mission Critical Engineering
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Parkway, 4th Floor
602.565.3144

STRUCTURAL ENGINEER



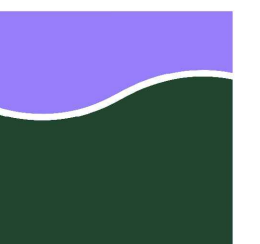
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TECHNOLOGY ENGINEER

CIVIL ENGINEER



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(408) 487-2200
HMMca.com



REED ASSOCIATES
LANDSCAPE ARCHITECTURE
PLANNING, DESIGN, CONSTRUCTION
MANAGEMENT

No.	Description	Date
-----	-------------	------

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SANTA CLARA, CA 95051

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UTILITY PLAN

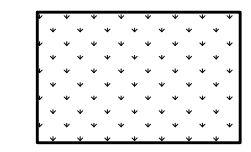
C4

SCALE: AS NOTED

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*Sizing for Bioretention Area Required calculated using the 4% Method (Impervious Area x 0.04)

BIORETENTION AREA

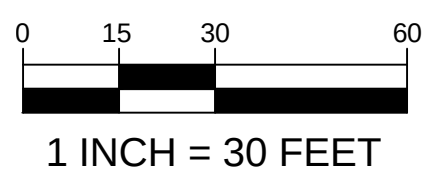


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PHONE: 488-481-9026

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1

I. PROPERTY INFORMATION:

I.A. PROPERTY ADDRESS:
200 WAS-94 AVENUE
SANTA CLARA, CA 95051

I.B. PROPERTY OWNER:
VANTAGE DATA CENTERS

II. RESPONSIBLE PARTY FOR MAINTENANCE:

II.A. CONTACT:
SIMON CASEY

II.B. PHONE NUMBER OF CONTACT:

II.C. EMAIL:
SCASEY@VANTAGE-DC.COM

II.D. ADDRESS:
200 NORTHWESTERN PARKWAY
SANTA CLARA, CA 95051

1. CONNECT THE FOLLOWING FEATURES TO SANITARY SEWER:
 - a. COVERED TRASH/ RECYCLING ENCLOSURES.
 - b. COVERED LOADING DOCKS AND MAINTENANCE BAYS.
2. BENEFICIAL LANDSCAPING.
3. USE OF WATER EFFICIENT IRRIGATION SYSTEMS.
4. MAINTENANCE (PAVEMENT SWEEPING, CATCH BASIN CLEANING, GOOD HOUSEKEEPING).
5. STORM DRAIN LABELING.

1. CREATE NEW PERVIOUS AREAS:
 - a. LANDSCAPING
2. CLUSTER STRUCTURES/PAVEMENT.
3. PLANT TREES ADJACENT TO AND IN PARKING AREAS AND ADJACENT TO OTHER IMPERVIOUS AREAS.
4. PARKING:
 - a. NOT PROVIDED IN EXCESS OF CODE.

1. SOILS TYPE: _____
2. GROUND WATER DEPTH: _____
3. NAME OF RECEIVING BODY: _____
4. FLOOD ZONE: _____
5. FLOOD ELEVATION (IF APPLICABLE): _____

- STANDING WATER SHALL NOT REMAIN IN THE TREATMENT MEASURES FOR MORE THAN FIVE DAYS, TO PREVENT MOSQUITO GROWTH. SHOWS OF MOSQUITO LARVAE IN ANY OF THE CONTACTS OF THE SANTA CLARA VALLEY VECTOR CONTROL DISTRICT (DISTRICT) MOSQUITO LARVIDICES SHALL BE APPLIED ONLY WHEN ABSOLUTELY NECESSARY, AS INDICATED BY THE DISTRICT, AND ONLY BY A LICENSED PROFESSIONAL OR CONTRACTOR. CONTACT INFORMATION FOR THE DISTRICT IS PROVIDED BELOW.
- DO NOT USE PESTICIDES OR OTHER CHEMICAL APPLICATIONS TO TREAT DISEASED PLANTS. CONTROL WEEDS OR REMOVED UNWANTED GROWTH WITH MECHANICAL OR CHEMICALS (BIOLOGICAL, PHYSICAL AND CULTURAL CONTROLS) TO TREAT A PEST PROBLEM. PRUNE PLANTS PROPERLY AND AT THE APPROPRIATE TIME OF YEAR. DO NOT OVERWATER. IRRIGATION FOR LANDSCAPE PLANTS. DO NOT OVER WATER.

- BIOTREATMENT SOIL MIX SHALL MEET THE REQUIREMENTS AS OUTLINED IN APPENDIX C OF THE C-3 STORM WATER HANDBOOK AND SHALL HAVE A TEXTURE OF FINER THAN NO. 20. SHALL BE MEASURED ON A VOLUME BASIS OF 60-70% SAND AND 30-40% COMPOST. CONTRACTOR TO REFER TO APPENDIX C FOR SAND AND COMPOST MATERIAL SPECIFICATIONS. CONTRACTOR MAY OBTAIN A COPY OF THE C-3 HANDBOOK AT: [HTTP://WWW.SANJOESCA.GOV/INDEX.ASPX?NID=1761](http://www.sanjoesca.gov/index.aspx?nid=1761)
- PRIOR TO ORDERING THE BIOTREATMENT SOIL MIX OR DELIVERY TO THE PROJECT SITE, CONTRACTOR SHALL PROVIDE A BIOTREATMENT SOIL SPECIFICATION CHECKLIST COMPLETED BY THE SOIL MIX SUPPLIER AND CERTIFIED TESTING LAB.

1. SET GRADING PLAN FOR BASIN FOOTPRINT AND DESIGN ELEVATIONS.
2. PLACE 3 INCHES OF COMPOSTED, NON-FLOATABLE MULCH IN AREAS BETWEEN STORMWATER PLANTINGS.
3. SET LANDSCAPE PLAN FOR MULCH, PLANT MATERIALS AND IRRIGATION REQUIREMENTS
4. CURB CUTS SHALL BE A MINIMUM 18" WIDE AND SPACED AT MAXIMUM 10' O.C. INTERVALS AND SLOPED TO DIRECT STORMWATER TO DRAIN INTO BASIN. CURB CUTS SHALL ALSO NOT BE PLACED INLINE WITH OVERTLOW CATCH BASIN. SET GRADING PLAN FOR MORE DETAIL ON LOCATIONS OF CURB CUTS.
5. A MINIMUM 0.2' DROP BETWEEN STORM WATER ENTRY POINT (I.E. CURB OPENING, FLUSH CURB, ETC.) AND ADJACENT LANDSCAPE FINISHED GRADE.
6. DO NOT COMPACT NATIVE SOIL / SUBGRADE AT BOTTOM OF BASIN. LOOSEN SOIL TO 12" DEPTH.

[illegible]

REED ASSOCIATES
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STORMWATER CONTROL PLAN
NOTES & DETAILS

SCALE: AS NOTED

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