Attachment G

Energy Reports

Preliminary Engineering Study Report

Solstra Communities California, LLC

SOLOMON HILLS

1555 ORCUTT HILL ROAD, ORCUTT, CA

Pacific Gas and Electric Company

WE DELIVER ENERGY.

October 2025

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1. Introduction

Solstra Communities California, LLC has submitted an application to Pacific Gas & Electric Company (PG&E) for a new housing development with integrated commercial sites at 1555 Orcutt Hill Road, Orcutt, CA with an estimated demand of 18.3MW by Q1 2045 ("Solomon Hills"). The calculated demand loads, as determined by PG&E, as being in accordance with Salas O'Brien's calculated loads of August 19, 2025, as issued.

PG&E has determined that a Preliminary Engineering Study (PES) will be needed to determine the options to serve the Project and identify any impacts caused by this interconnection. This PES identifies:

- Distribution system options to serve the Project on PG&E's existing distribution facilities
- Transmission and distribution system impacts caused solely by the Project
- Transmission and distribution system reinforcements necessary to mitigate any adverse impacts caused by the Project under peak-load conditions

This study assumes no additional generation, renewable or otherwise, will be installed at the site. Should Solstra Communities California, LLC wish to install generation, renewable or otherwise, at the site later, an application is required.

This study will determine which, if any, primary facilities, conductor, and equipment will need to be installed, upgraded, and/or modified on the existing distribution network to provide adequate capacity. This study will be limited to what primary line, substation work, and transmission line work is required to serve the project regardless of whether the project is served at primary voltage with a single meter (12,000 volts) or secondary voltage (120 to 480 volts) with multiple transformers and meter locations.

This Agreement does not constitute an agreement to extend power to the Customer's Project. The extension of power from PG&E's Distribution System and other services that the Project may require will be addressed in separate agreements in accordance with PG&E tariff rules then in effect. Should the Customer pursue electric distribution or service extensions, that work would be performed under PG&E's standard form, Distribution Service and Extension Agreement Declarations (Form 65-0980). The Customer will be responsible for separately making all necessary arrangements for extension of power.

If no customer comments have been received after ten business days of receiving the draft PES report, this PES report will be deemed final. This PES report is valid for three months from the date the final report is issued to the customer. After that, a new study will be required.

2. Project and Interconnection Information

Solstra Communities California, LLC is to construct a housing development that will include 4,000 homes, commercial businesses, and large office spaces.

Solstra Communities California, LLC is requesting 18.3MW of load, which includes 9.44MW of housing load (1.16 W/ sq ft),1.17MW of combined commercial loading (12.34W / sq ft), 0.54MW of miscellaneous loads, 0.35MW of new school loading (3.2 W/ sq ft), 2.74MW of office space (5.22 W/ sq ft), 3.58 MW of EV charging, and 0.5MW of waste Water plant load. Figure 2-1 below shows the existing circuits in this area in reference to the new development.

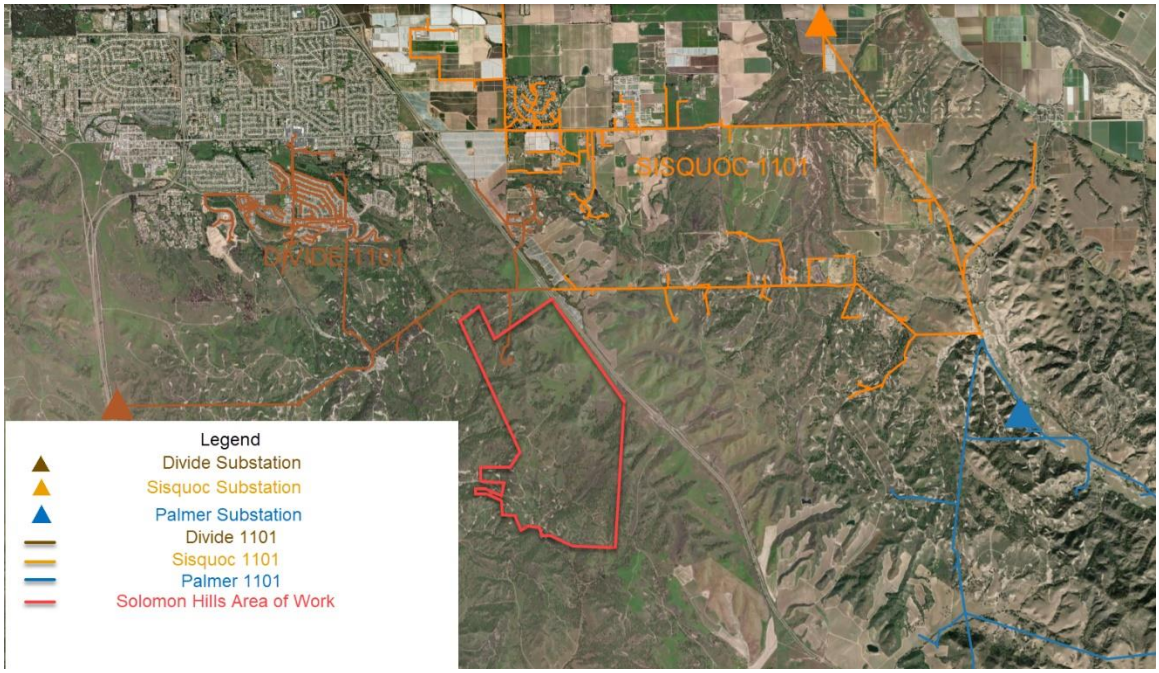


Figure 2-1: Satellite Vicinity Sketch 1555 Orcutt Hill Road, Orcutt, CA

Table 2-1: Load Ramp Schedule

Year of Occupancy	Cumulative Maximum Metered Demand (MW)
2031	1.1
2032	2.3
2033	3.4
2034	4.6
2035	5.7
2036	6.6
2037	7.5
2038	8.4
2039	9.3
2040	10.2

2041	11.1
2042	12.0
2043	12.9
2044	13.8
2045	18.3

3. Study Assumptions

The infrastructure evaluation will identify any new PG&E substation facilities or existing facility upgrades necessary to serve Solomon Hills using the following assumptions:

- The connection voltage will be multiple secondary services ranging from circuit voltage of 120V to 480V.
- The peak electrical demand and schedule provided by the customer in Table 2-1 with a maximum net electrical demand of 18.3 MW.

4. Present Available Capacity

1555 Orcutt Hill Road, Orcutt, CA will be presently served by Divide 1101/1103 Per PG&E Electric Rule 2[1],12 kV circuits are typically rated at 12 MW total. Given this total capacity, current load projections as well as existing applications for customer growth, PG&E's projections for available capacity are insufficient to accommodate the additional demand of 18.3 MW.

The present available capacity for this load application is shown below in Table 4-1 which is subject to change.

Table 4-1: 2026 Divide Substation Capacity

Distribution Asset	Divide Bank 3	Divide 1101	Divide Bank 4	Divide 1103
2026 Capacity	9.64 MW	4.7 MW	17.69 MW	2.6 MW

These capacity estimates are forecasts only and apply at peak loading conditions. Additionally, these forecasts can be impacted by new customer loads as well as increased loads for existing customers.

It is essential that load estimates provided by Solstra Communities California, LLC be as accurate as possible so that PG&E can propose the most appropriate and relevant options for serving this load. It is in the interest of both PG&E and Solstra Communities California, LLC to ensure that unnecessary infrastructure is neither designed nor constructed.

[1] https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_RULES_2.pdf

5. Project Cost and Timeline Estimates

Any costs provided in the final report are non-binding good faith cost estimates only. All costs shown in the final study will be considered AACE Class 5[2] estimates.

Any timelines provided in the PES will be non-binding good faith estimates only. Detailed timeline estimates can be provided upon completion of the Engineering and Design process if Solstra Communities California, LLC decides to proceed with the project. Timelines may be subject to change based on funding considerations or other extenuating circumstances.

6. Evaluation of Distribution Alternatives

Any extension of 12 kV line sections would be subject to approval and permitting by various agencies. Right-of-way acquisition of these lines would be the responsibility of PG&E. Per Electric Rule 2, the maximum load that can be served from a single 12 kV feeder is 12 MVA or 11.9 MW at 99% power factor.

7. Evaluation of Distribution Interconnection

7.1 Distribution D1: Service from Existing Feeders from the Divide Substation

The existing Divide 1101 and Palmer 1101 feeders shall be used to serve the proposed Solomon Hills Development. Divide 1104 shall be installed from the 30MVA Divide Bank 4.

Any extension of 12 kV line sections would be subject to approval and permitting by various agencies. Right-of-way acquisition of these lines would be the responsibility of PG&E.

This will provide a net available capacity of 23.7MW

7.1.1 Distribution Scope

Based off the circuit capabilities listed in Table 4-1, the following points of interconnections are studied in this Preliminary Engineering Report. Divide 1101 and Palmer 1101 to the North. An additional feeder will also be evaluated to serve this load.

The available capacity and customer requested capacity per year from 2031 through 2045 can be seen on Table 7-1 below. In addition, the scope of distribution work is shown in Figure 7-1. With individual equipment numbered and detailed below.

[2] *AACE is an acronym for the Association for the Advancement of Cost Engineering. AACE Class 5 is based on historical information with less than 2% of project definition required. The probable accuracy of the AACE Class 5 cost is +100%, -50%.*

Table 7-1: PG&E Distribution Work Plan Schedule

Phase	Year	Load Ramp [MW]	PG&E Work
1	2031	5.7	No capacity work
	2032		
	2033		
	2034		
	2035		
2	2036	9.3	No capacity work
	2037		
	2038		
3	2039		
	2040	10.2	New Divide 1104 Circuit Breaker and Distribution Line
	2041	18.3	No capacity work
	2042		
	2043		
	2044		
	2045		

2040: Install Divide 1104 + Divide 1101 Reconductor

- Install a new 12 kV circuit breaker inside Divide Substation
- Divide 1101: reconductor 5,100 ft of 1/0 conductor to 715 AAC
- Double Circuit 24,700 ft of overhead 715 AAC of Divide 1104 alongside the existing Divide 1101
- Install 1,000 ft of a new underground feeder outlet
- Install four overhead capacitors
- Install one new overhead recloser with part 57 in-line disconnects
- Install six 900 A overhead switches

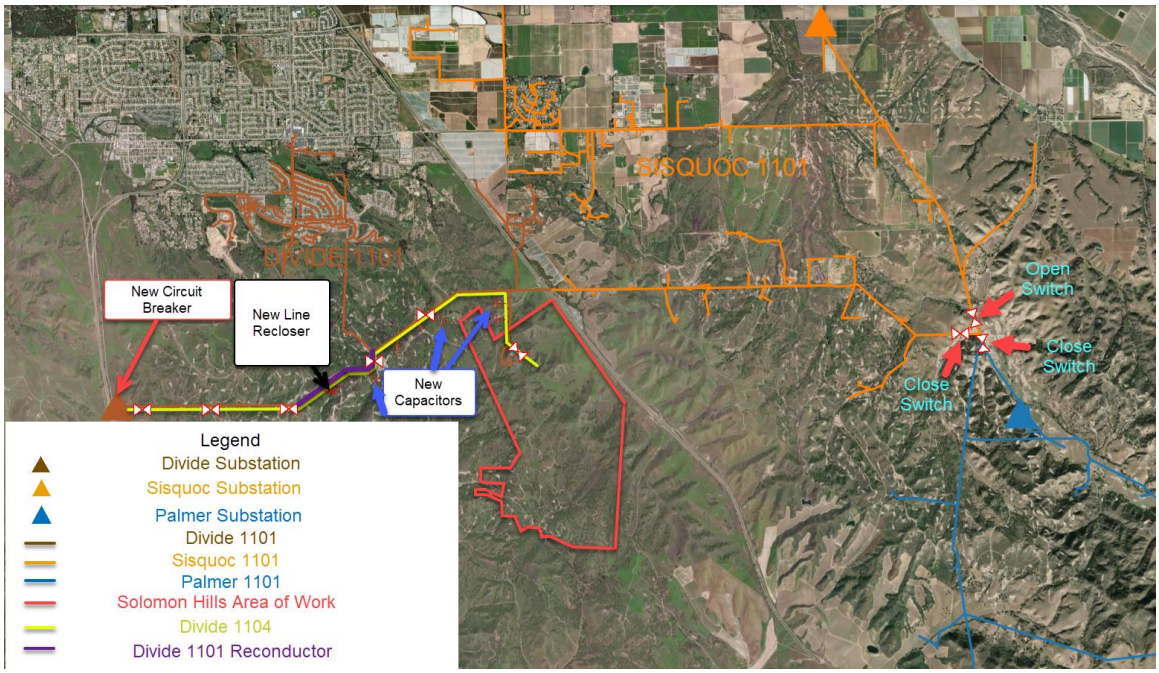


Figure 7-1: Distribution Work

Table 7-2 Description of Work

Work Description		$ Cost (x1000)
Divide 1104 Circuit Breaker	Substation Work	1,400
Install 1,000 ft of a New Underground Feeder Outlet	Distribution Work	490
Divide 1101: reconductor 5,100 ft of 1/0 conductor to 715 AAC	Distribution Work	816
Double Circuit 24,700 ft of overhead 715 AAC of Divide 1104 with the Existing Divide 1101	Distribution Work	3,952
6x Divide 1104 Overhead Switches	Distribution Work	306
1x Overhead Recloser with Part 57 Disconnects	Distribution Work	101
4x Overhead Capacitors	Distribution Work	186
Total Estimated Cost*		7,251

*Note: Estimated Cost is based on historical averages for similar scopes of work. Cost estimates provided in PES Reports are typically at an Association for the Advancement of Cost Engineering (AACE) Class 5, with an expected accuracy range of -50% to +100%

Except in locations where it is not feasible, the preferred distribution circuit design will have the following characteristics:

- Overhead construction
- Double circuit construction shared with existing poles and circuits, to minimize cost and schedule impacts of new pole installation and associated land rights

7.1.1a Distribution Line Evaluation

PG&E's distribution line evaluation will identify any existing equipment requiring upgrades to mitigate any adverse impacts due to the Project. Preliminary scope of work and non-binding cost estimates for these potential system upgrades will be included in the distribution line evaluation for the PES.

However, the feasibility, detailed scope of work, and detailed costs for these potential system upgrades will not be included in the distribution line evaluation for the PES.

Detailed cost estimates and work scope for the distribution line evaluation will be provided, if applicable, when the Project progresses to the Detailed Interconnection Study.

Note that any line extensions, betterment work, and back-ties are not included in this study. This scope of work will be determined as part of Rule 15 or 16.

8. Transmission Power Flow Studies and Cases

Power flow analyses will be performed to ensure that PG&E's transmission system remains in full compliance with North American Reliability Corporation (NERC) reliability standards TPL-001-4 with the proposed load increase. The results of these power flow analyses will serve as documentation that an evaluation of the reliability impact of this load increase has been performed. If a NERC reliability problem exists as a result of this load increase, it will be PG&E's responsibility to identify the problem and develop an appropriate corrective action plan to comply with NERC reliability standards.

As part of PG&E's obligations with NERC as the registered Transmission Owner for the PG&E transmission system, the study results for this load increase will be communicated to the CAISO or other neighboring entities that may be impacted for coordination and incorporation of its transmission assessments. Input from the CAISO and other neighboring entities are solicited to ensure coordination of transmission systems.

The CAISO Controlled Grid Reliability Criteria, which incorporates the Western Electricity Coordinating Council (WECC), NERC planning criteria, and CAISO Transmission Planning Standards will be used to evaluate the impact of the Project on the PG&E transmission system. Power Flow analysis will be performed using the power flow case(s) described in the following sub section. The power flow case(s) will be used to simulate the impact of the interconnection during normal operating conditions (Category P0) and for all Category P1 and selected (Category P2~P7) contingencies in PG&E's Central Coast/Los Padres Area.

Single contingency (Category P1)

The assessment will consider all Category P1 contingencies based upon the following:

- 3Φ Fault with loss of one generator (P1-1)
- 3Φ Fault with loss of one transmission circuit (P1-2)
- 3Φ Fault with loss of one transformer (P1-3)
- 3Φ Fault with loss of one shunt device (P1-4)

Multiple contingency (Category P3)

The assessment will consider the Category P3 contingencies with loss of a generator unit, followed by system adjustments and the loss of the following:

- 3Φ Fault with loss of one generator (P3-1)
- 3Φ Fault with loss of one transmission circuit (P3-2)
- 3Φ Fault with loss of one transformer (P3-3)
- 3Φ Fault with loss of one shunt device (P3-4)

Three (3) power flow cases will be used to evaluate the transmission system impacts of the Project. While it is impossible to study all combinations of system load and generation levels during all seasons and at all times of the day, the power flow base case represents the credible extreme loading and generation

conditions for the study area. The power flow cases are based on the proposed load schedule for the Project as provided by the IC.

The following power flow cases will be used to evaluate the transmission system impacts of the Project on the PG&E system.

8.1 2035 Summer Peak Truncated Power Flow Case

Power flow analyses will be performed using PG&E's Summer Peak power flow cases (in General Electric Power Sequence Load Flow format). The power flow case is from PG&E's 2025 base case series and has a 1-in-10 year adverse weather load level for the Central Coast/Los Padres Area of the PG&E transmission system. The Project will be modeled at 9.0 MW gross load at 0.99 lag power factor.

8.2 2035 Summer Peak Truncated Power Flow Case

Power flow analyses will be performed using PG&E's Summer Peak power flow cases (in General Electric Power Sequence Load Flow format). The power flow case is from PG&E's 2025 base case series and has a 1-in-10 year adverse weather load level for the Central Coast/Los Padres Area of the PG&E transmission system. The Project will be modeled at the full requested 28 MW with 0.99 lag power factor because 2035 is the furthest available model year for analysis.

All CAISO approved PG&E transmission projects, and active load projects that will be operational by each of the study years will be included in the power flow cases accordingly.

8.3 Power Flow Results

No violations has been observed that will be driven by the addition of the new load.

9. Substation Scope of Work

9.1 Preliminary Scope

In order to serve the proposed customer load, one new 12kV feeder 1104 will be installed from Divide substation. The existing 12kV Bus Section E will be expanded to house this new feeder bay. The substation road will need to be modified slightly to accommodate this new feeder

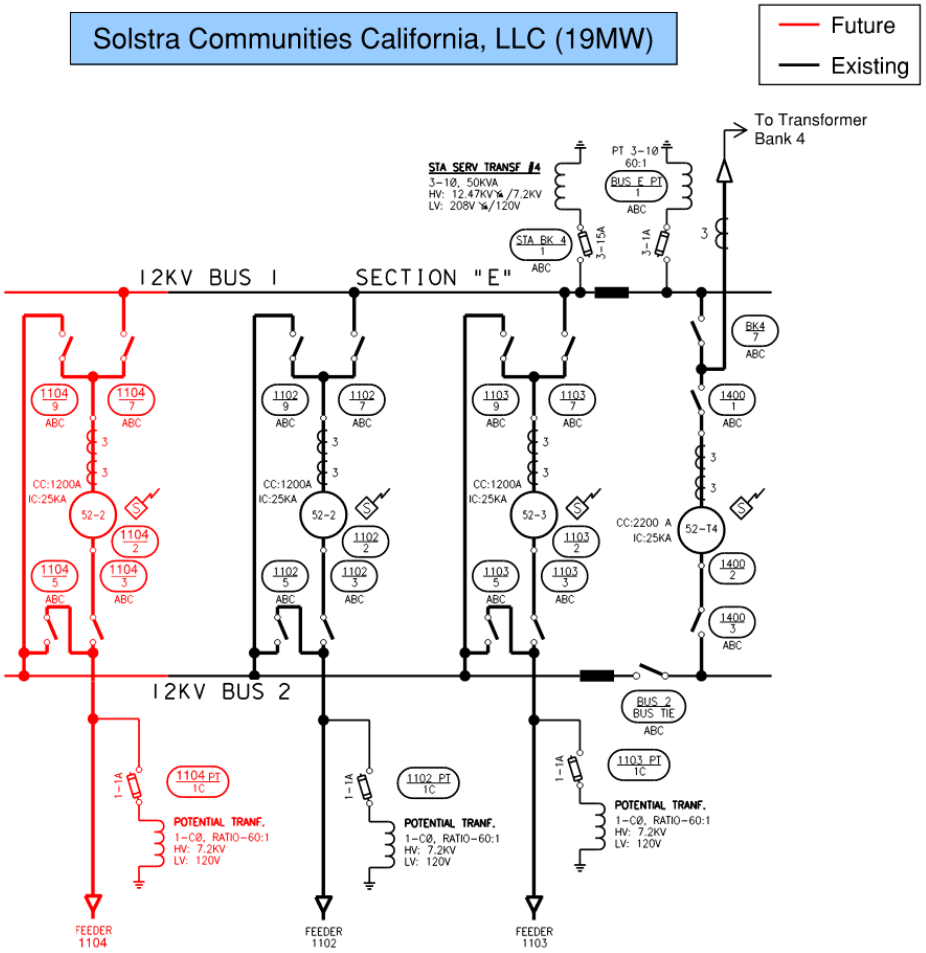


Figure 1 (Conceptual Electrical Single Line Block Diagram)

Divide Substation:

1. Install one (1) new 12kV, DBSB feeder bay per latest PGE standards on 12kV Bus Section E, for new Feeder 1104
    a. Install foundations for new 12kV feeder bay steel structures and circuit breaker.
    b. Install one (1) 12kV, 1200A CC, 25kAIC circuit breaker; four (4) 12kV, 1200A disconnect switches; one (1) riser structure; and one (1) line PT for Feeder 1104
    c. Extend existing angle bus conductors to new feeder bay

d. Install one (1) SMP cabinet for protection of CB 1104
e. Ground all circuit breakers and structures per latest standard
f. Install conduits as needed between circuit breaker, SMP cabinet, and line PT. Install conduits back to the control building as needed for fiber/power/control circuits

2. Modify the substation road to accommodate new feeder bay. Install bollards as needed.

Total Estimated Cost: $1.4M

10. Study Updates

The PES is performed in accordance with the assumptions listed in the Section titled "Study Assumptions". In the event that these assumptions become invalid, an updated study may be required to re-evaluate Solstra Communities California, LLC's interconnection impact on PG&E's electric transmission and distribution system. Changes that might prompt an updated study are:

- Change in the interconnection date or the timing of subsequent load additions.
- Change in the projected amount of initial load or subsequent loads.
- Change in the nature of the load.
- Change in the interconnection plan.

Solstra Communities California, LLC would be responsible for paying for any such updated study.

11. Study Schedule

PG&E's study schedule for Solstra Communities California, LLC at 1555 Orcutt Hill Road, Orcutt, CA

Task	Milestone Description	Target Date
1	Engineering Advance received	March 6, 2025
2	Customer information Checklist received	March 3, 2025
3	PG&E submits Draft PES Plan	March 31, 2025
4	Solstra Communities California, LLC submits comments on Draft PES Study Plan	April 14, 2025
5	PG&E submits Draft PES report	September 16, 2025
6	Solstra Communities California, LLC submits comments on Draft PES report	October 23, 2025
7	PG&E submits finalized PES report	November 6, 2025

Pacific Gas and Electric Company

WE DELIVER ENERGY

Preliminary Engineering Study Agreement

Solstra Communities California, LLC has reviewed the Preliminary Engineering Study Plan for capacity for their proposed project at 1555 Orcutt Hill Road, Orcutt, CA and agrees with the proposed Preliminary Engineering Study Plan.

Solstra Communities California, LLC has paid a total of $50,000 in study fees as of April 16, 2025.

Dated this _____ day of _____, 2025

Solstra Communities California, LLC:

BY: _____
(Signature)

_____
(Type or Print Name)

MAILING ADDRESS

_____

_____

_____

_____

LOAD CALCULATIONS REPORT

SOLOMON HILLS COMMUNITY

2023-03392

JULY 18, 2025 SOLOMON HILLS COMMUNITY LOAD CALCULATION REPORT

The Solomon Hills Project proposes to create Santa Barbara County's first new community that will result in a sustainable, resilient and healthy environment for its residents. The Project establishes a holistic framework for Smart Growth with a redevelopment of private lands historically used for grazing and oil and gas production. It's proposed Specific Plan includes the design and implementation of a central village closely surrounded by several neighborhoods, office and commercial space, a TK-8 school, fire/sheriff station, parks, open space and public trails to allow walking and biking as an easy alternative to vehicle transport.

The Project's proposed Specific Plan allows for a balance of land uses primarily serving working families allowing 4,000 single and multi-family residential units, 650,000 square feet of commercial retail and office use and space, 25.5-acres of public and institutional uses and space, and 1,023 acres of recreational and open space uses. Critical infrastructure includes water supply and a water reclamation facility, interchange improvements along Hwy 101, additional secondary access along Hwy 101 and Hwy 135 and several active and passive parks and public trails. Public benefits include developer sponsored Affordable housing near commercial and transportation access points, utility and access improvements that minimize traffic impacts to neighboring properties, new public trail access into the Orcutt Hills, recreational improvements and public access to the Newlove Picnic Grounds, the preservation of open space ridgelines and valleys for habitat protection and the abandonment and remediation of all oilfield features and operations. The Project is designed to be built in four (4) buildout phases over a fourteen-year period for the orderly delivery of the Project. Phased grading, access, utility, horizontal and public improvements are scheduled ahead of and to align with the same buildout phases.

SOBE was contracted to perform preliminary electrical load calculations for the overall residential, commercial, retail, and park / recreation components, as planned for the subject master planned community.

Refer to sheet E0.01 for site map showing space allocation.

The site contains both residential (refer to Appendix A for residential assumptions) and commercial areas (refer to Appendix B for Commercial assumptions). For detailed calculations by building type please refer to Appendix C. The provided site plan (refer to sheets E0.01) divided the site into different areas of use commercial and residential. The commercial areas loads are based on the provided commercial space matrix and amendments provided in our conference calls with ownership. The site plans provided residential areas indicating quantity and type of units per area. Load calculations were done for each of the different residential areas of use. With an estimated 4,000 residential units.

Per the electrical load calculations performed, the total calculated electrical load for the proposed Solomon Hills community is estimated to be 73,542 KVA*. Refer to provided electrical plans sheet E0.01.for load per planning area. Refer to sheet E0.10 for the total site calculation. Refer to sheet E0.11 for electrical load calculations per community buildout phasing. Phasing sequence of each planning area was provided by the developer and used to calculate the electrical load per buildout phase.

* Please note electrical loads for the water reclamation facility were assumptive loads provided by the civil engineer based on projects of similar size / scope. Refer to the civil engineer's plans for detailed load calculations and buildout phasing. Electrical loads provided by the civil engineer were added to the overall electrical load calculations performed.

Appendix A: Residential Assumptions

Assumptions used in our calculations for Residential type:

1. **Residential (refer to sheets E0.20-E0.29.3)**
   For all residential buildings and single-family residences the following assumptions were made for individual units.

    1. Per NEC 220.3 all general lighting and power were calculated at 3 VA/ sq.ft.
    2. All residences were assumed to have a minimum of (2) 1500watt small appliance circuits.
        a. With exception of the Estates (2) extra small appliance circuits were added due to the possibility of a kitchenette within these housing types.
    3. (1) Laundry circuit is assumed for all residences
        a. Affordable living units were not calculated with laundry circuits as it was assumed that these buildings would be provided with communal laundry rooms.
            i. The load for these communal laundry rooms were calculated within the house load for affordable living buildings.
    4. The following small appliance loads were used on all Residences:
        a. (1) Refrigerator/Freezer, (1) Dishwasher, (1) Garbage Disposal, (1) Range hood, and (1) Microwave were assumed in the kitchen small appliance loads.
    5. The following special appliance loads were used on all residences:
        a. (1) garage door estimated at 600W each
            i. Affordable living units were not calculated with garage door openers.
            ii. Partial estates, and Estates were all assumed with (2) garage door openers.
        b. (1) AV circuit load varies based on the size of the residence.
        c. Electric Dryer estimated at 5KW each.
            i. Affordable living units were not calculated with electric dryers as it was assumed that these buildings would be provided with communal laundry rooms.
                1. The load for these communal laundry rooms were calculated within the house load for all affordable living buildings.
        d. Electric water heater estimated at 5KW each.
            i. Affordable living units were not calculated with individual water heaters. Instead, it was assumed all units would be fed via a communal water heater.
                1. Loads for the communal water heaters were considered under the buildings house load.
            ii. MU2 single family residence, Partial estates, and Estates were all assumed with (2) electric dryers.
    6. All Single Family residences were calculated with an estimated site lighting lump sum. The estimated value varies based on the size of each residence type.
        a. For affordable living units site lighting was calculated through the buildings house power
    7. electric vehicle charging
        a. All single-family residences were calculated with (1) electric vehicle charging station.
        b. All Apartment residences were calculated with electric vehicle charging station per 2022 Cal Green.
            i. Per CGBC2022 4.106.4.2.25 based on the total number of parking spaces 10% are to be day one EV stations and 40% to be low power EV stations.
                1. Code was updated from original load assumptions which led to an increase in EV stalls required.
            ii. it was assumed that all EVCS to be provided under house power when not provided with direct access.
    8. The calculations above were demanded per NEC 220.31.
    9. All residences were assumed with the following mechanical/plumbing equipment.
        a. (1) outdoor unit, (1) Fan coil unit, exhaust fans, and miscellaneous equipment minimum. Mechanical equipment size and quantity varied by the size of the residence type.

    10. 40% of all MU2 single family residence, Partial estates, and Estates were calculated with an additional 10KVA lump sum for pool/jacuzzi loads.

11. 10% of all MU1 single family residence were calculated with an additional 10KVA lump sum for pool/jacuzzi loads.

12. Adding the calculated loads of points 8-10 yielded the base load consumption per individual residential unit type.
13. The individual residential unit type load was then multiplied by the number of units found within each parcel (please refer to sheet E0.01 for parcel division) for a total connected residential load.

The total residential connected load was then demanded by the number of buildings within each parcel per NEC 220.84 to calculate the total residential demanded load per parcel.

14. The following House loads were added to the total demanded load in the calculations.
    a. All residential parcel calculation included site lighting (for street lighting) and miscellaneous power. These values were estimated based on the parcel size.
    b. Affordable living buildings had EV stations calculated via the house power with the following assumptions:
        i. For a total # of available parking spaces we multiplied the total number of units by 1.5.
        ii. Per CGBC2022 4.106.4.2.25 based on the total number of parking spaces 10% are to be day one EV stations and 40% to be low power EV stations.
            1. Code was updated from original load assumptions which led to an increase in EV stalls required.
    c. Affordable living units were calculated to have amenity spaces. The size and load for these amenity spaces were based on the number of units within each parcel.
    d. Affordable living units were calculated to have elevators quantity varies by number of units.
    e. Special mechanical loads for Affordable units are as follows:
        i. Communal laundry and booster pumps for residential units
            1. Size and quantity based on number of units per parcel. (Equipment size estimated is from equipment used on similar projects)

Adding the total residential demanded load and the total house load yielded the total demand load per parcel. As indicated on the site plan on sheet E0.01.

Appendix B: Commercial Assumptions

Assumptions used in our calculations for commercial building types:

1. **Commercial (refer to sheets E0.30-E0.35)**
   For all commercial buildings the following assumptions were made for individual units.

RETAIL (sheets E0.30-E0.30.1)

1. Retail Loads
   a. Per NEC 220.12 all general lighting and power were calculated at 3 VA/ sq.ft..
   b. Per NEC 220.14(G) 200VA per linear foot were provided for “show window lighting”
      i. SOBE assumed the square root of the square footage provided per building to estimate the length of the “show window” for this calculation.
   c. Special purpose is estimated to be at 5VA / sq.ft..
      i. CVS, Grocery, Fitness, Nails & Lashes, and urgent care were calculated with a higher special purpose load to consider higher equipment loads.
   d. General Purpose power estimated at 1VA per Sq.ft..
   e. HVAC power is estimated at 10VA-12VA per Sq.ft. This calculation varied based on the use of the building.

RESTAURANT (sheets E0.31)

1. Restaurant Loads
   a. Per NEC 220.12 all general lighting and power were calculated at 3 VA/ sq.ft..
   b. Dinning power is estimated to be at 5VA / sq.ft..1/2 of the building square footage is assumed for this calculation.
   c. Restaurant power is estimation varies by restaurant usage type value estimated range is 25VA / sq.ft. through 50VA / sq.ft. .1/2 of the building square footage is assumed for this calculation.
   d. HVAC power is estimated at 12VA per Sq.ft..

RETAIL & RESTAURANT HOUSE LOADS (sheets E0.30-E0.31)

1. House Loads
   a. House loads for both retail and restaurant spaces were added together as ownership indicated most retail/restaurant buildings would be built within the vicinity of each other.
      i. The following loads were estimates based on the amount of parking stalls indicated by ownership.
         1. Site Lighting was estimated as a lump sum.
         2. Exterior building mounted lighting was estimated lump sum.
         3. Miscellaneous
2. EV Loads
   a. Ownership provided total number of stalls for both retail and restaurant buildings is 400 Stalls
      i. Per CGBC2022 5.106.5.3.1 based on the total number of parking spaces 20% of stalls shall be EV capable and 25% of the 20% EV capable stalls shall be day one EV stations

Adding the total retail/restaurant load, house load and assumed EV load gives the total load assumed per building. As indicated on the site plan on sheet E0.01.

OFFICE (sheets E0.32)

1. Retail Loads
   a. Per NEC 220.12 all general lighting and power were calculated at 3 VA/ sq.ft..
   b. Special purpose is estimated to be at 6VA / sq.ft..

   c. General Purpose power estimated at 1VA per Sq.ft..
   d. HVAC power is estimated at 10VA per Sq.ft..
2. House Loads:
   1. All retail building calculations included site lighting (for street/parking lighting) and miscellaneous power. These values were estimated based on the retail building size and assumed building usage.

3. EV Loads
   b. Parking stalls are assumed to be provided at 200 Sq.ft. per stall for smaller footprint buildings and 300sq.ft per stall for larger footprint buildings.
      i. Per CGBC2022 5.106.5.3.1 based on the total number of parking spaces 20% of stalls shall be EV capable and 25% of the 20% EV capable stalls shall be day one EV stations

Adding the total retail load, house load and assumed EV load gives the total load assumed per building. As indicated on the site plan on sheet E0.01.

School (sheets E0.33)

1. The school is indicated to be K-8 150,000 sq.ft. school with an estimated 1,017 students total
2. School loads were divided into 6 main building categories:
   a. Admin building
      i. MPOE equipment loads estimating 5KVA.
   b. Design Lab/Library
      i. Estimated load for a computer lab within design lab .
   c. Gym/server
      i. Estimated loads for kitchen equipment based on loads calculated from similar projects.
      ii. Estimated loads for av equipment and stage lighting based on loads calculated from similar projects.
   d. Staff workroom/ RR buildings
   e. Special education
   f. Classrooms
   g. All the buildings mentioned above were calculated with the following additional varying loads per building type.
      i. Lighting by square footage
      ii. General purpose power by square footage
      iii. Special purpose power by square footage
      iv. HVAC estimated loads by square footage.
   h. Additionally, site lighting load was estimated based on the estimated school size.
      i. Additional load was added for sports lighting equipment.
   i. Parking stalls were estimated based on the number of staff per students, plus additional parking for admin staff and guests. We estimate a total of 100 stalls required.
      i. Per CGBC2022 5.106.5.3.1 based on the total number of parking spaces 20% of stalls shall be EV capable and 25% of the 20% EV capable stalls shall be day one EV stations

Fire Station/police station

For the fire station/ police station the following assumptions were made for individual units.

1. Per NEC 220.3 all general lighting and power were calculated at 3 VA/ sq.ft.
2. The building was assumed to have a minimum of (4) 1500watt small appliance circuits.
3. (2) Laundry circuit is assumed for the building
4. The following small appliance loads were assumed for the building:
   a. (4) Refrigerator/Freezer, (1) Dishwasher, (1) Garbage Disposal, (1) Range hood, and (4) Microwave were assumed in the kitchen small appliance loads.
5. The following special appliance loads were used on all residences:

   a. (3) garage door estimated at 1000W each
   b. (10) AV circuit estimated at 750W each for the building.
   c. (2) Electric Dryer estimated at 5KW each for the building.
   d. (2) Electric water heater estimated at 5KW each.
6. Building was calculated with a 3KVA lump sum for site lighting.
7. electric vehicle charging
   a. Building was calculated with (7) electric vehicle charging station to handle future EV loads.
8. The calculations above were demanded per NEC 220.31.
9. The fire/police station was assumed with the following mechanical/plumbing equipment.
   a. (3) outdoor units, Fan coil units, exhaust fans, and miscellaneous equipment.
10. Adding the calculated loads of points 8-9 yields the total load for police /fire station.

Amenity/Pool

For the Amenity Buildings/Pool the following assumptions were made:

1. Amenity/Pool areas were divided into 4 main components:
   a. Clubhouse (clubhouse square footage include square footage for pool bathrooms)
      i. Estimate General lighting to be 3.5VA per sq.ft.
      ii. Estimate general purpose power at 1VA per sq. ft.
      iii. Estimate special purpose power at 4VA per sq. ft.
      iv. Estimate HVAC power at 8VA per sq.ft.
   b. Fitness
      i. Estimate General lighting to be 3.5VA per sq.ft.
      ii. Estimate general purpose power at 1VA per sq. ft.
      iii. Estimate special purpose power at 7VA per sq. ft.
      iv. Estimate HVAC power at 12VA per sq.ft.
   c. EV charging station.
      i. Referenced Confluence Park Amenities to estimate total number of parking stalls
         1. Per CGBC2022 5.106.5.3.1 based on the total number of parking spaces 20% of stalls shall be EV capable and 25% of the 20% EV capable stalls shall be day one EV stations
   d. Pool Loads
      i. Estimated pool loads were derived from projects similar load calculations.

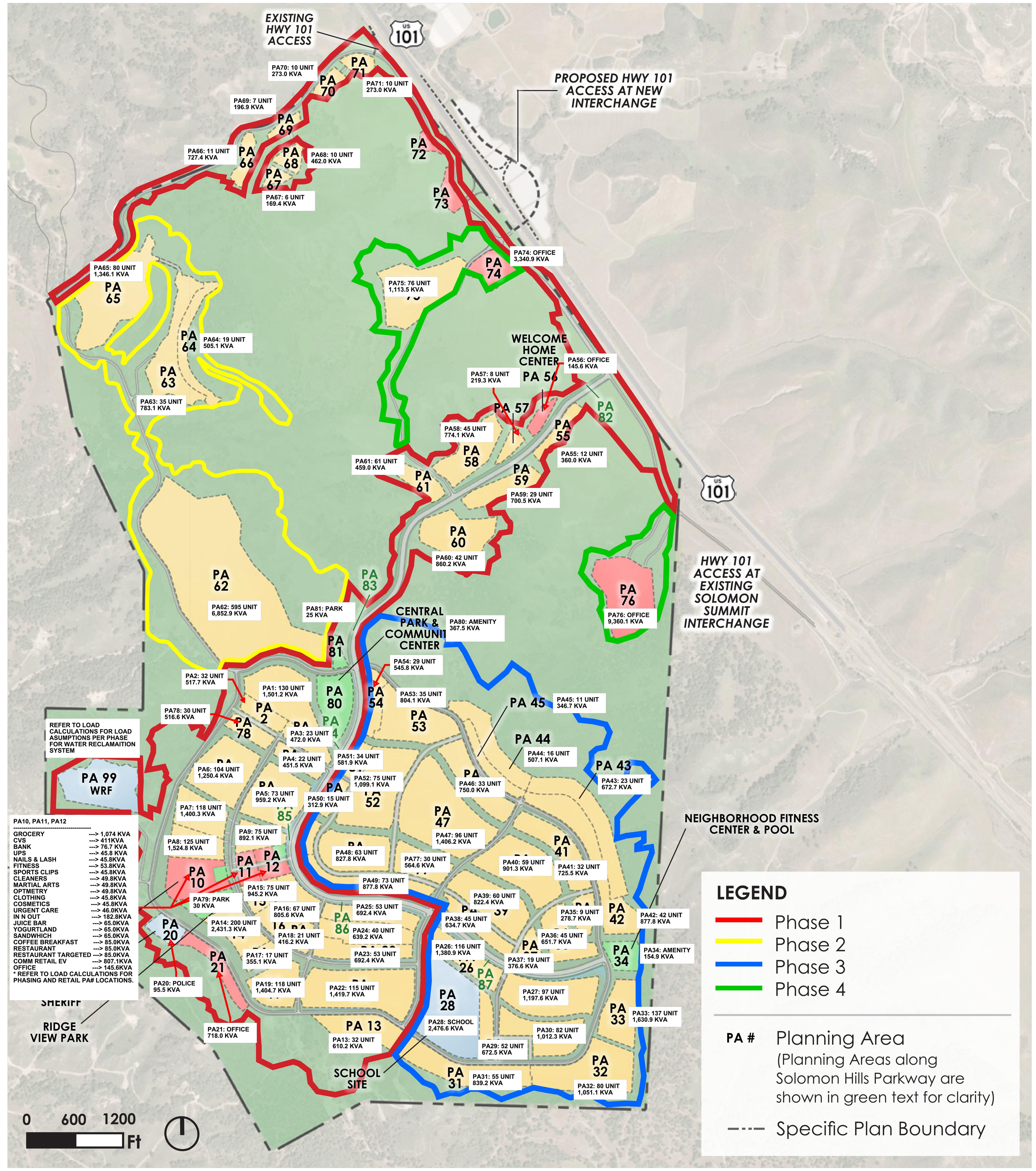
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solomon hills

Exhibit 8-2: Phasing Plan



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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

COVER SHEET

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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1.) RESIDENTIAL LOAD CALCULATIONS

PARCEL	PRODUCT TYPE	# OF UNITS	-	PARCEL RESIDENTIAL CONNECTED LOAD (KVA)	--	PARCEL RESIDENTIAL DEMANDED LOAD (KVA)	---	PARCEL HOUSE LOAD (KVA)	PA PHASING
PA1	16	130		6,484.4		1,491.4		9.8	1
PA62	16	595		29,678.6		6,826.1		26.8	2
PA7	2	118		6,068.9		1,395.8		4.5	1
PA9	2	75		3,857.3		887.2		4.9	1
PA19	2	118		6,068.9		1,395.8		8.9	1
PA26	2	116		5,966.0		1,372.2		8.7	3
PA29	2	52		2,674.4		668.6		3.9	3
PA33	2	137		7,046.0		1,620.6		10.3	3
PA2	4	32		1,662.4		515.3		2.4	1
PA6	3	104		5,402.8		1,242.6		7.8	1
PA16	3	67		3,480.7		800.5		5.0	1
PA25	3	53		2,753.4		688.3		4.1	1
PA78	4	30		1,558.5		514.3		2.3	1
PA23	5	53		2,753.4		688.3		4.1	1
PA37	5	19		987.1		375.1		1.5	3
PA38	5	45		2,337.8		631.2		3.5	3
PA49	5	73		3,792.4		872.2		5.6	3
PA50	5	15		779.3		311.7		1.2	3
PA17	6	17		907.0		353.7		1.4	1
PA18	6	21		1,120.4		414.5		1.7	1
PA22	6	115		6,135.3		1,411.1		8.6	1
PA27	6	97		5,175.0		1,190.2		7.4	3
PA30	6	82		4,374.7		1,006.2		6.2	3
PA36	6	45		2,400.8		648.2		3.5	3
PA3	7	23		1,306.4		470.3		1.7	1
PA4	7	22		1,249.6		449.9		1.7	1
PA5	7	73		4,146.4		953.7		5.5	1
PA32	7	80		4,544.0		1,045.1		6.0	3
PA51	7	34		1,931.2		579.4		2.6	3
PA54	7	29		1,647.2		543.6		2.2	3
PA24	8	40		2,272.0		636.2		3.0	1
PA39	8	60		3,408.0		817.9		4.5	3
PA48	8	63		3,578.4		823.0		4.7	3
PA77	8	30		1,704.0		562.3		2.3	3
PA13	9	32		2,034.2		630.6		2.4	1
PA31	9	55		3,487.6		871.9		4.1	3
PA52	9	75		4,754.0		1,093.4		5.6	3
PA57	9	8		508.6		218.7		0.6	1
PA58	9	45		2,854.4		770.7		3.4	1
PA61	9	19		1,204.1		457.6		1.4	1
PA75	9	76		4,816.3		1,107.8		5.7	4
PA40	10	59		3,736.9		896.9		4.4	3
PA47	10	96		6,082.7		1,399.0		7.2	3
PA66	10	11		1,729.8		726.5		0.8	1
PA67	10	6		383.9		168.9		0.5	1
PA68	10	10		1,091.8		469.5		0.8	1
PA69	10	7		446.2		196.3		0.5	1
PA70	10	10		633.2		272.3		0.8	1
PA71	10	10		633.2		272.3		0.8	1
PA41	11	32		2,332.6		723.1		2.4	3
PA46	11	33		2,411.4		747.5		2.5	3
PA55	11	12		876.0		359.1		0.9	1
PA59	11	29		2,116.1		698.3		2.2	1
PA60	11	42		3,060.9		857.0		3.2	1
PA65	11	80		5,826.4		1,340.1		6.0	2
PA35	12	9		673.0		289.4		0.7	3
PA42	12	42		3,123.9		874.7		3.2	3
PA45	12	11		823.6		345.9		0.8	3
PA53	12	35		2,671.6		801.5		2.6	3
PA63	12	35		2,601.6		780.5		2.6	2
PA64	12	19		1,325.5		503.7		1.4	2
PA43	13	23		1,863.9		671.0		1.7	3
PA44	13	16		1,297.0		505.8		1.2	3
PA8-R1	16	42		1,146.5		321.0		740.1	1
PA8-R2	16	22		600.5		216.2			2
PA8-R3	16	45		1,228.4		331.7			3
PA8-R4	16	16		436.8		170.3			4
PA15-R1	16	25		682.4		238.8		474.4	1
PA15-R2	16	13		354.9		145.5			2
PA15-R3	16	27		737.0		250.6			3
PA15-R4	16	10		273.0		117.4			4
PA14-R1	16	68		1,856.2		426.9		1,175.6	1
PA14-R2	16	35		955.4		286.6			2
PA14-R3	16	73		1,992.7		458.3			3
PA14-R4	16	24		655.1		229.3			4
	TOTAL # OF RESIDENTIAL UNITS--->	4,000.0	RESIDENTIAL CONNECTED SUM (KVA)--->	215,571.1	RESIDENTIAL DEMANDED LOAD SUM (KVA) DEMANDED BY PARCEL--->	56,445.3	HOUSE LOAD SUM (KVA)--->	2,638.2	
APPLICATION OF DEMAND (NEC220.84) RESIDENTIAL CONNECTED LOAD X 23%				49,581.3					
GRAND TOTAL LOAD (RESIDENTIAL + HOUSE) =				52,219.6 KVA		59,083.5 KVA			

2.) COMMERCIAL LOAD CALCULATIONS

PARCEL	BUILDING TYPE	CONNECTED LOAD (KVA)	PA PHASE	Column1
PA10	GROCERY	1,074.00	4	
PA10	CVS	411.00	4	
PA10	BANK	76.70	4	
PA10, PA11	UPS	45.80	3	
PA11, PA12	NAILS & LASHES	45.80	3	
PA11, PA12	FITNESS	53.80	4	
PA11, PA12	SPORTS CLIPS	45.80	3	
PA11, PA12	CLEANERS	49.80	4	
PA11, PA12	MARTIAL ARTS	49.80	3	
PA11, PA12	OPTOMETRY	49.80	3	
PA11, PA12	CLOTHING	45.80	3	
PA11, PA12	COSMETICS	45.80	3	
PA11, PA12	URGENT CARE	46.00	4	
PA11, PA12	IN N OUT	182.75	3	
PA11, PA12	JUICE BAR	65.00	1	
PA11, PA12	YOGURTLAND	65.00	1	
PA11, PA12	SANDWHICH	65.00	1	
PA11, PA12	COFFE BREAKFAST	85.00	1	
PA11, PA12	RESTAURANT	85.00	2	
PA11, PA12	RESTAURANT TARGETED	85.00	3	
PA11, PA12	COMMERCIAL HOUSE/EV	807.12	1	
PA11	OFFICE	134.60	1	
PA56	OFFICE	134.60	1	
PA21	OFFICE	666.00	2	
PA74	OFFICE	3,078.84	3	
PA76	OFFICE	8,625.08	4	
PA28	SCHOOL	2,476.63	3	
PA20	FIRE/POLICE	95.50	3	
PA80	AMENITIES	367.51	1	
PA34	AMENITIES	154.91	1	
PA79, PA81	PARK (ESTIMATE)	50.00	2	
PA99	SEWAGE TREATMENT	1,821.00	1	*
PA99	SEWAGE TREATMENT	140.00	2	*
PA99	SEWAGE TREATMENT	59.00	3	*
PA99	SEWAGE TREATMENT	39.00	4	*
RAND TOTAL COMMERCIAL LOAD		21,322.43 KVA		

* SEWAGE TREATMENT PLANT LOADS WERE PROVIDED BY CIVIL ENGINEERING CONSUULTANT REFER TO CIVIL ENGINEER PLANS FOR DETAILED LOAD CALCULATIONS

3.) SUM OF 1.) & 2.)

SITE GRAND TOTAL (RESIDENTIAL+COMMERCIAL)=	73,542.0 KVA *

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

SITE TOTAL LOAD CALCULATION

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

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2.) COMMERCIAL LOAD CALCULATIONS

PARCEL	BUILDING TYPE	CONNECTED LOAD (KVA)
PA10, PA11	UPS	45.80
PA11, PA12	NAILS & LASHES	45.80
PA11, PA12	SPORTS CLIPS	45.80
PA11, PA12	MARTIAL ARTS	49.80
PA11, PA12	OPTOMETRY	49.80
PA11, PA12	CLOTHING	45.80
PA11, PA12	COSMETICS	45.80
PA11, PA12	IN N OUT	182.75
PA11, PA12	RESTAURANT TARGETED	85.00
PA74	OFFICE	3,078.84
PA28	SCHOOL	2,476.63
PA20	FIRE/POLICE	95.50
PA99	SEWAGE TREATMENT	59.00
GRAND TOTAL COMMERCIAL LOAD		6,306.32 KVA

* SEWAGE TREATMENT PLANT LOADS WERE PROVIDED BY CIVIL ENGINEERING CONSUULTANT REFER TO CIVIL ENGINEER PLANS FOR DETAILED LOAD CALCULATIONS

3.) SUM OF 1.) & 2.)

PHASE 3 GRAND TOTAL (RESIDENTIAL+COMMERCIAL)=	27,016.0 KVA

1.) RESIDENTIAL LOAD CALCULATIONS

PARCEL	PRODUCT TYI	# OF UNIT -	PARCEL RESIDENTIAL CONNECTED LOAD (KVA) --	PARCEL RESIDENTIAL DEMANDED LOAD (KVA) ---	PARCEL HOUSE LOAD (KVA)	PA PHASING
PA26	2	116	5,966.0	1,372.2	8.7	3
PA29	2	52	2,674.4	668.6	3.9	3
PA33	2	137	7,046.0	1,620.6	10.3	3
PA37	5	19	987.1	375.1	1.5	3
PA38	5	45	2,337.8	631.2	3.5	3
PA49	5	73	3,792.4	872.2	5.6	3
PA50	5	15	779.3	311.7	1.2	3
PA27	6	97	5,175.0	1,190.2	7.4	3
PA30	6	82	4,374.7	1,006.2	6.2	3
PA36	6	45	2,400.8	648.2	3.5	3
PA32	7	80	4,544.0	1,045.1	6.0	3
PA51	7	34	1,931.2	579.4	2.6	3
PA54	7	29	1,647.2	543.6	2.2	3
PA39	8	60	3,408.0	817.9	4.5	3
PA48	8	63	3,578.4	823.0	4.7	3
PA77	8	30	1,704.0	562.3	2.3	3
PA31	9	55	3,487.6	871.9	4.1	3
PA52	9	75	4,754.0	1,093.4	5.6	3
PA40	10	59	3,736.9	896.9	4.4	3
PA47	10	96	6,082.7	1,399.0	7.2	3
PA41	11	32	2,332.6	723.1	2.4	3
PA46	11	33	2,411.4	747.5	2.5	3
PA35	12	9	673.0	289.4	0.7	3
PA42	12	42	3,123.9	874.7	3.2	3
PA45	12	11	823.6	345.9	0.8	3
PA53	12	35	2,671.6	801.5	2.6	3
PA43	13	23	1,863.9	671.0	1.7	3
PA44	13	16	1,297.0	505.8	1.2	3
PA8-R3	16	45	1,228.4	331.7		3
PA15-R3	16	27	737.0	250.6		3
PA14-R3	16	73	1,992.7	458.3		3

	TOTAL # OF RESIDENTIAL UNITS--->		RESIDENTIAL CONNECTED SUM (KVA)--->		RESIDENTIAL DEMANDED LOAD SUM (KVA) DEMANDED BY PARCEL--->		HOUSE LOAD SUM (KVA)--->	
		1,608.0		89,562.2		23,328.2		110.4
APPLICATION OF DEMAND (NEC220.84) RESIDENTIAL CONNECTED LOAD X 23%				20,599.3				
GRAND TOTAL LOAD (RESIDENTIAL + HOUSE) =				20,709.7 KVA		23,438.6 KVA		

3 E0.11 PHASE 3 LOAD CALCULATIONS
SCALE: NONE

2.) COMMERCIAL LOAD CALCULATIONS

PARCEL	BUILDING TYPE	CONNECTED LOAD (KVA)
PA11, PA12	JUICE BAR	65.00
PA11, PA12	YOGURTLAND	65.00
PA11, PA12	SANDWHICH	65.00
PA11, PA12	COFFE BREAKFAST	85.00
PA11, PA12	COMMERCIAL HOUSE/EV	807.12
PA11	OFFICE	134.60
PA56	OFFICE	134.60
PA80	AMENITIES	367.51
PA34	AMENITIES	154.91
PA99	SEWAGE TREATMENT	1,821.00 *
GRAND TOTAL COMMERCIAL LOAD		3,699.74 KVA

* SEWAGE TREATMENT PLANT LOADS WERE PROVIDED BY CIVIL ENGINEERING CONSUULTANT REFER TO CIVIL ENGINEER PLANS FOR DETAILED LOAD CALCULATIONS

3.) SUM OF 1.) & 2.)

PHASE 1 GRAND TOTAL (RESIDENTIAL+COMMERCIAL)=	24,236.6 KVA

1.) RESIDENTIAL LOAD CALCULATIONS

PARCEL	PRODUCT TYPE	# OF UNITS -	PARCEL RESIDENTIAL CONNECTED LOAD (KVA) --	PARCEL RESIDENTIAL DEMANDED LOAD (KVA) ---	PARCEL HOUSE LOAD (KVA)
PA1	16	130	6,484.4	1,491.4	9.8
PA7	2	118	6,068.9	1,395.8	4.5
PA9	2	75	3,857.3	887.2	4.9
PA19	2	118	6,068.9	1,395.8	8.9
PA2	4	32	1,662.4	515.3	2.4
PA6	3	104	5,402.8	1,242.6	7.8
PA16	3	67	3,480.7	800.5	5.0
PA25	3	53	2,753.4	688.3	4.1
PA78	4	30	1,558.5	514.3	2.3
PA23	5	53	2,753.4	688.3	4.1
PA17	6	17	907.0	353.7	1.4
PA18	6	21	1,120.4	414.5	1.7
PA22	6	115	6,135.3	1,411.1	8.6
PA3	7	23	1,306.4	470.3	1.7
PA4	7	22	1,249.6	449.9	1.7
PA5	7	73	4,146.4	953.7	5.5
PA24	8	40	2,272.0	636.2	3.0
PA13	9	32	2,034.2	630.6	2.4
PA57	9	8	508.6	218.7	0.6
PA58	9	45	2,854.4	770.7	3.4
PA61	9	19	1,204.1	457.6	1.4
PA66	10	11	1,729.8	726.5	0.8
PA67	10	6	383.9	168.9	0.5
PA68	10	10	1,091.8	469.5	0.8
PA69	10	7	446.2	196.3	0.5
PA70	10	10	633.2	272.3	0.8
PA71	10	10	633.2	272.3	0.8
PA55	11	12	876.0	359.1	0.9
PA59	11	29	2,116.1	698.3	2.2
PA60	11	42	3,060.9	857.0	3.2
PA8-R1	16	42	1,146.5	321.0	740.1
PA15-R1	16	25	682.4	238.8	474.4
PA14-R1	16	68	1,856.2	426.9	1,175.6

	TOTAL # OF RESIDENTIAL UNITS--->		RESIDENTIAL CONNECTED SUM (KVA)--->		DEMANDED LOAD SUM (KVA) DEMANDED BY PARCEL--->		HOUSE LOAD SUM (KVA)--->	
		1,467.0		78,484.9		21,393.8		2,485.3
APPLICATION OF DEMAND (NEC220.84) RESIDENTIAL CONNECTE				18,051.5				
GRAND TOTAL LOAD (RESIDENTIAL + HOUSE) =				20,536.8 KVA		23,879.1 KVA		

1 E0.11 PHASE 1 LOAD CALCULATIONS
SCALE: NONE

2.) COMMERCIAL LOAD CALCULATIONS

PARCEL	BUILDING TYPE	CONNECTED LOAD (KVA)
PA10	GROCERY	1,074.00
PA10	CVS	411.00
PA10	BANK	76.70
PA11, PA12	FITNESS	53.80
PA11, PA12	CLEANERS	49.80
PA11, PA12	URGENT CARE	46.00
PA76	OFFICE	8,625.08
PA99	SEWAGE TREATMENT	39.00
GRAND TOTAL COMMERCIAL LOAD		10,375.38 KVA

* SEWAGE TREATMENT PLANT LOADS WERE PROVIDED BY CIVIL ENGINEERING CONSUULTANT REFER TO CIVIL ENGINEER PLANS FOR DETAILED LOAD

3.) SUM OF 1.) & 2.)

PHASE 1 GRAND TOTAL (RESIDENTIAL+COMMERCIAL)=	11,802.7 KVA

1.) RESIDENTIAL LOAD CALCULATIONS

PARCEL	PRODUCT TYPE	# OF UNITS -	PARCEL RESIDENTIAL CONNECTED LOAD (KVA) --	PARCEL RESIDENTIAL DEMANDED LOAD (KVA) ---	PARCEL HOUSE LOAD (KVA)
PA75	9	76	4,816.3	1,107.8	5.7
PA8-R4	16	16	436.8	170.3	
PA15-R4	16	10	273.0	117.4	
PA14-R4	16	24	655.1	229.3	

	TOTAL # OF RESIDENTIAL UNITS--->		RESIDENTIAL CONNECTED SUM (KVA)--->		RESIDENTIAL DEMANDED LOAD SUM (KVA) DEMANDED BY PARCEL--->		HOUSE LOAD SUM (KVA)--->	
		126.0		6,181.2		1,624.8		5.7
APPLICATION OF DEMAND (NEC220.84) RESIDENTIAL CONNECTED LOAD X 23%				1,421.7				
GRAND TOTAL LOAD (RESIDENTIAL + HOUSE) =				1,427.4 KVA		1,630.5 KVA		

4 E0.11 PHASE 4 LOAD CALCULATIONS
SCALE: NONE

2.) COMMERCIAL LOAD CALCULATIONS

PARCEL	BUILDING TYPE	CONNECTED LOAD (KVA)
PA11, PA12	RESTAURANT	85.00
PA21	OFFICE	666.00
PA79, PA81	PARK (ESTIMATE)	50.00
PA99	SEWAGE TREATMENT	140.00
GRAND TOTAL COMMERCIAL LOAD		941.00 KVA

* SEWAGE TREATMENT PLANT LOADS WERE PROVIDED BY CIVIL ENGINEERING CONSUULTANT REFER TO CIVIL ENGINEER PLANS FOR DETAILED LOAD CALCULATIONS

3.) SUM OF 1.) & 2.)

PHASE 1 GRAND TOTAL (RESIDENTIAL+COMMERCIAL)=	10,486.7 KVA

1.) RESIDENTIAL LOAD CALCULATIONS

PARCEL	PRODUCT TYPE	# OF UNITS -	PARCEL RESIDENTIAL CONNECTED LOAD (KVA) --	PARCEL RESIDENTIAL DEMANDED LOAD (KVA) ---	PARCEL HOUSE LOAD (KVA)
PA62	16	595	29,678.6	6,826.1	26.8
PA65	11	80	5,826.4	1,340.1	6.0
PA63	12	35	2,601.6	780.5	2.6
PA64	12	19	1,325.5	503.7	1.4
PA8-R2	16	22	600.5	216.2	
PA15-R2	16	13	354.9	145.5	
PA14-R2	16	35	955.4	286.6	

	TOTAL # OF RESIDENTIAL UNITS--->		RESIDENTIAL CONNECTED SUM (KVA)--->		RESIDENTIAL DEMANDED LOAD SUM (KVA) DEMANDED BY PARCEL--->		HOUSE LOAD SUM (KVA)--->	
		799.0		41,342.8		10,098.6		36.8
APPLICATION OF DEMAND (NEC220.84) RESIDENTIAL CONNECTE				9,508.8				
GRAND TOTAL LOAD (RESIDENTIAL + HOUSE) =				9,545.7 KVA		10,135.4 KVA		

2 E0.11 PHASE 2 LOAD CALCULATIONS
SCALE: NONE

Consultant
Salas O'Brien
salasobrien.com 949.753.1553
Corona
4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392
Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

PHASING LOAD CALCULATIONS

Preliminary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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NEIGBORHOOD PA29 INDICATE TO HAVE 52 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	52	=	509.65	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	52	=	249.08	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	52	=	569.92	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	52	=	13.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	52	=	499.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	52	=	416.00	KVA
7.0 HVAC System Equipment (speculated)	8.0 KVA	each X	52	=	417.56	KVA
			Total (all units)	=	2,674.41	KVA
Application of Demand (NEC 220.84)						
2674.412 kVA x 25% (52 units)					668.60	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	26	=	2.60	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	13	=	1.30	KVA
			Total (8)	**=**	3.90	KVA
			Grand-Total (1.0 – 8.0):	**=**	**672.50**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,802.10**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,868.06**	**AMPS**

NEIGBORHOOD PA33 INDICATE TO HAVE 137 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	137	=	1,342.74	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	137	=	656.23	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	137	=	1,501.52	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	137	=	34.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	137	=	1,315.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	137	=	1,096.00	KVA
7.0 HVAC System Equipment (speculated)	8.0 KVA	each X	137	=	1,100.11	KVA
			Total (all units)	=	7,046.05	KVA
Application of Demand (NEC 220.84)						
7046.047 kVA x 23% (137 units)					1,620.59	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	6.9 KVA	each X	1	=	6.85	KVA
.2 Misc. Power (estimate)	3.4 KVA	each X	1	=	3.43	KVA
			Total (8)	**=**	10.28	KVA
			Grand-Total (1.0 – 8.0):	**=**	**1,630.87**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**6,795.27**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**4,530.18**	**AMPS**

NEIGBORHOOD PA7 INDICATE TO HAVE 118 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	118	=	1,156.52	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	118	=	565.22	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	118	=	1,293.28	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	118	=	29.50	KVA
5.0 Electric Vehicle Charging Station 50% Residence	9.6 KVA	each X	118	=	1,132.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	118	=	944.00	KVA
7.0 HVAC System Equipment (speculated)	8.0 KVA	each X	118	=	947.54	KVA
			Total (all units)	=	6,068.86	KVA
Application of Demand (NEC 220.84)						
6068.858 kVA x 23% (118 units)					1,395.84	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	3.0 KVA	each X	1	=	3.00	KVA
.2 Misc. Power (estimate)	1.5 KVA	each X	1	=	1.50	KVA
			Total (8)	**=**	4.50	KVA
			Grand-Total (1.0 – 8.0):	**=**	**1,400.34**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**5,834.74**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3,889.83**	**AMPS**

NEIGBORHOOD PA9 INDICATE TO HAVE 75 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	75	=	735.08	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	75	=	359.25	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	75	=	822.00	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	75	=	18.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	75	=	720.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	75	=	600.00	KVA
7.0 HVAC System Equipment (speculated)	8.0 KVA	each X	75	=	602.25	KVA
			Total (all units)	=	3,857.33	KVA
Application of Demand (NEC 220.84)						
3857.325 kVA x 23% (75 units)					887.18	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	3.3 KVA	each X	1	=	3.25	KVA
.2 Misc. Power (estimate)	1.7 KVA	each X	1	=	1.65	KVA
			Total (8)	**=**	4.90	KVA
			Grand-Total (1.0 – 8.0):	**=**	**892.08**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3,717.02**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2,478.01**	**AMPS**

NEIGBORHOOD PA19 INDICATE TO HAVE 118 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	118	=	1,156.52	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	118	=	565.22	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	118	=	1,293.28	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	118	=	29.50	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	118	=	1,132.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	118	=	944.00	KVA
7.0 HVAC System Equipment (speculated)	8.0 KVA	each X	118	=	947.54	KVA
			Total (all units)	=	6,068.86	KVA
Application of Demand (NEC 220.84)						
6068.858 kVA x 23% (118 units)					1,395.84	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	59	=	5.90	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	30	=	3.00	KVA
			Total (8)	**=**	8.90	KVA
			Grand-Total (1.0 – 8.0):	**=**	**1,404.74**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**5,853.07**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3,902.05**	**AMPS**

NEIGBORHOOD PA26 INDICATE TO HAVE 116 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	116	=	1,136.92	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	116	=	555.64	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	116	=	1,271.36	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	116	=	29.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	116	=	1,113.60	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	116	=	928.00	KVA
7.0 HVAC System Equipment (speculated)	8.0 KVA	each X	116	=	931.48	KVA
			Total (all units)	=	5,966.00	KVA
Application of Demand (NEC 220.84)						
5965.996 kVA x 23% (116 units)					1,372.18	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	58	=	5.80	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	29	=	2.90	KVA
			Total (8)	**=**	8.70	KVA
			Grand-Total (1.0 – 8.0):	**=**	**1,380.88**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**5,753.66**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3,835.78**	**AMPS**

Town Home (Item #1 & #2)
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power		**1,767 Sq.Ft.**					
.1	**General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:**				**=**	**5.3**	**KVA**
.2	**Small Appliance Circuits(2) at 1500 Watts each:**				**=**	**3.0**	**KVA**
.3	**Laundry Circuits(1) at 1500 Watts each:**				**=**	**1.5**	**KVA**
				Total (1)	**=**	**9.8**	**KVA**
2.0 Small Appliance Loads							
	Appliance	***Quanti***		***Estimated Load***			
.1	**Refrigerator/Freezer:**	**1**	**0.54**	**KVA**	**=**	**0.5**	**KVA**
.2	**Dishwasher:**	**1**	**1.2**	**KVA**	**=**	**1.2**	**KVA**
.3	**Garbage Disposal:**	**1**	**1.15**	**KVA**	**=**	**1.2**	**KVA**
.4	**Range hood:**	**1**	**0.5**	**KVA**	**=**	**0.5**	**KVA**
.5	**Microwave:**	**1**	**1.4**	**KVA**	**=**	**1.4**	**KVA**
				Total (2)	**=**	**4.8**	**KVA**
3.0 Special Equipment Loads							
.1	**Garage Door Motor(Estimated (1) @600W each):**				**=**	**0.6**	**KVA**
.2	**AV System Equipment – (1) Circuits at 360W each**				**=**	**0.4**	**KVA**
.3	**Electric Dryer (1) @5KW each**				**=**	**5.0**	**KVA**
.4	**Electric Water Heater provisions (1) @5KW**				**=**	**5.0**	**KVA**
				Total (3)	**=**	**11.0**	**KVA**
4.0 Miscellaneous Site Lighting							
.1	**Estimated Lump Sum:**			**Total (4)**	**=**	**0.3**	**KVA**
5.0 Electric Vehicle Charging Stations							
.1	**EV Station 1 @**	**40 Amps Each - 230V. 1 Phase**			**=**	**7.7**	**KVA**
.2	**Plus 125% for LCL**				**=**	**1.9**	**KVA**
				Total (5)	**=**	**9.6**	**KVA**
6.0	**Electric Cooktops/Ovens/Ranges**						
.1	**Electric Cooktops/Ovens/Ranges**				**=**	**8.0**	**KVA**
				Total (6)	**=**	**8.0**	**KVA**
				Sub-Total (1.0 – 6.0):	**=**	**43.4**	**KVA**
	Application of Demand (Per NEC 220.31):						
	1st 10 kVA at 100% :				**=**	**8.0**	**KVA**
	Remainder of Load at 40% :				**=**	**13.4**	**KVA**
				Total (1.0 – 6.0):	**=**	**21.4**	**KVA**
7.0 HVAC System Equipment (Speculated)							
.1	**Outdoor Unit:**	**1 @22A 230V-1PH**			**=**	**5.3**	**KVA**
.2	**Fan Coil Units:**				**=**	**0.8**	**KVA**
.3	**Exhaust Fans:**				**=**	**0.3**	**KVA**
.4	**Misc. Mech/Plmbg Units:**				**=**	**0.3**	**KVA**
.5	**Plus 25% Of Largest Rated Motor**				**=**	**1.5**	**KVA**
				Total (7)	**=**	**8.0**	**KVA**
				Grand-Total (1.0 – 7.0):	**=**	**29.4**	**KVA**
				÷ 240V:	**=**	**122.5**	**AMPS**

Estimated 200A – 240V – 1Ø – 3W Service

Seal

Consultant

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4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883
Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE TOWNHOME
PRODUCT TYPE:1 & 2

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

S H E E T

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NEIGBORHOOD PA23 INDICATE TO HAVE 53 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	53	=	524.70	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	53	=	253.87	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	53	=	580.88	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	53	=	13.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	53	=	508.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	53	=	424.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	53	=	447.85	KVA
			Total (all units)	=	2,753.35	KVA
Application of Demand (NEC 220.84)						
2753.35 kVA x 25% (53 units)					688.34	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	27	=	2.70	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	14	=	1.40	KVA
			Total (8)	=	4.10	KVA
			Grand-Total (1.0 – 8.0):	=	**692.44**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,885.16**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,923.44**	**AMPS**

NEIGBORHOOD PA37 INDICATE TO HAVE 19 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	19	=	188.10	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	19	=	91.01	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	19	=	208.24	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	19	=	4.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	19	=	182.40	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	19	=	152.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	19	=	160.55	KVA
			Total (all units)	=	987.05	KVA
Application of Demand (NEC 220.84)						
987.05 kVA x 38% (19 units)					375.08	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	10	=	1.00	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	5	=	0.50	KVA
			Total (8)	=	1.50	KVA
			Grand-Total (1.0 – 8.0):	=	**376.58**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**1,569.08**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,046.05**	**AMPS**

NEIGBORHOOD PA38 INDICATE TO HAVE 45 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	45	=	445.50	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	45	=	215.55	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	45	=	493.20	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	45	=	11.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	45	=	432.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	45	=	360.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	45	=	380.25	KVA
			Total (all units)	=	2,337.75	KVA
Application of Demand (NEC 220.84)						
2337.75 kVA x 27% (45 units)					631.19	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	23	=	2.30	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	12	=	1.20	KVA
			Total (8)	=	3.50	KVA
			Grand-Total (1.0 – 8.0):	=	**634.69**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,644.55**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,763.03**	**AMPS**

NEIGBORHOOD PA49 INDICATE TO HAVE 73 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	73	=	722.70	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	73	=	349.67	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	73	=	800.08	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	73	=	18.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	73	=	700.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	73	=	584.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	73	=	616.85	KVA
			Total (all units)	=	3,792.35	KVA
Application of Demand (NEC 220.84)						
3792.35 kVA x 23% (73 units)					872.24	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	37	=	3.70	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	19	=	1.90	KVA
			Total (8)	=	5.60	KVA
			Grand-Total (1.0 – 8.0):	=	**877.84**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3,657.67**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2,438.45**	**AMPS**

NEIGBORHOOD PA6 INDICATE TO HAVE 104 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	104	=	1,029.60	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	104	=	498.16	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	104	=	1,139.84	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	104	=	26.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	104	=	998.40	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	104	=	832.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	104	=	878.80	KVA
			Total (all units)	=	5,402.80	KVA
Application of Demand (NEC 220.84)						
5402.8 kVA x 23% (104 units)					1,242.64	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	52	=	5.20	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	26	=	2.60	KVA
			Total (8)	=	7.80	KVA
			Grand-Total (1.0 – 8.0):	=	**1,250.44**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**5,210.18**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3,473.46**	**AMPS**

NEIGBORHOOD PA16 INDICATE TO HAVE 67 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	67	=	663.30	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	67	=	320.93	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	67	=	734.32	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	67	=	16.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	67	=	643.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	67	=	536.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	67	=	566.15	KVA
			Total (all units)	=	3,480.65	KVA
Application of Demand (NEC 220.84)						
3480.65 kVA x 23% (67 units)					800.55	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	3.4 KVA	each X	1	=	3.35	KVA
.2 Misc. Power (estimate)	1.7 KVA	each X	1	=	1.68	KVA
			Total (8)	=	5.03	KVA
			Grand-Total (1.0 – 8.0):	=	**805.57**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3,356.56**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2,237.71**	**AMPS**

NEIGBORHOOD PA25 INDICATE TO HAVE 53 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	53	=	524.70	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	53	=	253.87	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	53	=	580.88	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	53	=	13.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	53	=	508.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	53	=	424.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	53	=	447.85	KVA
			Total (all units)	=	2,753.35	KVA
Application of Demand (NEC 220.84)						
2753.35 kVA x 25% (53 units)					688.34	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	27	=	2.70	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	14	=	1.40	KVA
			Total (8)	=	4.10	KVA
			Grand-Total (1.0 – 8.0):	=	**692.44**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,885.16**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,923.44**	**AMPS**

NEIGBORHOOD PA78 INDICATE TO HAVE 30 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	30	=	297.00	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	30	=	143.70	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	30	=	328.80	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	30	=	7.50	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	30	=	288.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	30	=	240.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	30	=	253.50	KVA
			Total (all units)	=	1,558.50	KVA
Application of Demand (NEC 220.84)						
1558.5 kVA x 33% (30 units)					514.31	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	1.5 KVA	each X	1	=	1.50	KVA
.2 Misc. Power (estimate)	0.8 KVA	each X	1	=	0.75	KVA
			Total (8)	=	2.25	KVA
			Grand-Total (1.0 – 8.0):	=	**516.56**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,152.31**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,434.88**	**AMPS**

SFD-ENT (Item #3, #4, #5)

MAIN SERVICE BOARD "MSA"

PRELIMINARY ELECTRICAL LOAD CALCULATION

SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power 1,800 Sq.Ft.

.1	General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:			=	5.4 KVA
.2	Small Appliance Circuits(2) at 1500 Watts each:			=	3.0 KVA
.3	Laundry Circuits(1) at 1500 Watts each:			=	1.5 KVA
			Total (1)	=	9.9 KVA

2.0 Small Appliance Loads

	Appliance	*Quantity*		*Estimated Load*		
.1	Refrigerator/Frezeer:	1	0.54	KVA	=	0.5 KVA
.3	Dishwasher:	1	1.2	KVA	=	1.2 KVA
.4	Garbage Disposal:	1	1.15	KVA	=	1.2 KVA
.7	Range hood:	1	0.5	KVA	=	0.5 KVA
.8	Microwave:	1	1.4	KVA	=	1.4 KVA
				Total (2)	=	4.8 KVA

3.0 Special Equipment Loads

.1	Garage Door Motor(Estimated (1) @600W each):		=	0.6 KVA
.2	AV System Equipment – (1) Circuits at 360W each		=	0.4 KVA
.3	Electric Dryer (1) @5KW each		=	5.0 KVA
.4	Electric Water Heater provisions (1) @5KW		=	5.0 KVA
		Total (3)	=	11.0 KVA

4.0 Miscellaneous Site Lighting

.1	Estimated Lump Sum:	Total (4)	=	0.3 KVA

5.0 Electric Vehicle Charging Stations

.1	EV Station 1 @ 40 Amps Each - 230V. 1 Phase		=	7.7 KVA
.2	Plus 125% for LCL		=	1.9 KVA
		Total (5)	=	9.6 KVA

6.0 Electric Cooktops/Ovens/Ranges

.1	Electric Cooktops/Ovens/Ranges		=	8.0 KVA
		Total (6)	=	8.0 KVA
		Sub-Total (1.0 – 6.0):	=	43.5 KVA

Application of Demand (Per NEC 220.31):

1st 10 kVA at 100% :		=	10.0 KVA
Remainder of Load at 40% :		=	13.4 KVA
	Total (1.0 – 6.0):	=	23.4 KVA

7.0 HVAC System Equipment (Speculated)

.1	Outdoor Unit: 1 @24A 230V-1PH		=	5.8 KVA
.2	Fan Coil Units:		=	0.8 KVA
.3	Exhaust Fans:		=	0.3 KVA
.4	Misc. Mech/Plmbg Units:		=	0.3 KVA
.5	Plus 25% Of Largest Rated Motor		=	1.4 KVA
		Total (7)	=	8.5 KVA
		Grand-Total (1.0 – 7.0):	=	31.9 KVA
		÷ 240V:	=	132.7 AMPS

Estimated 200A – 240V – 1Ø – 3W Service

NEIGBORHOOD PA2 INDICATE TO HAVE 32 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	32	=	316.80	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	32	=	153.28	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	32	=	350.72	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	32	=	8.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	32	=	307.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	32	=	256.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	32	=	270.40	KVA
			Total (all units)	=	1,662.40	KVA
Application of Demand (NEC 220.84)						
1662.4 kVA x 31% (32 units)					515.34	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	16	=	1.60	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	8	=	0.80	KVA
			Total (8)	=	2.40	KVA
			Grand-Total (1.0 – 8.0):	=	**517.74**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,157.27**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,438.18**	**AMPS**

Seal

Consultant

Salas O'Brien

salasobrien.com 949.753.1553

Corona
4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE SFD-ENT
PRODUCT TYPE: 3, 4, 5

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

S H E E T

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NEIGBORHOOD PA50 INDICATE TO HAVE 15 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.9 KVA	each X	15	=	148.50	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	15	=	71.85	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	15	=	164.40	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	15	=	3.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	15	=	144.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	15	=	120.00	KVA
7.0 HVAC System Equipment (speculated)	8.5 KVA	each X	15	=	126.75	KVA
			Total (all units)	=	779.25	KVA
Application of Demand (NEC 220.84)						
779.25 kVA x 40% (15 units)					311.70	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	8	=	0.80	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	4	=	0.40	KVA
			Total (8)	=	1.20	KVA
			Grand-Total (1.0 – 8.0):	=	**312.90**	**KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**1,303.75**	**AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**869.17**	**AMPS**

Seal

Consultant

Salas O'Brien

salasobrien.com 949.753.1553

Corona
4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE SFD-ENT
PRODUCT TYPE: 3, 4, 5

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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NEIGBORHOOD PA30 INDICATE TO HAVE 82 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	10.4 KVA	each X	82	=	848.70	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	82	=	392.78	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	82	=	898.72	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	82	=	20.50	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	82	=	787.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	82	=	656.00	KVA
7.0 HVAC System Equipment (speculated)	9.4 KVA	each X	82	=	770.80	KVA
			Total (all units)	=	4,374.70	KVA
Application of Demand (NEC 220.84)						
4374.7 kVA x 23% (82 units)					1,006.18	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	4.1 KVA	each X	1	=	4.10	KVA
.2 Misc. Power (estimate)	2.1 KVA	each X	1	=	2.05	KVA
			Total (8)	=	6.15	KVA
			Grand-Total (1.0 – 8.0):	=	**1,012.33**	**KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**4,218.05**	**AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**2,812.03**	**AMPS**

NEIGBORHOOD PA36 INDICATE TO HAVE 45 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	10.4 KVA	each X	45	=	465.75	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	45	=	215.55	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	45	=	493.20	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	45	=	11.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	45	=	432.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	45	=	360.00	KVA
7.0 HVAC System Equipment (speculated)	9.4 KVA	each X	45	=	423.00	KVA
			Total (all units)	=	2,400.75	KVA
Application of Demand (NEC 220.84)						
2400.75 kVA x 27% (45 units)					648.20	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	23	=	2.30	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	12	=	1.20	KVA
			Total (8)	=	3.50	KVA
			Grand-Total (1.0 – 8.0):	=	**651.70**	**KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**2,715.43**	**AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**1,810.28**	**AMPS**

NEIGBORHOOD PA17 INDICATE TO HAVE 17 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	10.4 KVA	each X	17	=	175.95	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	17	=	81.43	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	17	=	186.32	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	17	=	4.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	17	=	163.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	17	=	136.00	KVA
7.0 HVAC System Equipment (speculated)	9.4 KVA	each X	17	=	159.80	KVA
			Total (all units)	=	906.95	KVA
Application of Demand (NEC 220.84)						
906.95 kVA x 39% (17 units)					353.71	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	9	=	0.90	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	4.5	=	0.45	KVA
			Total (8)	=	1.35	KVA
			Grand-Total (1.0 – 8.0):	=	**355.06**	**KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**1,479.42**	**AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**986.28**	**AMPS**

NEIGBORHOOD PA18 INDICATE TO HAVE 21 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	10.4 KVA	each X	21	=	217.35	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	21	=	100.59	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	21	=	230.16	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	21	=	5.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	21	=	201.60	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	21	=	168.00	KVA
7.0 HVAC System Equipment (speculated)	9.4 KVA	each X	21	=	197.40	KVA
			Total (all units)	=	1,120.35	KVA
Application of Demand (NEC 220.84)						
1120.35 kVA x 37% (21 units)					414.53	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	11	=	1.10	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	5.5	=	0.55	KVA
			Total (8)	=	1.65	KVA
			Grand-Total (1.0 – 8.0):	=	**416.18**	**KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**1,734.08**	**AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**1,156.05**	**AMPS**

NEIGBORHOOD PA22 INDICATE TO HAVE 115 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	10.4 KVA	each X	115	=	1,190.25	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	115	=	550.85	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	115	=	1,260.40	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	115	=	28.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	115	=	1,104.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	115	=	920.00	KVA
7.0 HVAC System Equipment (speculated)	9.4 KVA	each X	115	=	1,081.00	KVA
			Total (all units)	=	6,135.25	KVA
Application of Demand (NEC 220.84)						
6135.25 kVA x 23% (115 units)					1,411.11	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	5.8 KVA	each X	1	=	5.75	KVA
.2 Misc. Power (estimate)	2.9 KVA	each X	1	=	2.88	KVA
			Total (8)	=	8.63	KVA
			Grand-Total (1.0 – 8.0):	=	**1,419.73**	**KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**5,915.55**	**AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**3,943.70**	**AMPS**

NEIGBORHOOD PA27 INDICATE TO HAVE 97 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	10.4 KVA	each X	97	=	1,003.95	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	97	=	464.63	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	97	=	1,063.12	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	97	=	24.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	97	=	931.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	97	=	776.00	KVA
7.0 HVAC System Equipment (speculated)	9.4 KVA	each X	97	=	911.80	KVA
			Total (all units)	=	5,174.95	KVA
Application of Demand (NEC 220.84)						
5174.95 kVA x 23% (97 units)					1,190.24	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.1 KVA	each X	49	=	4.90	KVA
.2 Misc. Power (estimate)	0.1 KVA	each X	25	=	2.50	KVA
			Total (8)	=	7.40	KVA
			Grand-Total (1.0 – 8.0):	=	**1,197.64**	**KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**4,990.16**	**AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**3,326.77**	**AMPS**

SFD-ENT (Item #6)

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power **1,950 Sq.Ft.**

.1 General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:			=	**5.9**	**KVA**
.2 Small Appliance Circuits(2) at 1500 Watts each:			=	**3.0**	**KVA**
.3 Laundry Circuits(1) at 1500 Watts each:			=	**1.5**	**KVA**
		Total (1)	=	**10.4**	**KVA**

2.0 Small Appliance Loads

Appliance	*Quantity*		*Estimated Load*			
.1 Refrigerator/Frezeer:	**1**	**0.54**	**KVA**	=	**0.5**	**KVA**
.3 Dishwasher:	**1**	**1.2**	**KVA**	=	**1.2**	**KVA**
.4 Garbage Disposal:	**1**	**1.15**	**KVA**	=	**1.2**	**KVA**
.7 Range hood:	**1**	**0.5**	**KVA**	=	**0.5**	**KVA**
.8 Microwave:	**1**	**1.4**	**KVA**	=	**1.4**	**KVA**
			Total (2)	=	**4.8**	**KVA**

3.0 Special Equipment Loads

.1 Garage Door Motor(Estimated (1) @600W each):	=	**0.6**	**KVA**
.2 AV System Equipment – (1) Circuits at 360W each	=	**0.4**	**KVA**
.3 Electric Dryer (1) @5KW each	=	**5.0**	**KVA**
.4 Electric Water Heater provisions (1) @5KW	=	**5.0**	**KVA**
Total (3)	=	**11.0**	**KVA**

4.0 Miscellaneous Site Lighting

.1 Estimated Lump Sum:			=	**0.3**	**KVA**
Total (4)	=	**0.3**	**KVA**

5.0 Electric Vehicle Charging Stations

.1 EV Station	**1 @ 40 Amps Each - 230V. 1 Phase**		=	**7.7**	**KVA**
.2 Plus 125% for LCL			=	**1.9**	**KVA**
		Total (5)	=	**9.6**	**KVA**

6.0 Electric Cooktops/Ovens/Ranges

.1 Electric Cooktops/Ovens/Ranges		=	**8.0**	**KVA**
Total (6)		=	**8.0**	**KVA**
Sub-Total (1.0 – 6.0):		=	**44.0**	**KVA**

Application of Demand (Per NEC 220.31):

1st 10 kVA at 100% :		=	**10.0**	**KVA**
Remainder of Load at 40% :		=	**13.6**	**KVA**
Total (1.0 – 6.0):		=	**23.6**	**KVA**

7.0 HVAC System Equipment (Speculated)

.1 Outdoor Unit:	**1 @27A 230V-1PH**	=	**6.5**	**KVA**
.2 Fan Coil Units:		=	**0.8**	**KVA**
.3 Exhaust Fans:		=	**0.3**	**KVA**
.4 Misc. Mech/Plmbg Units:		=	**0.3**	**KVA**
.5 Plus 25% Of Largest Rated Motor		=	**1.6**	**KVA**
Total (7)		=	**9.4**	**KVA**
Grand-Total (1.0 – 7.0):		=	**33.0**	**KVA**
÷ 240V:		=	**137.4**	**AMPS**

Estimated 200A – 240V – 1Ø – 3W Service

Seal

Consultant

Salas O'Brien

salasobrien.com 949.753.1553

Corona
4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE SFD-ENT
PRODUCT TYPE: 6

Preliminary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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NEIGBORHOOD PA54 INDICATE TO HAVE 29 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	29	=	365.40	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	29	=	138.91	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	29	=	317.84	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	29	=	7.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	29	=	278.40	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	29	=	232.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	29	=	307.40	KVA
			Total (all units)	=	1,647.20	KVA
Application of Demand (NEC 220.84)						
1647.2 kVA x 33% (29 units)					543.58	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	1.5 KVA	each X	1	=	1.45	KVA
.2 Misc. Power (estimate)	0.7 KVA	each X	1	=	0.73	KVA
			Total (8)	=	2.18	KVA
			Grand-Total (1.0 – 8.0):	=	545.75	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					2,273.96	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					1,515.98	AMPS

NEIGBORHOOD PA24 INDICATE TO HAVE 40 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	40	=	504.00	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	40	=	191.60	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	40	=	438.40	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	40	=	10.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	40	=	384.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	40	=	320.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	40	=	424.00	KVA
			Total (all units)	=	2,272.00	KVA
Application of Demand (NEC 220.84)						
2272 kVA x 28% (40 units)					636.16	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	2.0 KVA	each X	1	=	2.00	KVA
.2 Misc. Power (estimate)	1.0 KVA	each X	1	=	1.00	KVA
			Total (8)	=	3.00	KVA
			Grand-Total (1.0 – 8.0):	=	639.16	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					2,663.17	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					1,775.44	AMPS

NEIGBORHOOD PA39 INDICATE TO HAVE 60 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	60	=	756.00	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	60	=	287.40	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	60	=	657.60	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	60	=	15.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	60	=	576.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	60	=	480.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	60	=	636.00	KVA
			Total (all units)	=	3,408.00	KVA
Application of Demand (NEC 220.84)						
3408 kVA x 24% (60 units)					817.92	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	3.0 KVA	each X	1	=	3.00	KVA
.2 Misc. Power (estimate)	1.5 KVA	each X	1	=	1.50	KVA
			Total (8)	=	4.50	KVA
			Grand-Total (1.0 – 8.0):	=	822.42	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					3,426.75	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					2,284.50	AMPS

NEIGBORHOOD PA48 INDICATE TO HAVE 63 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	63	=	793.80	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	63	=	301.77	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	63	=	690.48	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	63	=	15.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	63	=	604.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	63	=	504.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	63	=	667.80	KVA
			Total (all units)	=	3,578.40	KVA
Application of Demand (NEC 220.84)						
3578.4 kVA x 23% (63 units)					823.03	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	3.2 KVA	each X	1	=	3.15	KVA
.2 Misc. Power (estimate)	1.6 KVA	each X	1	=	1.58	KVA
			Total (8)	=	4.73	KVA
			Grand-Total (1.0 – 8.0):	=	827.76	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					3,448.99	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					2,299.33	AMPS

NEIGBORHOOD PA4 INDICATE TO HAVE 22 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	22	=	277.20	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	22	=	105.38	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	22	=	241.12	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	22	=	5.50	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	22	=	211.20	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	22	=	176.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	22	=	233.20	KVA
			Total (all units)	=	1,249.60	KVA
Application of Demand (NEC 220.84)						
1249.6 kVA x 36% (22 units)					449.86	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	1.1 KVA	each X	1	=	1.10	KVA
.2 Misc. Power (estimate)	0.6 KVA	each X	1	=	0.55	KVA
			Total (8)	=	1.65	KVA
			Grand-Total (1.0 – 8.0):	=	451.51	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					1,881.28	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					1,254.18	AMPS

NEIGBORHOOD PA5 INDICATE TO HAVE 73 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	73	=	919.80	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	73	=	349.67	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	73	=	800.08	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	73	=	18.25	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	73	=	700.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	73	=	584.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	73	=	773.80	KVA
			Total (all units)	=	4,146.40	KVA
Application of Demand (NEC 220.84)						
4146.4 kVA x 23% (73 units)					953.67	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	3.7 KVA	each X	1	=	3.65	KVA
.2 Misc. Power (estimate)	1.8 KVA	each X	1	=	1.83	KVA
			Total (8)	=	5.48	KVA
			Grand-Total (1.0 – 8.0):	=	959.15	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					3,996.45	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					2,664.30	AMPS

NEIGBORHOOD PA32 INDICATE TO HAVE 80 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	80	=	1,008.00	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	80	=	383.20	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	80	=	876.80	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	80	=	20.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	80	=	768.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	80	=	640.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	80	=	848.00	KVA
			Total (all units)	=	4,544.00	KVA
Application of Demand (NEC 220.84)						
4544 kVA x 23% (80 units)					1,045.12	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	4.0 KVA	each X	1	=	4.00	KVA
.2 Misc. Power (estimate)	2.0 KVA	each X	1	=	2.00	KVA
			Total (8)	=	6.00	KVA
			Grand-Total (1.0 – 8.0):	=	1,051.12	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					4,379.67	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					2,919.78	AMPS

NEIGBORHOOD PA51 INDICATE TO HAVE 34 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	34	=	428.40	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	34	=	162.86	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	34	=	372.64	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	34	=	8.50	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	34	=	326.40	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	34	=	272.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	34	=	360.40	KVA
			Total (all units)	=	1,931.20	KVA
Application of Demand (NEC 220.84)						
1931.2 kVA x 30% (34 units)					579.36	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	1.7 KVA	each X	1	=	1.70	KVA
.2 Misc. Power (estimate)	0.9 KVA	each X	1	=	0.85	KVA
			Total (8)	=	2.55	KVA
			Grand-Total (1.0 – 8.0):	=	581.91	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					2,424.63	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					1,616.42	AMPS

SFD-ENT (Item #7 & 8)
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power	2,200 Sq.Ft.				
.1 General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:				=	6.6 KVA
.2 Small Appliance Circuits(2) at 1500 Watts each:				=	3.0 KVA
.3 Laundry Circuits(2) at 1500 Watts each:				=	3.0 KVA
			Total (1)	=	12.6 KVA
2.0 Small Appliance Loads					
Appliance	*Quantity*		*Estimated Load*		
.1 Refrigerator/Freezer:	1	0.54	KVA	=	0.5 KVA
.2 Dishwasher:	1	1.2	KVA	=	1.2 KVA
.3 Garbage Disposal:	1	1.15	KVA	=	1.2 KVA
.4 Range hood:	1	0.5	KVA	=	0.5 KVA
.5 Microwave:	1	1.4	KVA	=	1.4 KVA
			Total (2)	=	4.8 KVA
3.0 Special Equipment Loads					
.1 Garage Door Motor(Estimated (1) @600W each):				=	0.6 KVA
.2 AV System Equipment – (1) Circuits at 360W each				=	0.4 KVA
.3 Electric Dryer (1) @5KW each				=	5.0 KVA
.4 Electric Water Heater provisions (1) @5KW				=	5.0 KVA
			Total (3)	=	11.0 KVA
4.0 Miscellaneous Site Lighting					
.1 Estimated Lump Sum:			Total (4)	=	0.3 KVA
5.0 Electric Vehicle Charging Stations					
.1 EV Station 1 @	40 Amps Each - 230V. 1 Phase			=	7.7 KVA
.2 Plus 125% for LCL				=	1.9 KVA
			Total (5)	=	9.6 KVA
6.0 Electric Cooktops/Ovens/Ranges					
.1 Electric Cooktops/Ovens/Ranges				=	8.0 KVA
			Total (6)	=	8.0 KVA
			Sub-Total (1.0 – 6.0):	=	46.2 KVA
Application of Demand (Per NEC 220.31):					
1st 10 kVA at 100% :				=	10.0 KVA
Remainder of Load at 40% :				=	14.5 KVA
			Total (1.0 – 6.0):	=	24.5 KVA
7.0 HVAC System Equipment (Speculated)					
.1 Outdoor Unit:	1 @31A 230V-1PH			=	7.4 KVA
.2 Fan Coil Units:				=	0.8 KVA
.4 Exhaust Fans:				=	0.3 KVA
.5 Misc. Mech/Plmbg Units:				=	0.3 KVA
.6 Plus 25% Of Largest Rated Motor				=	1.9 KVA
			Total (7)	=	10.6 KVA
			Grand-Total (1.0 – 7.0):	=	35.1 KVA
			÷ 240V:	=	146.2 AMPS

Estimated 200A – 240V – 1Ø – 3W Service

NEIGBORHOOD PA3 INDICATE TO HAVE 23 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	23	=	289.80	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	23	=	110.17	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	23	=	252.08	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	23	=	5.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	23	=	220.80	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	23	=	184.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	23	=	243.80	KVA
			Total (all units)	=	1,306.40	KVA
Application of Demand (NEC 220.84)						
1306.4 kVA x 36% (23 units)					470.30	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	1.2 KVA	each X	1	=	1.15	KVA
.2 Misc. Power (estimate)	0.6 KVA	each X	1	=	0.58	KVA
			Total (8)	=	1.73	KVA
			Grand-Total (1.0 – 8.0):	=	472.03	KVA
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					1,966.79	AMPS
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					1,311.19	AMPS

Seal

Consultant

Salas O'Brien

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Corona
4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE SFD-ENT
PRODUCT TYPE: 7 & 8

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

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NEIGBORHOOD PA77 INDICATE TO HAVE 30 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	12.6 KVA	each X	30	=	378.00	KVA
2.0 Small Appliance Loads	4.8 KVA	each X	30	=	143.70	KVA
3.0 Special Equipment Loads	11.0 KVA	each X	30	=	328.80	KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	30	=	7.50	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	30	=	288.00	KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	30	=	240.00	KVA
7.0 HVAC System Equipment (speculated)	10.6 KVA	each X	30	=	318.00	KVA
			Total (all units)	=	1,704.00	KVA
Application of Demand (NEC 220.84)						
1704 kVA x 33% (30 units)					562.32	KVA
8.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	1.5 KVA	each X	1	=	1.50	KVA
.2 Misc. Power (estimate)	0.8 KVA	each X	1	=	0.75	KVA
			Total (8)	**=**	2.25	KVA
			Grand-Total (1.0 – 8.0):	**=**	**564.57**	**KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,352.38**	**AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,568.25**	**AMPS**

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SANTA BARBARA COUNTY, CA

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NEIGBORHOOD PA61 INDICATE TO HAVE 19 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	19	=	267.9 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	19	=	101.7 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	19	=	211.7 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	19	=	4.8 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	19	=	182.4 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	19	=	152.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	19	=	263.7 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	2	=	20.0 KVA
			Total (all units)	=	1204.1 KVA
Application of Demand (NEC 220.84)					
1204.08 kVA x 38% (19 units)					457.6 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.0 KVA	each X	1	=	1.0 KVA
.2 Misc. Power (estimate)	0.5 KVA	each X	1	=	0.5 KVA
			Total (8)	**=**	1.4 KVA
			Grand-Total (1.0 – 8.0):	**=**	**459.0 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**1912.4 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1274.9 AMPS**

NEIGBORHOOD PA75 INDICATE TO HAVE 76 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	76	=	1071.6 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	76	=	406.6 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	76	=	846.6 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	76	=	19.0 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	76	=	729.6 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	76	=	608.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	76	=	1054.9 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	8	=	80.0 KVA
			Total (all units)	=	4816.3 KVA
Application of Demand (NEC 220.84)					
4816.32 kVA x 23% (76 units)					1107.8 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	3.8 KVA	each X	1	=	3.8 KVA
.2 Misc. Power (estimate)	1.9 KVA	each X	1	=	1.9 KVA
			Total (8)	**=**	5.7 KVA
			Grand-Total (1.0 – 8.0):	**=**	**1113.5 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**4639.4 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3092.9 AMPS**

NEIGBORHOOD PA40 INDICATE TO HAVE 59 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	59	=	831.9 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	59	=	315.7 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	59	=	657.3 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	59	=	14.8 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	59	=	566.4 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	59	=	472.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	59	=	818.9 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	6	=	60.0 KVA
			Total (all units)	=	3736.9 KVA
Application of Demand (NEC 220.84)					
3736.88 kVA x 24% (59 units)					896.9 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	3.0 KVA	each X	1	=	3.0 KVA
.2 Misc. Power (estimate)	1.5 KVA	each X	1	=	1.5 KVA
			Total (8)	**=**	4.4 KVA
			Grand-Total (1.0 – 8.0):	**=**	**901.3 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3755.3 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2503.5 AMPS**

NEIGBORHOOD PA47 INDICATE TO HAVE 96 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	96	=	1353.6 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	96	=	513.6 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	96	=	1069.4 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	96	=	24.0 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	96	=	921.6 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	96	=	768.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	96	=	1332.5 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	10	=	100.0 KVA
			Total (all units)	=	6082.7 KVA
Application of Demand (NEC 220.84)					
6082.72 kVA x 23% (96 units)					1399.0 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	4.8 KVA	each X	1	=	4.8 KVA
.2 Misc. Power (estimate)	2.4 KVA	each X	1	=	2.4 KVA
			Total (8)	**=**	7.2 KVA
			Grand-Total (1.0 – 8.0):	**=**	**1406.2 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**5859.3 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3906.2 AMPS**

NEIGBORHOOD PA31 INDICATE TO HAVE 55 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	55	=	775.50 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	55	=	294.25 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	55	=	612.70 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	55	=	13.75 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	55	=	528.00 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	55	=	440.00 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	55	=	763.40 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	6	=	60.00 KVA
			Total (all units)	=	3,487.60 KVA
Application of Demand (NEC 220.84)					
3487.6 kVA x 25% (55 units)					871.90 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	2.8 KVA	each X	1	=	2.75 KVA
.2 Misc. Power (estimate)	1.4 KVA	each X	1	=	1.38 KVA
			Total (8)	**=**	4.13 KVA
			Grand-Total (1.0 – 8.0):	**=**	**876.03 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3,650.10 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2,433.40 AMPS**

NEIGBORHOOD PA52 INDICATE TO HAVE 75 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	75	=	1,057.50 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	75	=	401.25 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	75	=	835.50 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	75	=	18.75 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	75	=	720.00 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	75	=	600.00 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	75	=	1,041.00 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	8	=	80.00 KVA
			Total (all units)	=	4,754.00 KVA
Application of Demand (NEC 220.84)					
4754 kVA x 23% (75 units)					1,093.42 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	3.8 KVA	each X	1	=	3.75 KVA
.2 Misc. Power (estimate)	1.9 KVA	each X	1	=	1.88 KVA
			Total (8)	**=**	5.63 KVA
			Grand-Total (1.0 – 8.0):	**=**	**1,099.05 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**4,579.35 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3,052.90 AMPS**

NEIGBORHOOD PA57 INDICATE TO HAVE 8 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	8	=	112.80 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	8	=	42.80 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	8	=	89.12 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	8	=	2.00 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	8	=	76.80 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	8	=	64.00 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	8	=	111.04 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	1	=	10.00 KVA
			Total (all units)	=	508.56 KVA
Application of Demand (NEC 220.84)					
508.56 kVA x 43% (8 units)					218.68 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.4 KVA	each X	1	=	0.40 KVA
.2 Misc. Power (estimate)	0.2 KVA	each X	1	=	0.20 KVA
			Total (8)	**=**	0.60 KVA
			Grand-Total (1.0 – 8.0):	**=**	**219.28 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**913.67 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**609.11 AMPS**

NEIGBORHOOD PA58 INDICATE TO HAVE 45 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	45	=	634.50 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	45	=	240.75 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	45	=	501.30 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	45	=	11.25 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	45	=	432.00 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	45	=	360.00 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	45	=	624.60 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	5	=	50.00 KVA
			Total (all units)	=	2,854.40 KVA
Application of Demand (NEC 220.84)					
2854.4 kVA x 27% (45 units)					770.69 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	2.3 KVA	each X	1	=	2.25 KVA
.2 Misc. Power (estimate)	1.1 KVA	each X	1	=	1.13 KVA
			Total (8)	**=**	3.38 KVA
			Grand-Total (1.0 – 8.0):	**=**	**774.06 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3,225.26 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2,150.18 AMPS**

SFD-MU1(Item #9 & 10)
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power	**2,700 Sq.Ft.**					
.1 General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:					=	8.1 KVA
.2 Small Appliance Circuits(4) at 1500 Watts each:					=	4.5 KVA
.3 Laundry Circuits(1) at 1500 Watts each:					=	1.5 KVA
				Total (1)	=	14.1 KVA
2.0 Small Appliance Loads						
Appliance	***Quantity***		***Estimated Load***			
.1 Refrigerator/Freezer:	1	0.5	KVA		=	0.5 KVA
.2 Dishwasher:	1	1.2	KVA		=	1.2 KVA
.3 Garbage Disposal:	1	1.15	KVA		=	1.2 KVA
.4 Ice Maker:	1	0.6	KVA		=	0.6 KVA
.5 Range hood:	1	0.5	KVA		=	0.5 KVA
.6 Microwave:	1	1.4	KVA		=	1.4 KVA
				Total (2)	=	5.4 KVA
3.0 Special Equipment Loads						
.1 Garage Door Motor(Estimated (1) @600W each):					=	0.6 KVA
.2 AV System Equipment – (1) Circuits at 750W each					=	0.5 KVA
.3 Electric Dryer (1) @5KW each					=	5.0 KVA
.4 Electric Water Heater provisions (1) @5KW					=	5.0 KVA
				Total (3)	=	11.1 KVA
4.0 Miscellaneous Site Lighting						
.1 Estimated Lump Sum:				**Total (4)**	=	0.3 KVA
5.0 Electric Vehicle Charging Stations						
.1 EV Station 1 @	**40 Amps Each - 230V. 1 Phase**				=	7.7 KVA
.2 Plus 125% for LCL					=	1.9 KVA
				Total (5)	=	9.6 KVA
6.0 Electric Cooktops/Ovens/Ranges						
.1 Electric Cooktops/Ovens/Ranges					=	8.0 KVA
				Total (6)	=	8.0 KVA
				Sub-Total (1.0 – 6.0):	=	48.4 KVA
Application of Demand (Per NEC 220.31):						
1st 10 kVA at 100% :					=	10.0 KVA
Remainder of Load at 40% :					=	15.4 KVA
				Total (1.0 – 6.0):	=	25.4 KVA
7.0 HVAC System Equipment (Speculated)						
.1 Outdoor Unit:	**2 @22A 230V-1PH**				=	10.6 KVA
.2 Fan Coil Units:					=	1.0 KVA
.3 Exhaust Fans:					=	0.5 KVA
.4 Misc. Mech/Plmbg Units:					=	0.5 KVA
.5 Plus 25% Of Largest Rated Motor					=	1.3 KVA
				Total (7)	=	13.9 KVA
				Grand-Total (1.0 – 7.0):	=	39.3 KVA
				÷ 240V:	=	163.6 AMPS
Estimated	**400A – 240V – 1Ø – 3W Service**					
8.0 Pool/Jacuzzi Equipment (10% of all units)						
.1 Pool/Jacuzzi Estimated @10KW					=	10.0 KVA
				Total (8)	=	10.0 KVA
				Grand-Total (1.0 – 8.0):	=	49.3 KVA
				÷ 240V:	=	205.2 AMPS
Estimated	**400A – 240V – 1Ø – 3W Service**					

NEIGBORHOOD PA13 INDICATE TO HAVE 32 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	32	=	451.20 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	32	=	171.20 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	32	=	356.48 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	32	=	8.00 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	32	=	307.20 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	32	=	256.00 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	32	=	444.16 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	4	=	40.00 KVA
			Total (all units)	=	2,034.24 KVA
Application of Demand (NEC 220.84)					
2034.24 kVA x 31% (32 units)					630.61 KVA
8.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.6 KVA	each X	1	=	1.60 KVA
.2 Misc. Power (estimate)	0.8 KVA	each X	1	=	0.80 KVA
			Total (8)	**=**	2.40 KVA
			Grand-Total (1.0 – 8.0):	**=**	**633.01 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2,637.56 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1,758.37 AMPS**

Seal

Consultant

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Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE MU1
PRODUCT TYPE: 9 & 10

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

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NEIGBORHOOD PA70 INDICATE TO HAVE 10 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	10	=	141.0 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	10	=	53.5 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	10	=	111.4 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	10	=	2.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	10	=	96.0 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	10	=	80.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	10	=	138.8 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	1	=	10.0 KVA
			Total (all units)	=	633.2 KVA
Application of Demand (NEC 220.84)					
633.2 kVA x 43% (10 units)					272.3 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.5 KVA	each X	1	=	0.5 KVA
.2 Misc. Power (estimate)	0.3 KVA	each X	1	=	0.3 KVA
			Total (8)	**=**	0.8 KVA
			Grand-Total (1.0 – 8.0):	**=**	**273.0 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**1137.6 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**758.4 AMPS**

NEIGBORHOOD PA71 INDICATE TO HAVE 10 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	10	=	141.0 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	10	=	53.5 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	10	=	111.4 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	10	=	2.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	10	=	96.0 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	10	=	80.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	10	=	138.8 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	1	=	10.0 KVA
			Total (all units)	=	633.2 KVA
Application of Demand (NEC 220.84)					
633.2 kVA x 43% (10 units)					272.3 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.5 KVA	each X	1	=	0.5 KVA
.2 Misc. Power (estimate)	0.3 KVA	each X	1	=	0.3 KVA
			Total (8)	**=**	0.8 KVA
			Grand-Total (1.0 – 8.0):	**=**	**273.0 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**1137.6 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**758.4 AMPS**

NEIGBORHOOD PA66 INDICATE TO HAVE 11 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	11	=	155.1 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	11	=	58.9 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	11	=	122.5 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	11	=	2.8 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	11	=	105.6 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	11	=	88.0 KVA
7.0 HVAC System Equipment (speculated)	107.0 KVA	each X	11	=	1177.0 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	2	=	20.0 KVA
			Total (all units)	=	1729.8 KVA
Application of Demand (NEC 220.84)					
1729.84 kVA x 42% (11 units)					726.5 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.6 KVA	each X	1	=	0.6 KVA
.2 Misc. Power (estimate)	0.3 KVA	each X	1	=	0.3 KVA
			Total (8)	**=**	0.8 KVA
			Grand-Total (1.0 – 8.0):	**=**	**727.4 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3030.7 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2020.4 AMPS**

NEIGBORHOOD PA67 INDICATE TO HAVE 6 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	6	=	84.6 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	6	=	32.1 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	6	=	66.8 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	6	=	1.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	6	=	57.6 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	6	=	48.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	6	=	83.3 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	1	=	10.0 KVA
			Total (all units)	=	383.9 KVA
Application of Demand (NEC 220.84)					
383.92 kVA x 44% (6 units)					168.9 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.3 KVA	each X	1	=	0.3 KVA
.2 Misc. Power (estimate)	0.2 KVA	each X	1	=	0.2 KVA
			Total (8)	**=**	0.5 KVA
			Grand-Total (1.0 – 8.0):	**=**	**169.4 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**705.7 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**470.5 AMPS**

NEIGBORHOOD PA68 INDICATE TO HAVE 10 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	10	=	141.0 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	10	=	53.5 KVA
3.0 Special Equipment Loads	57.0 KVA	each X	10	=	570.0 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	10	=	2.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	10	=	96.0 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	10	=	80.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	10	=	138.8 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	1	=	10.0 KVA
			Total (all units)	=	1091.8 KVA
Application of Demand (NEC 220.84)					
1091.8 kVA x 43% (10 units)					469.5 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.5 KVA	each X	1	=	0.5 KVA
.2 Misc. Power (estimate)	0.3 KVA	each X	1	=	0.3 KVA
			Total (8)	**=**	0.8 KVA
			Grand-Total (1.0 – 8.0):	**=**	**470.2 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**1959.3 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1306.2 AMPS**

NEIGBORHOOD PA69 INDICATE TO HAVE 7 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	14.1 KVA	each X	7	=	98.7 KVA
2.0 Small Appliance Loads	5.4 KVA	each X	7	=	37.5 KVA
3.0 Special Equipment Loads	11.1 KVA	each X	7	=	78.0 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	7	=	1.8 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	7	=	67.2 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	7	=	56.0 KVA
7.0 HVAC System Equipment (speculated)	13.9 KVA	each X	7	=	97.2 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	1	=	10.0 KVA
			Total (all units)	=	446.2 KVA
Application of Demand (NEC 220.84)					
446.24 kVA x 44% (7 units)					196.3 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.4 KVA	each X	1	=	0.4 KVA
.2 Misc. Power (estimate)	0.2 KVA	each X	1	=	0.2 KVA
			Total (8)	**=**	0.5 KVA
			Grand-Total (1.0 – 8.0):	**=**	**196.9 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**820.3 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**546.9 AMPS**

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE MU1
PRODUCT TYPE: 9 & 10

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

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NEIGBORHOOD PA65 INDICATE TO HAVE 80 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	15.8 KVA	each X	80	=	1260.0 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	80	=	488.0 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	80	=	953.6 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	80	=	40.0 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	80	=	768.0 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	80	=	720.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	80	=	1276.8 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	32	=	320.0 KVA
			Total (all units)	=	5826.4 KVA
Application of Demand (NEC 220.84)					
5826.4 kVA x 23% (80 units)					1340.1 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	4.0 KVA	each X	1	=	4.0 KVA
.2 Misc. Power (estimate)	2.0 KVA	each X	1	=	2.0 KVA
			Total (9)	=	6.0 KVA
			Grand-Total (1.0 – 9.0):	=	**1346.1 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**5608.6 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**3739.1 AMPS**

NEIGBORHOOD PA46 INDICATE TO HAVE 33 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	15.8 KVA	each X	33	=	519.8 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	33	=	201.3 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	33	=	393.4 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	33	=	16.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	33	=	316.8 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	33	=	297.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	33	=	526.7 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	14	=	140.0 KVA
			Total (all units)	=	2411.4 KVA
Application of Demand (NEC 220.84)					
2411.39 kVA x 31% (33 units)					747.5 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.7 KVA	each X	1	=	1.7 KVA
.2 Misc. Power (estimate)	0.8 KVA	each X	1	=	0.8 KVA
			Total (9)	=	2.5 KVA
			Grand-Total (1.0 – 9.0):	=	**750.0 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3125.0 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2083.3 AMPS**

NEIGBORHOOD PA55 INDICATE TO HAVE 12 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	15.8 KVA	each X	12	=	189.0 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	12	=	73.2 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	12	=	143.0 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	12	=	6.0 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	12	=	115.2 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	12	=	108.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	12	=	191.5 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	5	=	50.0 KVA
			Total (all units)	=	876.0 KVA
Application of Demand (NEC 220.84)					
875.96 kVA x 41% (12 units)					359.1 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.6 KVA	each X	1	=	0.6 KVA
.2 Misc. Power (estimate)	0.3 KVA	each X	1	=	0.3 KVA
			Total (9)	=	0.9 KVA
			Grand-Total (1.0 – 9.0):	=	**360.0 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**1500.2 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1000.1 AMPS**

NEIGBORHOOD PA59 INDICATE TO HAVE 29 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	15.8 KVA	each X	29	=	456.8 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	29	=	176.9 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	29	=	345.7 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	29	=	14.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	29	=	278.4 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	29	=	261.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	29	=	462.8 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	12	=	120.0 KVA
			Total (all units)	=	2116.1 KVA
Application of Demand (NEC 220.84)					
2116.07 kVA x 33% (29 units)					698.3 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.5 KVA	each X	1	=	1.5 KVA
.2 Misc. Power (estimate)	0.7 KVA	each X	1	=	0.7 KVA
			Total (9)	=	2.2 KVA
			Grand-Total (1.0 – 9.0):	=	**700.5 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**2918.7 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**1945.8 AMPS**

NEIGBORHOOD PA60 INDICATE TO HAVE 42 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	15.8 KVA	each X	42	=	661.5 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	42	=	256.2 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	42	=	500.6 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	42	=	21.0 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	42	=	403.2 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	42	=	378.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	42	=	670.3 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	17	=	170.0 KVA
			Total (all units)	=	3060.9 KVA
Application of Demand (NEC 220.84)					
3060.86 kVA x 28% (42 units)					857.0 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	2.1 KVA	each X	1	=	2.1 KVA
.2 Misc. Power (estimate)	1.1 KVA	each X	1	=	1.1 KVA
			Total (9)	=	3.2 KVA
			Grand-Total (1.0 – 9.0):	=	**860.2 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3584.1 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2389.4 AMPS**

SFD-MU2 (Item #11)
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power 3,250 Sq.Ft.

.1	General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:				=	9.8 KVA
.2	Small Appliance Circuits(4) at 1500 Watts each:				=	4.5 KVA
.3	Laundry Circuits(1) at 1500 Watts each:				=	1.5 KVA
				Total (1)	=	15.8 KVA

2.0 Small Appliance Loads

	Appliance	*Quantity*		*Estimated Load*		
.1	Sub-Zero Refrigerator:	1	0.6	KVA	=	0.6 KVA
.2	Sub-Zero Freezer:	1	0.6	KVA	=	0.6 KVA
.3	Dishwasher:	1	1.2	KVA	=	1.2 KVA
.4	Garbage Disposal:	1	1.25	KVA	=	1.3 KVA
.5	Under Counter Refrigerator:	1	0.35	KVA	=	0.4 KVA
.6	Range hood:	1	0.7	KVA	=	0.7 KVA
.7	Microwave:	1	1.4	KVA	=	1.4 KVA
				Total (2)	=	6.1 KVA

3.0 Special Equipment Loads

.1	Garage Door Motor(Estimated 600W each):		=	1.2 KVA
.2	AV System Equipment – (1) Circuits at 720W each		=	0.7 KVA
.3	Electric Dryer (1) @5KW each		=	5.0 KVA
.4	Electric Water Heater provisions (1) @5KW		=	5.0 KVA
		Total (3)	=	11.9 KVA

4.0 Miscellaneous Site Lighting
.1 Estimated Lump Sum: Total (4) = 0.5 KVA

5.0 Electric Vehicle Charging Stations

.1	EV Station 1 @ 40 Amps Each - 230V. 1 Phase		=	7.7 KVA
.2	Plus 125% for LCL		=	1.9 KVA
		Total (5)	=	9.6 KVA

6.0 Electric Cooktops/Ovens/Ranges

.1	Electric Cooktops/Ovens/Ranges (1) demanded per CEC 220.55		=	9.0 KVA
		Total (6)	=	9.0 KVA
		Sub-Total (1.0 – 6.0):	=	52.9 KVA

Application of Demand (Per NEC 220.31):

1st 10 kVA at 100% :		=	10.0 KVA
Remainder of Load at 40% :		=	17.1 KVA
	Total (1.0 – 6.0):	=	27.1 KVA

7.0 HVAC System Equipment (Speculated)

.1	Outdoor Unit:	1 @28A 230V-1PH		=	6.7 KVA
.2	Outdoor Unit:	1 @25A 230V-1PH		=	5.1 KVA
.3	Fan Coil Units:			=	1.5 KVA
.4	Exhaust Fans:			=	0.5 KVA
.5	Misc. Mech/Plmbg Units:			=	0.5 KVA
.6	Plus 25% Of Largest Rated Motor			=	1.7 KVA
			Total (7)	=	16.0 KVA
			Grand-Total (1.0 – 7.0):	=	43.1 KVA
			÷ 240V:	=	179.6 AMPS

Estimated 400A – 240V – 1Ø – 3W Service

8.0 Pool/Jacuzzi Equipment (40% of all units)

.1	Pool/Jacuzzi Estimated @10KW		=	10.0 KVA
		Total (8)	=	10.0 KVA
		Grand-Total (1.0 – 8.0):	=	53.1 KVA
		÷ 240V:	=	221.3 AMPS

Estimated 400A – 240V – 1Ø – 3W Service

NEIGBORHOOD PA41 INDICATE TO HAVE 32 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	15.8 KVA	each X	32	=	504.00 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	32	=	195.20 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	32	=	381.44 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	32	=	16.00 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	32	=	307.20 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	32	=	288.00 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	32	=	510.72 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	13	=	130.00 KVA
			Total (all units)	=	2,332.56 KVA
Application of Demand (NEC 220.84)					
2332.56 kVA x 31% (32 units)					723.09 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.6 KVA	each X	1	=	1.60 KVA
.2 Misc. Power (estimate)	0.8 KVA	each X	1	=	0.80 KVA
			Total (9)	=	2.40 KVA
			Grand-Total (1.0 – 9.0):	=	**725.49 KVA**
Grand Total Demand Load in Amps at 240/120- 1Phase 3W					**3,022.89 AMPS**
Grand Total Demand Load in Amps at 208/120- 3Phase 4W					**2,015.26 AMPS**

Seal

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE MU2
PRODUCT TYPE: 11

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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NEIGBORHOOD PA63 INDICATE TO HAVE 35 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	17.3 KVA	each X	35	=	603.8 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	35	=	213.5 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	35	=	417.2 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	35	=	17.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	35	=	336.0 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	35	=	315.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	35	=	558.6 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	14	=	140.0 KVA
			Total (all units)	=	2601.6 KVA
Application of Demand (NEC 220.84)					
2601.55 kVA x 30% (35 units)					780.5 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.8 KVA	each X	1	=	1.8 KVA
.2 Misc. Power (estimate)	0.9 KVA	each X	1	=	0.9 KVA
			Total (9)	**=**	2.6 KVA
			Grand-Total (1.0 – 9.0):	**=**	**783.1 KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**3262.9 AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**2175.3 AMPS**

NEIGBORHOOD PA64 INDICATE TO HAVE 19 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	17.3 KVA	each X	19	=	327.8 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	19	=	25.1 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	19	=	226.5 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	19	=	9.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	19	=	182.4 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	19	=	171.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	19	=	303.2 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	8	=	80.0 KVA
			Total (all units)	=	1325.5 KVA
Application of Demand (NEC 220.84)					
1325.47 kVA x 38% (19 units)					503.7 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.0 KVA	each X	1	=	1.0 KVA
.2 Misc. Power (estimate)	0.5 KVA	each X	1	=	0.5 KVA
			Total (9)	**=**	1.4 KVA
			Grand-Total (1.0 – 9.0):	**=**	**505.1 KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**2104.6 AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**1403.1 AMPS**

NEIGBORHOOD PA35 INDICATE TO HAVE 9 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	17.3 KVA	each X	9	=	155.25 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	9	=	54.90 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	9	=	107.28 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	9	=	4.50 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	9	=	86.40 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	9	=	81.00 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	9	=	143.64 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	4	=	40.00 KVA
			Total (all units)	=	672.97 KVA
Application of Demand (NEC 220.84)					
672.97 kVA x 43% (9 units)					289.38 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.5 KVA	each X	1	=	0.45 KVA
.2 Misc. Power (estimate)	0.2 KVA	each X	1	=	0.23 KVA
			Total (9)	**=**	0.68 KVA
			Grand-Total (1.0 – 9.0):	**=**	**290.05 KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**1,208.55 AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**805.70 AMPS**

NEIGBORHOOD PA42 INDICATE TO HAVE 42 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	17.3 KVA	each X	42	=	724.5 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	42	=	256.2 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	42	=	500.6 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	42	=	21.0 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	42	=	403.2 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	42	=	378.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	42	=	670.3 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	17	=	170.0 KVA
			Total (all units)	=	3123.9 KVA
Application of Demand (NEC 220.84)					
3123.86 kVA x 28% (42 units)					874.7 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	2.1 KVA	each X	1	=	2.1 KVA
.2 Misc. Power (estimate)	1.1 KVA	each X	1	=	1.1 KVA
			Total (9)	**=**	3.2 KVA
			Grand-Total (1.0 – 9.0):	**=**	**877.8 KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**3657.6 AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**2438.4 AMPS**

NEIGBORHOOD PA45 INDICATE TO HAVE 11 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	17.3 KVA	each X	11	=	189.8 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	11	=	67.1 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	11	=	131.1 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	11	=	5.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	11	=	105.6 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	11	=	99.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	11	=	175.6 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	5	=	50.0 KVA
			Total (all units)	=	823.6 KVA
Application of Demand (NEC 220.84)					
823.63 kVA x 42% (11 units)					345.9 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	0.6 KVA	each X	1	=	0.6 KVA
.2 Misc. Power (estimate)	0.3 KVA	each X	1	=	0.3 KVA
			Total (9)	**=**	0.8 KVA
			Grand-Total (1.0 – 9.0):	**=**	**346.7 KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**1444.8 AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**963.2 AMPS**

NEIGBORHOOD PA53 INDICATE TO HAVE 35 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	17.3 KVA	each X	35	=	603.8 KVA
2.0 Small Appliance Loads	6.1 KVA	each X	35	=	213.5 KVA
3.0 Special Equipment Loads	11.9 KVA	each X	35	=	417.2 KVA
4.0 Miscellaneous Site Lighting	0.5 KVA	each X	35	=	17.5 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	35	=	336.0 KVA
6.0 Electric Cooktops/Oven Ranges	9.0 KVA	each X	35	=	315.0 KVA
7.0 HVAC System Equipment (speculated)	16.0 KVA	each X	35	=	558.6 KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	21	=	210.0 KVA
			Total (all units)	=	2671.6 KVA
Application of Demand (NEC 220.84)					
2671.55 kVA x 30% (35 units)					801.5 KVA
9.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	1.8 KVA	each X	1	=	1.8 KVA
.2 Misc. Power (estimate)	0.9 KVA	each X	1	=	0.9 KVA
			Total (9)	**=**	2.6 KVA
			Grand-Total (1.0 – 9.0):	**=**	**804.1 KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**3350.4 AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**2233.6 AMPS**

SFD-MU2 (Item #12)
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power 3,750 Sq.Ft.

.1	General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:			=	11.3 KVA
.2	Small Appliance Circuits(4) at 1500 Watts each:			=	4.5 KVA
.3	Laundry Circuits(1) at 1500 Watts each:			=	1.5 KVA
			Total (1)	=	17.3 KVA

2.0 Small Appliance Loads

	Appliance	*Quantity*		*Estimated Load*		
.1	Sub-Zero Refrigerator:	1	0.6	KVA	=	0.6 KVA
.2	Sub-Zero Freezer:	1	0.6	KVA	=	0.6 KVA
.3	Dishwasher:	1	1.2	KVA	=	1.2 KVA
.4	Garbage Disposal:	1	1.25	KVA	=	1.3 KVA
.5	Under Counter Refrigerator:	1	0.35	KVA	=	0.4 KVA
.6	Range hood:	1	0.7	KVA	=	0.7 KVA
.7	Microwave:	1	1.4	KVA	=	1.4 KVA
				Total (2)	=	6.1 KVA

3.0 Special Equipment Loads

.1	Garage Door Motor(Estimated 600W each):		=	1.2 KVA
.2	AV System Equipment – (1) Circuits at 720W each		=	0.7 KVA
.3	Electric Dryer (1) @5KW each		=	5.0 KVA
.4	Electric Water Heater provisions (1) @5KW		=	5.0 KVA
		Total (3)	=	11.9 KVA

4.0 Miscellaneous Site Lighting

.1	Estimated Lump Sum:	Total (4)	=	0.5 KVA

5.0 Electric Vehicle Charging Stations

.1	EV Station 1 @ 40 Amps Each - 230V. 1 Phase		=	7.7 KVA
.2	Plus 125% for LCL		=	1.9 KVA
		Total (5)	=	9.6 KVA

6.0 Electric Cooktops/Ovens/Ranges

.1	Electric Cooktops/Ovens/Ranges (1) demanded per CEC 220.55		=	9.0 KVA
		Total (6)	=	9.0 KVA
		Sub-Total (1.0 – 6.0):	=	54.4 KVA

Application of Demand (Per NEC 220.31):

1st 10 kVA at 100% :		=	10.0 KVA
Remainder of Load at 40% :		=	17.7 KVA
	Total (1.0 – 6.0):	=	27.7 KVA

7.0 HVAC System Equipment (Speculated)

.1	Outdoor Unit:	1 @28A 230V-1PH		=	6.7 KVA
.2	Outdoor Unit:	1 @22A 230V-1PH		=	5.1 KVA
.3	Fan Coil Units:			=	1.5 KVA
.4	Exhaust Fans:			=	0.5 KVA
.5	Misc. Mech/Plmbg Units:			=	0.5 KVA
.6	Plus 25% Of Largest Rated Motor			=	1.7 KVA
			Total (7)	=	16.0 KVA
			Grand-Total (1.0 – 7.0):	=	43.7 KVA
			÷ 240V:	=	182.1 AMPS

Estimated **400A – 240V – 1Ø – 3W Service**

8.0 Pool/Jacuzzi Equipment (40% of all units)

.1	Pool/Jacuzzi Estimated @10KW		=	10.0 KVA
		Total (8)	=	10.0 KVA
		Grand-Total (1.0 – 8.0):	=	53.7 KVA
		÷ 240V:	=	223.8 AMPS

Estimated **400A – 240V – 1Ø – 3W Service**

Seal

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Corona, CA 92883
Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE MU2
PRODUCT TYPE: 12

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

S H E E T

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NEIGBORHOOD	PA43	INDICATE TO HAVE	23 OF THE ABOVE RESIDENCES			
1.0 General Lighting and Power	19.7 KVA	each X	23	=	451.95	KVA
2.0 Small Appliance Loads	6.1 KVA	each X	23	=	140.30	KVA
3.0 Special Equipment Loads	11.9 KVA	each X	23	=	274.16	KVA
4.0 Miscellaneous Site Lighting	1.3 KVA	each X	23	=	28.75	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	23	=	220.80	KVA
6.0 Electric Cooktops/Oven Ranges	10.0 KVA	each X	23	=	230.00	KVA
7.0 HVAC System Equipment (speculated)	18.2 KVA	each X	23	=	417.91	KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	10	=	100.00	KVA
			Total (all units)	=	1,863.87	KVA
Application of Demand (NEC 220.84)						
1863.87 kVA x 36% (23 units)					670.99	KVA
9.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	1.2 KVA	each X	1	=	1.15	KVA
.2 Misc. Power (estimate)	0.6 KVA	each X	1	=	0.58	KVA
			Total (9)	=	1.73	KVA
			Grand-Total (1.0 – 9.0):	=	**672.72**	**KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**2,802.99**	**AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**1,868.66**	**AMPS**

NEIGBORHOOD	PA44	INDICATE TO HAVE	16 OF THE ABOVE RESIDENCES			
1.0 General Lighting and Power	19.7 KVA	each X	16	=	314.40	KVA
2.0 Small Appliance Loads	6.1 KVA	each X	16	=	97.60	KVA
3.0 Special Equipment Loads	11.9 KVA	each X	16	=	190.72	KVA
4.0 Miscellaneous Site Lighting	1.3 KVA	each X	16	=	20.00	KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	16	=	153.60	KVA
6.0 Electric Cooktops/Oven Ranges	10.0 KVA	each X	16	=	160.00	KVA
7.0 HVAC System Equipment (speculated)	18.2 KVA	each X	16	=	290.72	KVA
8.0 Pool/Jacuzzi Equipment Estimated	10.0 KVA	each X	7	=	70.00	KVA
			Total (all units)	=	1,297.04	KVA
Application of Demand (NEC 220.84)						
1297.04 kVA x 39% (16 units)					505.85	KVA
9.0 Neighborhood Misc Power						
.1 Site Lighting (estimate)	0.8 KVA	each X	1	=	0.80	KVA
.2 Misc. Power (estimate)	0.4 KVA	each X	1	=	0.40	KVA
			Total (9)	=	1.20	KVA
			Grand-Total (1.0 – 9.0):	=	**507.05**	**KVA**
		Grand Total Demand Load in Amps at 240/120- 1Phase 3W			**2,112.69**	**AMPS**
		Grand Total Demand Load in Amps at 208/120- 3Phase 4W			**1,408.46**	**AMPS**

Estates Residence (Item #13)
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power 4,050 Sq.Ft.

.1	General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:		=	12.2	KVA
.2	Small Appliance Circuits(4) at 1500 Watts each:		=	6.0	KVA
.3	Laundry Circuits(1) at 1500 Watts each:		=	1.5	KVA
		Total (1)	=	19.7	KVA

2.0 Small Appliance Loads

	Appliance	*Quantity*		*Estimated Load*			
.1	Sub-Zero Refrigerator:	1	0.6	KVA	=	0.6	KVA
.2	Sub-Zero Freezer:	1	0.6	KVA	=	0.6	KVA
.3	Dishwasher:	1	1.2	KVA	=	1.2	KVA
.4	Garbage Disposal:	1	1.25	KVA	=	1.3	KVA
.5	Under Counter Refrigerator:	1	0.35	KVA	=	0.4	KVA
.6	Range hood:	1	0.7	KVA	=	0.7	KVA
.7	Microwave:	1	1.4	KVA	=	1.4	KVA
				Total (2)	=	6.1	KVA

3.0 Special Equipment Loads

.1	Garage Door Motor(2 Estimated 600W each):		=	1.2	KVA
.2	AV System Equipment – (1) Circuits at 720W each		=	0.7	KVA
.3	Electric Dryer (1) @5KW each		=	5.0	KVA
.4	Electric Water Heater provisions (1) @5KW		=	5.0	KVA
		Total (3)	=	11.9	KVA

4.0 Miscellaneous Site Lighting

.1	Estimated Lump Sum:	Total (4)	=	1.3	KVA

5.0 Electric Vehicle Charging Stations

.1	EV Station 1 @ 40 Amps Each - 230V. 1 Phase		=	7.7	KVA
.2	Plus 125% for LCL		=	1.9	KVA
		Total (5)	=	9.6	KVA

6.0 Electric Cooktops/Ovens/Ranges

.1	Electric Cooktops/Ovens/Ranges (1) demanded per CEC 220.55		=	10.0	KVA
		Total (6)	=	10.0	KVA
		Sub-Total (1.0 – 6.0):	=	58.5	KVA

Application of Demand (Per NEC 220.31):

1st 10 kVA at 100% :		=	10.0	KVA
Remainder of Load at 40% :		=	19.4	KVA
	Total (1.0 – 6.0):	=	29.4	KVA

7.0 HVAC System Equipment (Speculated)

.1	Outdoor Unit: 2 @29A 230V-1PH		=	13.9	KVA
.2	Fan Coil Units:		=	1.5	KVA
.4	Exhaust Fans:		=	0.5	KVA
.5	Misc. Mech/Plmbg Units:		=	0.5	KVA
.6	Plus 25% Of Largest Rated Motor		=	1.8	KVA
		Total (7)	=	18.2	KVA
		Grand-Total (1.0 – 7.0):	=	47.6	KVA
		÷ 240V:	=	198.2	AMPS

Estimated 400A – 240V – 1Ø – 3W Service

8.0 Pool/Jacuzzi Equipment (40% of all units)

.1	Pool/Jacuzzi Estimated @10KW		=	10.0	KVA
		Total (8)	=	10.0	KVA
		Grand-Total (1.0 – 8.0):	=	57.6	KVA
		÷ 240V:	=	239.9	AMPS

Estimated 400A – 240V – 1Ø – 3W Service

Seal

Consultant

Salas O'Brien
salasobrien.com 949.753.1553
Corona
4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE EST
PRODUCT TYPE: 13

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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NEIGBORHOOD PA1 INDICATE TO HAVE 130 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	130	=	1,267.50 KVA
2.0 Small Appliance Loads	4.8 KVA	each X	130	=	622.70 KVA
3.0 Special Equipment Loads	11.0 KVA	each X	130	=	1,424.80 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	130	=	32.50 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	130	=	1,248.00 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	130	=	1,040.00 KVA
7.0 HVAC System Equipment (speculated)	6.5 KVA	each X	130	=	848.90 KVA
			Total (all units)	=	6,484.40 KVA
Application of Demand (NEC 220.84)					
6484.4 kVA x 23% (130 units)					1,491.41 KVA
8.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	6.5 KVA	each X	1	=	6.50 KVA
.2 Misc. Power (estimate)	3.3 KVA	each X	1	=	3.25 KVA
			Total (8)	=	9.75 KVA
			Grand-Total (1.0 – 8.0):	=	**1,501.16 KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**6,254.84 AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**4,169.89 AMPS**

NEIGBORHOOD PA62 INDICATE TO HAVE 595 OF THE ABOVE RESIDENCES

1.0 General Lighting and Power	9.8 KVA	each X	595	=	5,801.25 KVA
2.0 Small Appliance Loads	4.8 KVA	each X	595	=	2,850.05 KVA
3.0 Special Equipment Loads	11.0 KVA	each X	595	=	6,521.20 KVA
4.0 Miscellaneous Site Lighting	0.3 KVA	each X	595	=	148.75 KVA
5.0 Electric Vehicle Charging Station	9.6 KVA	each X	595	=	5,712.00 KVA
6.0 Electric Cooktops/Oven Ranges	8.0 KVA	each X	595	=	4,760.00 KVA
7.0 HVAC System Equipment (speculated)	6.5 KVA	each X	595	=	3,885.35 KVA
			Total (all units)	=	29,678.60 KVA
Application of Demand (NEC 220.84)					
29678.6 kVA x 23% (595 units)					6,826.08 KVA
8.0 Neighborhood Misc Power					
.1 Site Lighting (estimate)	17.9 KVA	each X	1	=	17.85 KVA
.2 Misc. Power (estimate)	8.9 KVA	each X	1	=	8.93 KVA
			Total (8)	=	26.78 KVA
			Grand-Total (1.0 – 8.0):	=	**6,852.85 KVA**
			Grand Total Demand Load in Amps at 240/120- 1Phase 3W		**28,553.55 AMPS**
			Grand Total Demand Load in Amps at 208/120- 3Phase 4W		**19,035.70 AMPS**

Active Adult (Item #14, 15, 16)

MAIN SERVICE BOARD "MSA"

PRELIMINARY ELECTRICAL LOAD CALCULATION

SALAS O'BRIEN PROJECT NUMBER 2023-01013

1.0 General Lighting and Power **1,750 Sq.Ft.**

.1	General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:			=	5.3 KVA
.2	Small Appliance Circuits(2) at 1500 Watts each:			=	3.0 KVA
.3	Laundry Circuits(1) at 1500 Watts each:			=	1.5 KVA
			Total (1)	=	9.8 KVA

2.0 Small Appliance Loads

	Appliance	*Quantity*	*Estimated Load*		
.1	Refrigerator/Freezer:	1	0.54 KVA	=	0.5 KVA
.3	Dishwasher:	1	1.2 KVA	=	1.2 KVA
.4	Garbage Disposal:	1	1.15 KVA	=	1.2 KVA
.7	Range hood:	1	0.5 KVA	=	0.5 KVA
.8	Microwave:	1	1.4 KVA	=	1.4 KVA
			Total (2)	=	4.8 KVA

3.0 Special Equipment Loads

.1	Garage Door Motor(Estimated (1) @600W each):	=	0.6 KVA
.2	AV System Equipment – (1) Circuits at 360W each	=	0.4 KVA
.3	Electric Dryer (1) @5KW each	=	5.0 KVA
.4	Electric Water Heater provisions (1) @5KW	=	5.0 KVA
	Total (3)	=	11.0 KVA

4.0 Miscellaneous Site Lighting

.1	Estimated Lump Sum:			
	Total (4)	=	0.3 KVA

5.0 Electric Vehicle Charging Stations

.1	EV Station	1 @	40 Amps Each - 230V. 1 Phase	=	7.7 KVA
.2	Plus 125% for LCL			=	1.9 KVA
			Total (5)	=	9.6 KVA

6.0 Electric Cooktops/Ovens/Ranges

.1	Electric Cooktops/Ovens/Ranges	=	8.0 KVA
	Total (6)	=	8.0 KVA
	Sub-Total (1.0 – 6.0):	=	43.4 KVA

Application of Demand (Per NEC 220.31):

	1st 10 kVA at 100% :	=	10.0 KVA
	Remainder of Load at 40% :	=	13.3 KVA
	Total (1.0 – 6.0):	=	23.3 KVA

7.0 HVAC System Equipment (Speculated)

.1	Outdoor Unit:	1 @22A 230V-1PH	=	5.3 KVA
.2	Fan Coil Units:		=	0.8 KVA
.3	Exhaust Fans:		=	0.3 KVA
.4	Misc. Mech/Plmbg Units:		=	0.3 KVA
.5	Plus 25% Of Largest Rated Motor		= SS	KVA
		Total (7)	=	6.5 KVA
		Grand-Total (1.0 – 7.0):	=	29.9 KVA
		÷ 240V:	=	124.5 AMPS

Estimated 200A – 240V – 1Ø – 3W Service

Seal

Consultant

Salas O'Brien

salasobrien.com 949.753.1553

Corona
4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE AA
PRODUCT TYPE: 14,15,16

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTIAL SERVICE MAIN - PA8-R3

(45) Residental Units				**38,250 Sq.ft.**
1.0 GENERAL LOADS:				
General Lighting and Power at 3VA per square foot (NEC 220.42)			=	114.8 kVA
(90) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)			=	135.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)			=	0.0 kVA
		Part 1 Connected Load	=	**249.8 kVA**
2.0 Small Fixed Appliance Loads:				
(45) Microwave	@	1,500 VA	=	67.5 kVA
(45) Dishwasher	@	1,200 VA	=	54.0 kVA
(45) Garbage Disposal	@	1,147 VA	=	51.6 kVA
(45) Media Hub	@	180 VA	=	8.1 kVA
		Part 2 Connected Load	=	**185.7 kVA**
3.0 Large Electric Appliances				
(0) Electric Clothes Dryer	@	5,000 VA	=	0.0 kVA
(45) Electric Range	@	8,000 VA	=	360.0 kVA
		Part 3 Connected Load	=	**360.0 kVA**
4.0 **HVAC System Loads**				
(0) HP-1	@	2,288 VA	=	0.0 kVA
(45) HP-2	@	3,900 VA	=	175.5 kVA
(0) HP-3	@	5,200 VA	=	0.0 kVA
(0) HP-4	@	8,640 VA	=	0.0 kVA
(0) HP-5	@	0 VA	=	0.0 kVA
(0) FC-1	@	375 VA	=	0.0 kVA
(45) FC-2	@	520 VA	=	23.4 kVA
(0) FC-3	@	708 VA	=	0.0 kVA
(0) FC-4	@	1,488 VA	=	0.0 kVA
(0) FC-5	@	0 VA	=	0.0 kVA
(45) EF-1	@	100 VA	=	4.5 kVA
(0) EF-2	@	100 VA	=	0.0 kVA
(0) FC-4	@	800 VA	=	0.0 kVA
(45) SF-1	@	100 VA	=	4.5 kVA
(0) SF-2	@	0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**207.9 kVA**
4.1 Auxiliary Heating Loads				
(45) HS-1	@	0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads				
(45) Electric Water Heater	@	5,000 VA	=	225.0 kVA
		Part 5 Connected Load	=	**225.0 kVA**
		Grand Total Connected Load	=	**1,228.4 kVA**
Application of Demand (NEC 220.84)				
1228.365 kVA x 27% (45 units)			=	**331.7 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**920.6 A**
Provide a 1000A Main Circuit Breaker				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTIAL SERVICE MAIN - PA8-R1

(42) Residental Units				**35,700 Sq.ft.**
1.0 GENERAL LOADS:				
General Lighting and Power at 3VA per square foot (NEC 220.42)			=	107.1 kVA
(84) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)			=	126.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)			=	0.0 kVA
		Part 1 Connected Load	=	**233.1 kVA**
2.0 Small Fixed Appliance Loads:				
(42) Microwave	@	1,500 VA	=	63.0 kVA
(42) Dishwasher	@	1,200 VA	=	50.4 kVA
(42) Garbage Disposal	@	1,147 VA	=	48.2 kVA
(42) Media Hub	@	180 VA	=	7.6 kVA
		Part 2 Connected Load	=	**173.3 kVA**
3.0 Large Electric Appliances				
(0) Electric Clothes Dryer	@	5,000 VA	=	0.0 kVA
(42) Electric Range	@	8,000 VA	=	336.0 kVA
		Part 3 Connected Load	=	**336.0 kVA**
4.0 **HVAC System Loads**				
(0) HP-1	@	2,288 VA	=	0.0 kVA
(42) HP-2	@	3,900 VA	=	163.8 kVA
(0) HP-3	@	5,200 VA	=	0.0 kVA
(0) HP-4	@	8,640 VA	=	0.0 kVA
(0) HP-5	@	0 VA	=	0.0 kVA
(0) FC-1	@	375 VA	=	0.0 kVA
(42) FC-2	@	520 VA	=	21.8 kVA
(0) FC-3	@	708 VA	=	0.0 kVA
(0) FC-4	@	1,488 VA	=	0.0 kVA
(0) FC-5	@	0 VA	=	0.0 kVA
(42) EF-1	@	100 VA	=	4.2 kVA
(0) EF-2	@	100 VA	=	0.0 kVA
(0) FC-4	@	800 VA	=	0.0 kVA
(42) SF-1	@	100 VA	=	4.2 kVA
(0) SF-2	@	0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**194.0 kVA**
4.1 Auxiliary Heating Loads				
(42) HS-1	@	0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads				
(42) Electric Water Heater	@	5,000 VA	=	210.0 kVA
		Part 5 Connected Load	=	**210.0 kVA**
		Grand Total Connected Load	=	**1,146.5 kVA**
Application of Demand (NEC 220.84)				
1146.474 kVA x 28% (42 units)			=	**321.0 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**891.0 A**
Provide a 1000A Main Circuit Breaker				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
Salas O'Brien Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
Utilty Service Section - MSA(PA8)

1.0 Residential Service Loads:				
(1) Residental Service - PA8-R1	(42 Units)		=	1,146.5 kVA
(1) Residental Service - PA8-R2	(22 Units)		=	600.5 kVA
(1) Residental Service - PA8-R3	(45 Units)		=	1,228.4 kVA
(1) Residental Service - PA8-R4	(16 Units)		=	436.8 kVA
Total Connected Residential Service	(125 Units)		=	3,412.1 kVA
Application of Demand (NEC 220.84)				
3412.1 kVA x 23% (125 units)			=	**784.8 kVA**
2.0 Apartment Circulation	**20,000 Sq.ft.**			
Lighting @ 0.5 VA/sq.ft. x 125%			=	12.5 kVA
General Purpose Power @ 0.5 VA/sq.ft.			=	10.0 kVA
Special Purpose Power @ 0.5 VA/sq.ft.			=	10.0 kVA
HVAC Speculated @ 1 VA/sq.ft.			=	20.0 kVA
		Total Connected Load	=	**52.5 kVA**
2.0 Amenity Spaces	**2,750 Sq.ft.**			
Lighting @ 1 VA/sq.ft. x 125%			=	3.4 kVA
General Purpose Power @ 1 VA/sq.ft.			=	2.8 kVA
Special Purpose Power @ 5 VA/sq.ft.			=	13.8 kVA
HVAC Speculated @ 10 VA/sq.ft.			=	27.5 kVA
		Total Connected Load	=	**47.4 kVA**
3.0 Laundry	**1,000 Sq.ft.**			
Lighting @ 3 VA/sq.ft. x 125%			=	3.8 kVA
General Purpose Power @ 3 VA/sq.ft.			=	3.0 kVA
5-Electric Dryer @5000 each			=	25.0 kVA
5-Washer @1500 each			=	7.5 kVA
HVAC Speculated @ 10 VA/sq.ft.			=	10.0 kVA
		Total Connected Load	=	**49.3 kVA**
4.0 Parking Lot - 00 sq.ft. - parking stalls				
Lighting Speculated @ 10 kVA (Lump Sum)			=	10.0 kVA
General Purpose Power Speculated @ 2 kVA (Lump Sum)			=	2.0 kVA
		Total Connected Load	=	**12.0 kVA**
5.0 Mechanical Loads				
(2) Elevator @ 30 HP			=	63.4 kVA
(2) Booster Pumps @ 15 HP			=	33.3 kVA
		Total Connected Load	=	**96.7 kVA**
6.0 Largest Motor				
+ 25% Largest Motor Load			=	**7.9 kVA**
7.0 EV Charging Stations	**Estimated # of stalls**	**188**		
(19) Installed EVC Stations @ 6.656 kVA @ 125%			=	158.1 kVA
(76) Low Power EVC Stations @ 3.328 kVA @ 125%			=	316.2 kVA
		Total Connected Load	=	**474.2 kVA**
		Total House Load	=	**740.1 kVA**
		Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**2054.2 A**
		Grand Total Connected Load(Residential + House)	=	**1,524.8 kVA**
		Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**4232.5 A**
PROVIDE (2) 2500A -3P-4W-208V SERVICE				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTIAL SERVICE MAIN - PA8-R4

(16) Residental Units				**13,600 Sq.ft.**
1.0 GENERAL LOADS:				
General Lighting and Power at 3VA per square foot (NEC 220.42)			=	40.8 kVA
(32) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)			=	48.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)			=	0.0 kVA
		Part 1 Connected Load	=	**88.8 kVA**
2.0 Small Fixed Appliance Loads:				
(16) Microwave	@	1,500 VA	=	24.0 kVA
(16) Dishwasher	@	1,200 VA	=	19.2 kVA
(16) Garbage Disposal	@	1,147 VA	=	18.4 kVA
(16) Media Hub	@	180 VA	=	2.9 kVA
		Part 2 Connected Load	=	**66.0 kVA**
3.0 Large Electric Appliances				
(0) Electric Clothes Dryer	@	5,000 VA	=	0.0 kVA
(16) Electric Range	@	8,000 VA	=	128.0 kVA
		Part 3 Connected Load	=	**128.0 kVA**
4.0 **HVAC System Loads**				
(0) HP-1	@	2,288 VA	=	0.0 kVA
(16) HP-2	@	3,900 VA	=	62.4 kVA
(0) HP-3	@	5,200 VA	=	0.0 kVA
(0) HP-4	@	8,640 VA	=	0.0 kVA
(0) HP-5	@	0 VA	=	0.0 kVA
(0) FC-1	@	375 VA	=	0.0 kVA
(16) FC-2	@	520 VA	=	8.3 kVA
(0) FC-3	@	708 VA	=	0.0 kVA
(0) FC-4	@	1,488 VA	=	0.0 kVA
(0) FC-5	@	0 VA	=	0.0 kVA
(16) EF-1	@	100 VA	=	1.6 kVA
(0) EF-2	@	100 VA	=	0.0 kVA
(0) FC-4	@	800 VA	=	0.0 kVA
(16) SF-1	@	100 VA	=	1.6 kVA
(0) SF-2	@	0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**73.9 kVA**
4.1 Auxiliary Heating Loads				
(16) HS-1	@	0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads				
(16) Electric Water Heater	@	5,000 VA	=	80.0 kVA
		Part 5 Connected Load	=	**80.0 kVA**
		Grand Total Connected Load	=	**436.8 kVA**
Application of Demand (NEC 220.84)				
436.752 kVA x 39% (16 units)			=	**170.3 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**472.8 A**
Provide a 600A Main Circuit Breaker				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTIAL SERVICE MAIN - PA8-R2

(22) Residental Units				**18,700 Sq.ft.**
1.0 GENERAL LOADS:				
General Lighting and Power at 3VA per square foot (NEC 220.42)			=	56.1 kVA
(44) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)			=	66.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)			=	0.0 kVA
		Part 1 Connected Load	=	**122.1 kVA**
2.0 Small Fixed Appliance Loads:				
(22) Microwave	@	1,500 VA	=	33.0 kVA
(22) Dishwasher	@	1,200 VA	=	26.4 kVA
(22) Garbage Disposal	@	1,147 VA	=	25.2 kVA
(22) Media Hub	@	180 VA	=	4.0 kVA
		Part 2 Connected Load	=	**90.8 kVA**
3.0 Large Electric Appliances				
(0) Electric Clothes Dryer	@	5,000 VA	=	0.0 kVA
(22) Electric Range	@	8,000 VA	=	176.0 kVA
		Part 3 Connected Load	=	**176.0 kVA**
4.0 **HVAC System Loads**				
(0) HP-1	@	2,288 VA	=	0.0 kVA
(22) HP-2	@	3,900 VA	=	85.8 kVA
(0) HP-3	@	5,200 VA	=	0.0 kVA
(0) HP-4	@	8,640 VA	=	0.0 kVA
(0) HP-5	@	0 VA	=	0.0 kVA
(0) FC-1	@	375 VA	=	0.0 kVA
(22) FC-2	@	520 VA	=	11.4 kVA
(0) FC-3	@	708 VA	=	0.0 kVA
(0) FC-4	@	1,488 VA	=	0.0 kVA
(0) FC-5	@	0 VA	=	0.0 kVA
(22) EF-1	@	100 VA	=	2.2 kVA
(0) EF-2	@	100 VA	=	0.0 kVA
(0) FC-4	@	800 VA	=	0.0 kVA
(22) SF-1	@	100 VA	=	2.2 kVA
(0) SF-2	@	0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**101.6 kVA**
4.1 Auxiliary Heating Loads				
(22) HS-1	@	0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads				
(22) Electric Water Heater	@	5,000 VA	=	110.0 kVA
		Part 5 Connected Load	=	**110.0 kVA**
		Grand Total Connected Load	=	**600.5 kVA**
Application of Demand (NEC 220.84)				
600.534 kVA x 36% (22 units)			=	**216.2 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**600.1 A**
Provide a 800A Main Circuit Breaker				

Seal

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4160 Temescal Canyon Rd.,
Suite 201
Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE AA
PRODUCT TYPE: 17, 18, 19

Preliminary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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ELECTRICAL LOAD CALCULATION (NEC 220.84)			
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26			
Solomon Hills AA Units			
RESIDENTAL SERVICE MAIN - PA15-R3			
(27) Residental Units			22,950 Sq.ft.
1.0 GENERAL LOADS:			
General Lighting and Power at 3VA per square foot (NEC 220.42)		=	68.9 kVA
(54) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	81.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
	Part 1 Connected Load	=	**149.9 kVA**
2.0 Small Fixed Appliance Loads:			
(27) Microwave	@ 1,500 VA	=	40.5 kVA
(27) Dishwasher	@ 1,200 VA	=	32.4 kVA
(27) Garbage Disposal	@ 1,147 VA	=	31.0 kVA
(27) Media Hub	@ 180 VA	=	4.9 kVA
	Part 2 Connected Load	=	**111.4 kVA**
3.0 Large Electric Appliances			
(0) Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(27) Electric Range	@ 8,000 VA	=	216.0 kVA
	Part 3 Connected Load	=	**216.0 kVA**
4.0 HVAC System Loads			
(0) HP-1	@ 2,288 VA	=	0.0 kVA
(27) HP-2	@ 3,900 VA	=	105.3 kVA
(0) HP-3	@ 5,200 VA	=	0.0 kVA
(0) HP-4	@ 8,640 VA	=	0.0 kVA
(0) HP-5	@ 0 VA	=	0.0 kVA
(0) FC-1	@ 375 VA	=	0.0 kVA
(27) FC-2	@ 520 VA	=	14.0 kVA
(0) FC-3	@ 708 VA	=	0.0 kVA
(0) FC-4	@ 1,488 VA	=	0.0 kVA
(27) EF-1	@ 100 VA	=	2.7 kVA
(0) EF-2	@ 100 VA	=	0.0 kVA
(0) FC-4	@ 800 VA	=	0.0 kVA
(27) SF-1	@ 100 VA	=	2.7 kVA
(0) SF-2	@ 0 VA	=	0.0 kVA
	Part 4 Connected Load	=	**124.7 kVA**
4.1 Auxiliary Heating Loads			
(27) HS-1	@ 0 VA	=	0.0 kVA
	Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads			
(27) Electric Water Heater	@ 5,000 VA	=	135.0 kVA
	Part 5 Connected Load	=	**135.0 kVA**
	Grand Total Connected Load	=	**737.0 kVA**
Application of Demand (NEC 220.84)			
737.019 kVA x 34% (27 units)		=	**250.6 kVA**
	Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**695.6 A**
Provide a 800A Main Circuit Breaker			

ELECTRICAL LOAD CALCULATION (NEC 220.84)			
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26			
Solomon Hills AA Units			
RESIDENTAL SERVICE MAIN - PA15-R1			
(25) Residental Units			21,250 Sq.ft.
1.0 GENERAL LOADS:			
General Lighting and Power at 3VA per square foot (NEC 220.42)		=	63.8 kVA
(50) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	75.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
	Part 1 Connected Load	=	**138.8 kVA**
2.0 Small Fixed Appliance Loads:			
(25) Microwave	@ 1,500 VA	=	37.5 kVA
(25) Dishwasher	@ 1,200 VA	=	30.0 kVA
(25) Garbage Disposal	@ 1,147 VA	=	28.7 kVA
(25) Media Hub	@ 180 VA	=	4.5 kVA
	Part 2 Connected Load	=	**103.2 kVA**
3.0 Large Electric Appliances			
(0) Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(25) Electric Range	@ 8,000 VA	=	200.0 kVA
	Part 3 Connected Load	=	**200.0 kVA**
4.0 HVAC System Loads			
(0) HP-1	@ 2,288 VA	=	0.0 kVA
(25) HP-2	@ 3,900 VA	=	97.5 kVA
(0) HP-3	@ 5,200 VA	=	0.0 kVA
(0) HP-4	@ 8,640 VA	=	0.0 kVA
(0) HP-5	@ 0 VA	=	0.0 kVA
(0) FC-1	@ 375 VA	=	0.0 kVA
(25) FC-2	@ 520 VA	=	13.0 kVA
(0) FC-3	@ 708 VA	=	0.0 kVA
(0) FC-4	@ 1,488 VA	=	0.0 kVA
(25) EF-1	@ 100 VA	=	2.5 kVA
(0) EF-2	@ 100 VA	=	0.0 kVA
(0) FC-4	@ 800 VA	=	0.0 kVA
(25) SF-1	@ 100 VA	=	2.5 kVA
(0) SF-2	@ 0 VA	=	0.0 kVA
	Part 4 Connected Load	=	**115.5 kVA**
4.1 Auxiliary Heating Loads			
(25) HS-1	@ 0 VA	=	0.0 kVA
	Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads			
(25) Electric Water Heater	@ 5,000 VA	=	125.0 kVA
	Part 5 Connected Load	=	**125.0 kVA**
	Grand Total Connected Load	=	**682.4 kVA**
Application of Demand (NEC 220.84)			
682.425 kVA x 35% (25 units)		=	**238.8 kVA**
	Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**663.0 A**
Provide a 800A Main Circuit Breaker			

ELECTRICAL LOAD CALCULATION (NEC 220.84)			
Salas O'Brien Project No. 2023-03392 --- Date Prepared: 2023-07-26			
Solomon Hills AA Units			
Utilty Service Section - MSA (PA15)			
1.0 Residential Service Loads:			
(1) Residental Service - PA15-R1	(25 Units)	=	682.4 kVA
(1) Residental Service - PA15-R2	(13 Units)	=	354.9 kVA
(1) Residental Service - PA15-R3	(27 Units)	=	737.0 kVA
(1) Residental Service - PA15-R4	(10 Units)	=	273.0 kVA
Total Connected Residential Service	(75 Units)	=	2,047.3 kVA
Application of Demand (NEC 220.84)			
2047.3 kVA x 23% (75 units)		=	**470.9 kVA**
2.0 Apartment Circulation	13,500 Sq.ft.		
Lighting @ 0.5 VA/sq.ft. x 125%		=	8.4 kVA
General Purpose Power @ 0.5 VA/sq.ft.		=	6.8 kVA
Special Purpose Power @ 0.5 VA/sq.ft.		=	6.8 kVA
HVAC Speculated @ 1 VA/sq.ft.		=	13.5 kVA
	Total Connected Load	=	**35.4 kVA**
2.0 Amenity Spaces	1,500 Sq.ft.		
Lighting @ 1 VA/sq.ft. x 125%		=	1.9 kVA
General Purpose Power @ 1 VA/sq.ft.		=	1.5 kVA
Special Purpose Power @ 5 VA/sq.ft.		=	7.5 kVA
HVAC Speculated @ 10 VA/sq.ft.		=	15.0 kVA
	Total Connected Load	=	**25.9 kVA**
3.0 Laundry	500 Sq.ft.		
Lighting @ 3 VA/sq.ft. x 125%		=	1.9 kVA
General Purpose Power @ 3 VA/sq.ft.		=	1.5 kVA
3-Electric Dryer @5000 each		=	15.0 kVA
3-Washer @1500 each		=	4.5 kVA
HVAC Speculated @ 10 VA/sq.ft.		=	5.0 kVA
	Total Connected Load	=	**27.9 kVA**
4.0 Parking Lot - 00 sq.ft. - parking stalls			
Lighting Speculated @ 5 kVA (Lump Sum)		=	5.0 kVA
General Purpose Power Speculated @ 1 kVA (Lump Sum)		=	1.0 kVA
	Total Connected Load	=	**6.0 kVA**
5.0 Mechanical Loads			
(2) Elevator @ 30 HP		=	63.4 kVA
(1) Booster Pumps @ 15 HP		=	16.6 kVA
	Total Connected Load	=	**80.1 kVA**
6.0 Largest Motor			
+ 25% Largest Motor Load		=	**7.9 kVA**
7.0 EV Charging Stations	Estimated # of stalls 113		
(12) Installed EVC Stations @ 6.656 kVA @ 125%		=	99.8 kVA
(46) Low Power EVC Stations @ 3.328 kVA @ 125%		=	191.4 kVA
	Total Connected Load	=	**291.2 kVA**
	Total House Load	=	**474.4 kVA**
	Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**1316.7 A**
	Grand Total Connected Load(Residential + House)	=	**945.2 kVA**
	Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**2623.7 A**
PROVIDE 4000A -3P-4W-208V SERVICE			

ELECTRICAL LOAD CALCULATION (NEC 220.84)			
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26			
Solomon Hills AA Units			
RESIDENTAL SERVICE MAIN - PA15-R4			
(10) Residental Units			8,500 Sq.ft.
1.0 GENERAL LOADS:			
General Lighting and Power at 3VA per square foot (NEC 220.42)		=	25.5 kVA
(20) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	30.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
	Part 1 Connected Load	=	**55.5 kVA**
2.0 Small Fixed Appliance Loads:			
(10) Microwave	@ 1,500 VA	=	15.0 kVA
(10) Dishwasher	@ 1,200 VA	=	12.0 kVA
(10) Garbage Disposal	@ 1,147 VA	=	11.5 kVA
(10) Media Hub	@ 180 VA	=	1.8 kVA
	Part 2 Connected Load	=	**41.3 kVA**
3.0 Large Electric Appliances			
(0) Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(10) Electric Range	@ 8,000 VA	=	80.0 kVA
	Part 3 Connected Load	=	**80.0 kVA**
4.0 HVAC System Loads			
(0) HP-1	@ 2,288 VA	=	0.0 kVA
(10) HP-2	@ 3,900 VA	=	39.0 kVA
(0) HP-3	@ 5,200 VA	=	0.0 kVA
(0) HP-4	@ 8,640 VA	=	0.0 kVA
(0) HP-5	@ 0 VA	=	0.0 kVA
(0) FC-1	@ 375 VA	=	0.0 kVA
(10) FC-2	@ 520 VA	=	5.2 kVA
(0) FC-3	@ 708 VA	=	0.0 kVA
(0) FC-4	@ 1,488 VA	=	0.0 kVA
(0) FC-5	@ 0 VA	=	0.0 kVA
(10) EF-1	@ 100 VA	=	1.0 kVA
(0) EF-2	@ 100 VA	=	0.0 kVA
(0) FC-4	@ 800 VA	=	0.0 kVA
(10) SF-1	@ 100 VA	=	1.0 kVA
(0) SF-2	@ 0 VA	=	0.0 kVA
	Part 4 Connected Load	=	**46.2 kVA**
4.1 Auxiliary Heating Loads			
(10) HS-1	@ 0 VA	=	0.0 kVA
	Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads			
(10) Electric Water Heater	@ 5,000 VA	=	50.0 kVA
	Part 5 Connected Load	=	**50.0 kVA**
	Grand Total Connected Load	=	**273.0 kVA**
Application of Demand (NEC 220.84)			
272.97 kVA x 43% (10 units)		=	**117.4 kVA**
	Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**325.8 A**
Provide a 400A Main Circuit Breaker			

ELECTRICAL LOAD CALCULATION (NEC 220.84)			
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26			
Solomon Hills AA Units			
RESIDENTAL SERVICE MAIN - PA15-R2			
(13) Residental Units			11,050 Sq.ft.
1.0 GENERAL LOADS:			
General Lighting and Power at 3VA per square foot (NEC 220.42)		=	33.2 kVA
(26) 20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	39.0 kVA
(0) 20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
	Part 1 Connected Load	=	**72.2 kVA**
2.0 Small Fixed Appliance Loads:			
(13) Microwave	@ 1,500 VA	=	19.5 kVA
(13) Dishwasher	@ 1,200 VA	=	15.6 kVA
(13) Garbage Disposal	@ 1,147 VA	=	14.9 kVA
(13) Media Hub	@ 180 VA	=	2.3 kVA
	Part 2 Connected Load	=	**53.7 kVA**
3.0 Large Electric Appliances			
(0) Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(13) Electric Range	@ 8,000 VA	=	104.0 kVA
	Part 3 Connected Load	=	**104.0 kVA**
4.0 HVAC System Loads			
(0) HP-1	@ 2,288 VA	=	0.0 kVA
(13) HP-2	@ 3,900 VA	=	50.7 kVA
(0) HP-3	@ 5,200 VA	=	0.0 kVA
(0) HP-4	@ 8,640 VA	=	0.0 kVA
(0) HP-5	@ 0 VA	=	0.0 kVA
(0) FC-1	@ 375 VA	=	0.0 kVA
(13) FC-2	@ 520 VA	=	6.8 kVA
(0) FC-3	@ 708 VA	=	0.0 kVA
(0) FC-4	@ 1,488 VA	=	0.0 kVA
(0) FC-5	@ 0 VA	=	0.0 kVA
(13) EF-1	@ 100 VA	=	1.3 kVA
(0) EF-2	@ 100 VA	=	0.0 kVA
(0) FC-4	@ 800 VA	=	0.0 kVA
(13) SF-1	@ 100 VA	=	1.3 kVA
(0) SF-2	@ 0 VA	=	0.0 kVA
	Part 4 Connected Load	=	**60.1 kVA**
4.1 Auxiliary Heating Loads			
(13) HS-1	@ 0 VA	=	0.0 kVA
	Part 4.1 Connected Load	=	**0.0 kVA**
5.0 Miscellaneous Loads			
(13) Electric Water Heater	@ 5,000 VA	=	65.0 kVA
	Part 5 Connected Load	=	**65.0 kVA**
	Grand Total Connected Load	=	**354.9 kVA**
Application of Demand (NEC 220.84)			
354.861 kVA x 41% (13 units)		=	**145.5 kVA**
	Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**403.8 A**
Provide a 600A Main Circuit Breaker			

Seal

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Corona, CA 92883

Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE AA
PRODUCT TYPE: 17, 18, 19

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTAL SERVICE MAIN - PA14-R3

(73) Residental Units				**62,050 Sq.ft.**
1.0 **GENERAL LOADS:**				
	General Lighting and Power at 3VA per square foot (NEC 220.42)		=	186.2 kVA
(146)	20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	219.0 kVA
(0)	20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
		Part 1 Connected Load	=	**405.2 kVA**
2.0 **Small Fixed Appliance Loads:**				
(73)	Microwave	@ 1,500 VA	=	109.5 kVA
(73)	Dishwasher	@ 1,200 VA	=	87.6 kVA
(73)	Garbage Disposal	@ 1,147 VA	=	83.7 kVA
(73)	Media Hub	@ 180 VA	=	13.1 kVA
		Part 2 Connected Load	=	**301.3 kVA**
3.0 **Large Electric Appliances**				
(0)	Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(73)	Electric Range	@ 8,000 VA	=	584.0 kVA
		Part 3 Connected Load	=	**584.0 kVA**
4.0 **HVAC System Loads**				
(0)	HP-1	@ 2,288 VA	=	0.0 kVA
(73)	HP-2	@ 3,900 VA	=	284.7 kVA
(0)	HP-3	@ 5,200 VA	=	0.0 kVA
(0)	HP-4	@ 8,640 VA	=	0.0 kVA
(0)	HP-5	@ 0 VA	=	0.0 kVA
(0)	FC-1	@ 375 VA	=	0.0 kVA
(73)	FC-2	@ 520 VA	=	38.0 kVA
(0)	FC-3	@ 708 VA	=	0.0 kVA
(0)	FC-4	@ 1,488 VA	=	0.0 kVA
(0)	FC-5	@ 0 VA	=	0.0 kVA
(73)	EF-1	@ 100 VA	=	7.3 kVA
(0)	EF-2	@ 100 VA	=	0.0 kVA
(0)	FC-4	@ 800 VA	=	0.0 kVA
(73)	SF-1	@ 100 VA	=	7.3 kVA
(0)	SF-2	@ 0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**337.3 kVA**
4.1 **Auxiliary Heating Loads**				
(73)	HS-1	@ 0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 **Miscellaneous Loads**				
(73)	Electric Water Heater	@ 5,000 VA	=	365.0 kVA
		Part 5 Connected Load	=	**365.0 kVA**
		Grand Total Connected Load	=	**1,992.7 kVA**
	Application of Demand (NEC 220.84)			
	1992.681 kVA x 23% (73 units)		=	**458.3 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**1272.2 A**
Provide a 1600A Main Circuit Breaker				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTAL SERVICE MAIN - PA14-R1

(68) Residental Units				**57,800 Sq.ft.**
1.0 **GENERAL LOADS:**				
	General Lighting and Power at 3VA per square foot (NEC 220.42)		=	173.4 kVA
(136)	20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	204.0 kVA
(0)	20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
		Part 1 Connected Load	=	**377.4 kVA**
2.0 **Small Fixed Appliance Loads:**				
(68)	Microwave	@ 1,500 VA	=	102.0 kVA
(68)	Dishwasher	@ 1,200 VA	=	81.6 kVA
(68)	Garbage Disposal	@ 1,147 VA	=	78.0 kVA
(68)	Media Hub	@ 180 VA	=	12.2 kVA
		Part 2 Connected Load	=	**280.6 kVA**
3.0 **Large Electric Appliances**				
(0)	Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(68)	Electric Range	@ 8,000 VA	=	544.0 kVA
		Part 3 Connected Load	=	**544.0 kVA**
4.0 **HVAC System Loads**				
(0)	HP-1	@ 2,288 VA	=	0.0 kVA
(68)	HP-2	@ 3,900 VA	=	265.2 kVA
(0)	HP-3	@ 5,200 VA	=	0.0 kVA
(0)	HP-4	@ 8,640 VA	=	0.0 kVA
(0)	HP-5	@ 0 VA	=	0.0 kVA
(0)	FC-1	@ 375 VA	=	0.0 kVA
(68)	FC-2	@ 520 VA	=	35.4 kVA
(0)	FC-3	@ 708 VA	=	0.0 kVA
(0)	FC-4	@ 1,488 VA	=	0.0 kVA
(0)	FC-5	@ 0 VA	=	0.0 kVA
(68)	EF-1	@ 100 VA	=	6.8 kVA
(0)	EF-2	@ 100 VA	=	0.0 kVA
(0)	FC-4	@ 800 VA	=	0.0 kVA
(68)	SF-1	@ 100 VA	=	6.8 kVA
(0)	SF-2	@ 0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**314.2 kVA**
4.1 **Auxiliary Heating Loads**				
(68)	HS-1	@ 0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 **Miscellaneous Loads**				
(68)	Electric Water Heater	@ 5,000 VA	=	340.0 kVA
		Part 5 Connected Load	=	**340.0 kVA**
		Grand Total Connected Load	=	**1,856.2 kVA**
	Application of Demand (NEC 220.84)			
	1856.196 kVA x 23% (68 units)		=	**426.9 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**1185.0 A**
Provide a 1200A Main Circuit Breaker				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
Salas O'Brien Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
Utilty Service Section - MSA (PA14)

1.0 **Residential Service Loads:**				
(1)	Residental Service - PA14-R1	(68 Units)	=	1,856.2 kVA
(1)	Residental Service - PA14-R2	(35 Units)	=	955.4 kVA
(1)	Residental Service - PA14-R3	(73 Units)	=	1,992.7 kVA
(1)	Residental Service - PA14-R4	(24 Units)	=	655.1 kVA
	Total Connected Residential Service	(200 Units)	=	5,459.4 kVA
	Application of Demand (NEC 220.84)			
	5459.4 kVA x 23% (200 units)		=	**1,255.7 kVA**
2.0 **Apartment Circulation**		**40,000 Sq.ft.**		
	Lighting @ 0.5 VA/sq.ft. x 125%		=	25.0 kVA
	General Purpose Power @ 0.5 VA/sq.ft.		=	20.0 kVA
	Special Purpose Power @ 0.5 VA/sq.ft.		=	20.0 kVA
	HVAC Speculated @ 1 VA/sq.ft.		=	40.0 kVA
		Total Connected Load	=	**105.0 kVA**
2.0 **Amenity Spaces**		**5,000 Sq.ft.**		
	Lighting @ 1 VA/sq.ft. x 125%		=	6.3 kVA
	General Purpose Power @ 1 VA/sq.ft.		=	5.0 kVA
	Special Purpose Power @ 5 VA/sq.ft.		=	25.0 kVA
	HVAC Speculated @ 10 VA/sq.ft.		=	50.0 kVA
		Total Connected Load	=	**86.3 kVA**
3.0 **Laundry**		**1,200 Sq.ft.**		
	Lighting @ 3 VA/sq.ft. x 125%		=	4.5 kVA
	General Purpose Power @ 3 VA/sq.ft.		=	3.6 kVA
	7-Electric Dryer @5000 each		=	35.0 kVA
	7-Washer @1500 each		=	10.5 kVA
	HVAC Speculated @ 10 VA/sq.ft.		=	12.0 kVA
		Total Connected Load	=	**65.6 kVA**
4.0 **Parking Lot - 00 sq.ft. - parking stalls**				
	Lighting Speculated @ 15 kVA (Lump Sum)		=	15.0 kVA
	General Purpose Power Speculated @ 2 kVA (Lump Sum)		=	2.0 kVA
		Total Connected Load	=	**17.0 kVA**
5.0 **Mechanical Loads**				
(3)	Elevator @ 30 HP		=	95.1 kVA
(3)	Booster Pumps @ 15 HP		=	49.9 kVA
		Total Connected Load	=	**145.0 kVA**
6.0 **Largest Motor**				
	+ 25% Largest Motor Load		=	**7.9 kVA**
7.0 **EV Charging Stations**		**Estimated # of stalls**	**300**	
(30)	Installed EVC Stations @ 6.656 kVA @ 125%		=	249.6 kVA
(120)	Low Power EVC Stations @ 3.328 kVA @ 125%		=	499.2 kVA
		Total Connected Load	=	**748.8 kVA**
		Total House Load	=	**1,175.6 kVA**
		Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**3263.2 A**
		Grand Total Connected Load(Residential + House)	=	**2,431.3 kVA**
		Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**6748.6 A**
PROVIDE (3) 2500A -3P-4W-208V SERVICE				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTAL SERVICE MAIN - PA14-R4

(24) Residental Units				**20,400 Sq.ft.**
1.0 **GENERAL LOADS:**				
	General Lighting and Power at 3VA per square foot (NEC 220.42)		=	61.2 kVA
(48)	20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	72.0 kVA
(0)	20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
		Part 1 Connected Load	=	**133.2 kVA**
2.0 **Small Fixed Appliance Loads:**				
(24)	Microwave	@ 1,500 VA	=	36.0 kVA
(24)	Dishwasher	@ 1,200 VA	=	28.8 kVA
(24)	Garbage Disposal	@ 1,147 VA	=	27.5 kVA
(24)	Media Hub	@ 180 VA	=	4.3 kVA
		Part 2 Connected Load	=	**99.0 kVA**
3.0 **Large Electric Appliances**				
(0)	Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(24)	Electric Range	@ 8,000 VA	=	192.0 kVA
		Part 3 Connected Load	=	**192.0 kVA**
4.0 **HVAC System Loads**				
(0)	HP-1	@ 2,288 VA	=	0.0 kVA
(24)	HP-2	@ 3,900 VA	=	93.6 kVA
(0)	HP-3	@ 5,200 VA	=	0.0 kVA
(0)	HP-4	@ 8,640 VA	=	0.0 kVA
(0)	HP-5	@ 0 VA	=	0.0 kVA
(0)	FC-1	@ 375 VA	=	0.0 kVA
(24)	FC-2	@ 520 VA	=	12.5 kVA
(0)	FC-3	@ 708 VA	=	0.0 kVA
(0)	FC-4	@ 1,488 VA	=	0.0 kVA
(0)	FC-5	@ 0 VA	=	0.0 kVA
(24)	EF-1	@ 100 VA	=	2.4 kVA
(0)	EF-2	@ 100 VA	=	0.0 kVA
(0)	FC-4	@ 800 VA	=	0.0 kVA
(24)	SF-1	@ 100 VA	=	2.4 kVA
(0)	SF-2	@ 0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**110.9 kVA**
4.1 **Auxiliary Heating Loads**				
(24)	HS-1	@ 0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 **Miscellaneous Loads**				
(24)	Electric Water Heater	@ 5,000 VA	=	120.0 kVA
		Part 5 Connected Load	=	**120.0 kVA**
		Grand Total Connected Load	=	**655.1 kVA**
	Application of Demand (NEC 220.84)			
	655.128 kVA x 35% (24 units)		=	**229.3 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**636.5 A**
Provide a 800A Main Circuit Breaker				

ELECTRICAL LOAD CALCULATION (NEC 220.84)
OMB Project No. 2023-03392 --- Date Prepared: 2023-07-26
Solomon Hills AA Units
RESIDENTAL SERVICE MAIN - PA14-R2

(35) Residental Units				**29,750 Sq.ft.**
1.0 **GENERAL LOADS:**				
	General Lighting and Power at 3VA per square foot (NEC 220.42)		=	89.3 kVA
(70)	20A Small Appliance Circuits at 1500VA (NEC 220.52A)		=	105.0 kVA
(0)	20A Laundry Circuits at 1500VA (NEC 220.52B)		=	0.0 kVA
		Part 1 Connected Load	=	**194.3 kVA**
2.0 **Small Fixed Appliance Loads:**				
(35)	Microwave	@ 1,500 VA	=	52.5 kVA
(35)	Dishwasher	@ 1,200 VA	=	42.0 kVA
(35)	Garbage Disposal	@ 1,147 VA	=	40.1 kVA
(35)	Media Hub	@ 180 VA	=	6.3 kVA
		Part 2 Connected Load	=	**144.4 kVA**
3.0 **Large Electric Appliances**				
(0)	Electric Clothes Dryer	@ 5,000 VA	=	0.0 kVA
(35)	Electric Range	@ 8,000 VA	=	280.0 kVA
		Part 3 Connected Load	=	**280.0 kVA**
4.0 **HVAC System Loads**				
(0)	HP-1	@ 2,288 VA	=	0.0 kVA
(35)	HP-2	@ 3,900 VA	=	136.5 kVA
(0)	HP-3	@ 5,200 VA	=	0.0 kVA
(0)	HP-4	@ 8,640 VA	=	0.0 kVA
(0)	HP-5	@ 0 VA	=	0.0 kVA
(0)	FC-1	@ 375 VA	=	0.0 kVA
(35)	FC-2	@ 520 VA	=	18.2 kVA
(0)	FC-3	@ 708 VA	=	0.0 kVA
(0)	FC-4	@ 1,488 VA	=	0.0 kVA
(0)	FC-5	@ 0 VA	=	0.0 kVA
(35)	EF-1	@ 100 VA	=	3.5 kVA
(0)	EF-2	@ 100 VA	=	0.0 kVA
(0)	FC-4	@ 800 VA	=	0.0 kVA
(35)	SF-1	@ 100 VA	=	3.5 kVA
(0)	SF-2	@ 0 VA	=	0.0 kVA
		Part 4 Connected Load	=	**161.7 kVA**
4.1 **Auxiliary Heating Loads**				
(35)	HS-1	@ 0 VA	=	0.0 kVA
		Part 4.1 Connected Load	=	**0.0 kVA**
5.0 **Miscellaneous Loads**				
(35)	Electric Water Heater	@ 5,000 VA	=	175.0 kVA
		Part 5 Connected Load	=	**175.0 kVA**
		Grand Total Connected Load	=	**955.4 kVA**
	Application of Demand (NEC 220.84)			
	955.395 kVA x 30% (35 units)		=	**286.6 kVA**
		Grand Total Demand Load in Amps at 208/120V, 3-PH, 4-W	=	**795.6 A**
Provide a 800A Main Circuit Breaker				

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
BUILDING TYPE AA
PRODUCT TYPE: 17, 18, 19

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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BANK
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 3,500 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	10.5 KVA
.2	51 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	10.2 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	17.5 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	3.5 KVA
.5	HVAC Power estmated @ 10 VA / sq.ft.	=	35.0 KVA
	Total (1)	=	76.7 KVA
	÷208V√3	=	212.9 AMPS
	Grand-Total (1.0 – 2.0):	=	76.7 KVA
	÷208V√3	=	212.9 AMPS

Estimated 400A– 208V – 3Ø – 4W Service

CVS
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 15,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	45.00 KVA
.2	105 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	21.00 KVA
.3	Special Purpose Power estimated @ 10 VA / sq ft	=	150.00 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	15.00 KVA
.5	HVAC Power estmated @ 12 VA / sq.ft.	=	180.00 KVA
	Total (1)	=	411.00 KVA
	÷208V√3	=	1,140.82 AMPS
	Grand-Total (1.0 – 2.0):	=	411.00 KVA
	÷208V√3	=	1,140.82 AMPS

Estimated 1200A– 208V – 3Ø – 4W Service

GROCERY
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 40,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	120.00 KVA
.2	170 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	34.00 KVA
.3	Special Purpose Power estimated @ 10 VA / sq ft	=	400.00 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	40.00 KVA
.5	HVAC Power estmated @ 12 VA / sq.ft.	=	480.00 KVA
	Total (1)	=	1,074.00 KVA
	÷208V√3	=	2,981.13 AMPS
	Grand-Total (1.0 – 2.0):	=	1,074.00 KVA
	÷208V√3	=	2,981.13 AMPS

Estimated 3000A– 208V – 3Ø – 4W Service

FITNESS
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 7 VA / sq ft	=	14.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	53.8 KVA
	÷208V√3	=	149.3 AMPS
	Grand-Total (1.0 – 2.0):	=	53.8 KVA
	÷208V√3	=	149.3 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

NAILS & LASHES
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 10 VA / sq.ft.	=	20.0 KVA
	Total (1)	=	45.8 KVA
	÷208V√3	=	127.1 AMPS
	Grand-Total (1.0 – 2.0):	=	45.8 KVA
	÷208V√3	=	127.1 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

UPS
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 10 VA / sq.ft.	=	20.0 KVA
	Total (1)	=	45.8 KVA
	÷208V√3	=	127.1 AMPS
	Grand-Total (1.0 – 2.0):	=	45.8 KVA
	÷208V√3	=	127.1 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

MARTIAL ARTS
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	49.8 KVA
	÷208V√3	=	138.2 AMPS
	Grand-Total (1.0 – 2.0):	=	49.8 KVA
	÷208V√3	=	138.2 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

CLEANERS & TAILORING
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	49.8 KVA
	÷208V√3	=	138.2 AMPS
	Grand-Total (1.0 – 2.0):	=	49.8 KVA
	÷208V√3	=	138.2 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

SPORTS CLIPS
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 10 VA / sq.ft.	=	20.0 KVA
	Total (1)	=	45.8 KVA
	÷208V√3	=	127.1 AMPS
	Grand-Total (1.0 – 2.0):	=	45.8 KVA
	÷208V√3	=	127.1 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

COSMETICS
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 10 VA / sq.ft.	=	20.0 KVA
	Total (1)	=	45.8 KVA
	÷208V√3	=	127.1 AMPS
	Grand-Total (1.0 – 2.0):	=	45.8 KVA
	÷208V√3	=	127.1 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

CLOTHING
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 10 VA / sq.ft.	=	20.0 KVA
	Total (1)	=	45.8 KVA
	÷208V√3	=	127.1 AMPS
	Grand-Total (1.0 – 2.0):	=	45.8 KVA
	÷208V√3	=	127.1 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

OPTOMETRY
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	39 Linear Feet of Show Window Lighting x 200VA / Linear Foot (Per NEC 220.14(G)): (Note 1):	=	7.8 KVA
.3	Special Purpose Power estimated @ 5 VA / sq ft	=	10.0 KVA
.4	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.5	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	49.8 KVA
	÷208V√3	=	138.2 AMPS
	Grand-Total (1.0 – 2.0):	=	49.8 KVA
	÷208V√3	=	138.2 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

URGENT CARE
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Retail Loads 2,000 Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	Special Purpose Power estimated @ 7 VA / sq ft	=	14.0 KVA
.3	General Purpose Power estimated @ 1 VA / sq.ft.	=	2.0 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	46.0 KVA
	÷208V√3	=	127.7 AMPS
	Grand-Total (1.0 – 2.0):	=	46.0 KVA
	÷208V√3	=	127.7 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
RETAIL BUILDINGS

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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sheet plotted: Jul/22/2025 @ 9:48 AM
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YOGURTLAND

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 Restaurant 2,000 Sq.Ft.

.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	Dinning Power estimated @ 5 VA / sq.ft x 1/2 total sq ft area	=	5.0 KVA
.3	Kitchen Power estimated @ 30 VA / sq ft x 1/2 total sq. ft area	=	30.0 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	65.0 KVA
	÷208V√3	=	180.4 AMPS
	Grand-Total (1.0 – 2.0):	=	65.0 KVA
	÷208V√3	=	180.4 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

JUICE BAR

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 Restaurant 2,000 Sq.Ft.

.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	Dinning Power estimated @ 5 VA / sq.ft x 1/2 total sq ft area	=	5.0 KVA
.3	Kitchen Power estimated @ 30 VA / sq ft x 1/2 total sq. ft area	=	30.0 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	65.0 KVA
	÷208V√3	=	180.4 AMPS
	Grand-Total (1.0 – 2.0):	=	65.0 KVA
	÷208V√3	=	180.4 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

IN N OUT

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 Restaurant 4,300 Sq.Ft.

.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	12.9 KVA
.2	Dinning Power estimated @ 5 VA / sq.ft x 1/2 total sq ft area	=	10.8 KVA
.3	Kitchen Power estimated @ 50 VA / sq ft x 1/2 total sq. ft area	=	107.5 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	51.6 KVA
	Total (1)	=	182.8 KVA
	÷208V√3	=	507.3 AMPS
	Grand-Total (1.0 – 2.0):	=	182.8 KVA
	÷208V√3	=	507.3 AMPS

Estimated 600A– 208V – 3Ø – 4W Service

RESTAURANT

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 Restaurant 2,000 Sq.Ft.

.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	Dinning Power estimated @ 5 VA / sq.ft x 1/2 total sq ft area	=	5.0 KVA
.3	Kitchen Power estimated @ 50 VA / sq ft x 1/2 total sq. ft area	=	50.0 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	85.0 KVA
	÷208V√3	=	235.9 AMPS
	Grand-Total (1.0 – 2.0):	=	85.0 KVA
	÷208V√3	=	235.9 AMPS

Estimated 400A– 208V – 3Ø – 4W Service

COFFEE BREAKFAST

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 Restaurant 2,000 Sq.Ft.

.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	Dinning Power estimated @ 5 VA / sq.ft x 1/2 total sq ft area	=	5.0 KVA
.3	Kitchen Power estimated @ 50 VA / sq ft x 1/2 total sq. ft area	=	50.0 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	85.0 KVA
	÷208V√3	=	235.9 AMPS
	Grand-Total (1.0 – 2.0):	=	85.0 KVA
	÷208V√3	=	235.9 AMPS

Estimated 400A– 208V – 3Ø – 4W Service

SANDWHICH

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 Restaurant 2,000 Sq.Ft.

.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	Dinning Power estimated @ 5 VA / sq.ft x 1/2 total sq ft area	=	5.0 KVA
.3	Kitchen Power estimated @ 30 VA / sq ft x 1/2 total sq. ft area	=	30.0 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	65.0 KVA
	÷208V√3	=	180.4 AMPS
	Grand-Total (1.0 – 2.0):	=	65.0 KVA
	÷208V√3	=	180.4 AMPS

Estimated 200A– 208V – 3Ø – 4W Service

RESTAURANT TARGETED

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 Restaurant 2,000 Sq.Ft.

.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)	=	6.0 KVA
.2	Dinning Power estimated @ 5 VA / sq.ft x 1/2 total sq ft area	=	5.0 KVA
.3	Kitchen Power estimated @ 50 VA / sq ft x 1/2 total sq. ft area	=	50.0 KVA
.4	HVAC Power estmated @ 12 VA / sq.ft.	=	24.0 KVA
	Total (1)	=	85.0 KVA
	÷208V√3	=	235.9 AMPS
	Grand-Total (1.0 – 2.0):	=	85.0 KVA
	÷208V√3	=	235.9 AMPS

Estimated 400A– 208V – 3Ø – 4W Service

SEPARATE EV/HOUSE SERVICE FOR ALL RETAIL AND RESTAURANT COMMERCIAL SPACES

COMMERCIAL HOUSE SERVICE

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0 House System

.1	Exterior Building Attached Lighting Estimated Lump Sum:		=	10.0 KVA
.2	Site Lighting Estimated Lump Sum:		=	10.0 KVA
.3	Site Misc. Power Estimated Lump Sum:		=	30.0 KVA
		Total (2)	=	50.0 KVA
		÷208V√3	=	138.8 AMPS

2.0 Electric Vehicle — Estimated (450) stalls total

.1	EV Ready Stations	30	@ 6.656 KVA @ 125% '	=	249.60 KVA
.2	EV Capable Stations	61	@ 6.656 KVA @ 125% '	=	507.52 KVA

If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.

	Total (3)	=	757.12 KVA
	÷208V√3	=	2,101.55 AMPS
Grand-Total (1.0 – 3.0):		=	807.12 KVA
	÷208V√3	=	2,240.34 AMPS

Estimated 2500A– 208V – 3Ø – 4W Service Including EV

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Project No.: #2023-03392

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
RESTAURANT BUILDINGS

Preliminary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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PA74 Com Office Space

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Office Loads	130,000	Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)			=	390.00 KVA
.2	Special Purpose Power estimated @ 6 VA / sq ft			=	780.00 KVA
.3	General Purpose Power estimated @ 1 VA / sq.ft.			=	130.00 KVA
.4	HVAC Power estmated @ 8 VA / sq.ft.			=	1,040.00 KVA
				Total (1) =	2,340.00 KVA
				÷480V √3 =	2,814.58 AMPS
2.0	House System				
.1	Exterior Building Attached Lighting Estimated Lump Sum:			=	5.00 KVA
.2	Site Lighting Estimated Lump Sum:			=	10.00 KVA
				Total (2) =	15.00 KVA
				÷480V √3 =	18.04 AMPS
				Grand-Total (1.0 – 2.0): =	2,355.00 KVA
				÷480V √3 =	2,832.62 AMPS
	Estimated	3000A– 480V – 3Ø – 4W Service			
3.0	Electric Vehicle	Estimated (435) stalls total			
.1	EV Ready Stations	22	@ 6.656 KVA @ 125% '	=	183.04 KVA
.2	EV Capable Stations	65	@ 6.656 KVA @ 125% '	=	540.80 KVA
	If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.				
				Total (3) =	723.84 KVA
				÷208V √3 =	2,009.18 AMPS
				Grand-Total (1.0 – 3.0): =	3,078.84 KVA
				÷480V √3 =	3,703.27 AMPS
	Estimated	4000A– 480V – 3Ø – 4W Service Including EV			

PA 11 & PA56 Com Office Space

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Office Loads	5,000	Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)			=	15.00 KVA
.2	Special Purpose Power estimated @ 6 VA / sq ft			=	30.00 KVA
.3	General Purpose Power estimated @ 1 VA / sq.ft.			=	5.00 KVA
.4	HVAC Power estmated @ 8 VA / sq.ft.			=	40.00 KVA
				Total (1) =	90.00 KVA
				÷480V √3 =	108.25 AMPS
2.0	House System				
.1	Exterior Building Attached Lighting Estimated Lump Sum:			=	1.00 KVA
.2	Site Lighting Estimated Lump Sum:			=	2.00 KVA
				Total (2) =	3.00 KVA
				÷480V √3 =	3.61 AMPS
				Grand-Total (1.0 – 2.0): =	93.00 KVA
				÷480V √3 =	111.86 AMPS
	Estimated	200A– 480V – 3Ø – 4W Service			
3.0	Electric Vehicle	Estimated (25) stalls total			
.1	EV Ready Stations	2	@ 6.656 KVA @ 125% '	=	16.64 KVA
.2	EV Capable Stations	3	@ 6.656 KVA @ 125% '	=	24.96 KVA
	If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.				
				Total (3) =	41.60 KVA
				÷208V √3 =	115.47 AMPS
				Grand-Total (1.0 – 3.0): =	134.60 KVA
				÷480V √3 =	161.90 AMPS
	Estimated	200A– 480V – 3Ø – 4W Service Including EV			

PA76 Com Office Space

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Office Loads	365,000	Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)			=	1,095.00 KVA
.2	Special Purpose Power estimated @ 6 VA / sq ft			=	2,190.00 KVA
.3	General Purpose Power estimated @ 1 VA / sq.ft.			=	365.00 KVA
.4	HVAC Power estmated @ 8 VA / sq.ft.			=	2,920.00 KVA
				Total (1) =	6,570.00 KVA
				÷480V √3 =	7,902.48 AMPS
2.0	House System				
.1	Exterior Building Attached Lighting Estimated Lump Sum:			=	10.00 KVA
.2	Site Lighting Estimated Lump Sum:			=	15.00 KVA
				Total (2) =	25.00 KVA
				÷480V √3 =	30.07 AMPS
				Grand-Total (1.0 – 2.0): =	6,595.00 KVA
				÷480V √3 =	7,932.55 AMPS
	Estimated	(4)3000A– 480V – 3Ø – 4W Service			
3.0	Electric Vehicle	Estimated (1220) stalls total			
.1	EV Ready Stations	61	@ 6.656 KVA @ 125% '	=	507.52 KVA
.2	EV Capable Stations	183	@ 6.656 KVA @ 125% '	=	1,522.56 KVA
	If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.				
				Total (3) =	2,030.08 KVA
				÷208V √3 =	5,634.94 AMPS
				Grand-Total (1.0 – 3.0): =	8,625.1 KVA
				÷480V √3 =	10,374.4 AMPS
	Estimated	(4)3000A– 480V – 3Ø – 4W Service Including EV			

PA21 Com Office Space

MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-033392

1.0	Office Loads	25,000	Sq.Ft.		
.1	General lighting Estimated @ 3 VA/sq.ft. (Per NEC 220.12)			=	75.00 KVA
.2	Special Purpose Power estimated @ 6 VA / sq ft			=	150.00 KVA
.3	General Purpose Power estimated @ 1 VA / sq.ft.			=	25.00 KVA
.4	HVAC Power estmated @ 8 VA / sq.ft.			=	200.00 KVA
				Total (1) =	450.00 KVA
				÷480V √3 =	541.27 AMPS
2.0	House System				
.1	Exterior Building Attached Lighting Estimated Lump Sum:			=	3.00 KVA
.2	Site Lighting Estimated Lump Sum:			=	5.00 KVA
				Total (2) =	8.00 KVA
				÷480V √3 =	9.62 AMPS
				Grand-Total (1.0 – 2.0): =	458.00 KVA
				÷480V √3 =	550.89 AMPS
	Estimated	600A– 480V – 3Ø – 4W Service			
3.0	Electric Vehicle	Estimated (125) stalls total			
.1	EV Ready Stations	7	@ 6.656 KVA @ 125% '	=	58.24 KVA
.2	EV Capable Stations	18	@ 6.656 KVA @ 125% '	=	149.76 KVA
	If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.				
				Total (3) =	208.00 KVA
				÷208V √3 =	577.35 AMPS
				Grand-Total (1.0 – 3.0): =	666.00 KVA
				÷480V √3 =	801.07 AMPS
	Estimated	1000A– 480V – 3Ø – 4W Service Including EV			

Seal

Consultant

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
OFFICE BUILDINGS

Prelimanary Design 08/04/2023

Project Number: 2023-03392

Plan Check Number: #

SHEET

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ELECTRICAL LOAD CALCULATION (NEC 220.84)
Salas O'Brien Project No. 2023-03392 --- Date Prepared: 2023-08-14
School
Utilty Service Section - MS

1.0	**Admin Building**	**6,000 Sq.ft.**		
	Lighting @ 3 VA/sq.ft. x 125%		=	22.5 kVA
	General Purpose Power @ 1 VA/sq.ft.		=	6.0 kVA
	Special Purpose Power @ 5 VA/sq.ft.		=	30.0 kVA
	HVAC Speculated @ 10 VA/sq.ft.		=	60.0 kVA
	MPOE Low Voltage Equipment @ 5 kVA (Lump Sum Est.)		=	5.0 kVA
	Total Connected Load		=	**123.5 kVA**
2.0	**Design Lab/Library**	**8,000 Sq.ft.**		
	Lighting @ 3 VA/sq.ft. x 125%		=	30.0 kVA
	General Purpose Power @ 1 VA/sq.ft.		=	8.0 kVA
	Special Purpose Power @ 5 VA/sq.ft.		=	40.0 kVA
	HVAC Speculated @ 10 VA/sq.ft.		=	80.0 kVA
	Computer Lab @ 10 kVA (Lump Sum Est.)		=	10.0 kVA
	Total Connected Load		=	**168.0 kVA**
3.0	**GYM/Servery**	**18,000 Sq.ft.**		
	Lighting @ 3 VA/sq.ft. x 125%		=	67.5 kVA
	General Purpose Power @ 1 VA/sq.ft.		=	18.0 kVA
	Special Purpose Power @ 5 VA/sq.ft.		=	90.0 kVA
	HVAC Speculated @ 15 VA/sq.ft.		=	270.0 kVA
	Kitchen Equipment @ 27.5 kVA (25VA/sq.ft. Est.)		=	27.5 kVA
	Stage Ltg and AV Equipment @ 10 kVA (Lump Sum Est.)		=	10.0 kVA
	Total Connected Load		=	**483.0 kVA**
4.0	**Staff Workroom/RR Buildings**	**3,500 Sq.ft.**		
	Lighting @ 3 VA/sq.ft. x 125%		=	13.1 kVA
	General Purpose Power @ 1 VA/sq.ft.		=	3.5 kVA
	Special Purpose Power @ 0.5 VA/sq.ft.		=	1.8 kVA
	HVAC Speculated @ 10 VA/sq.ft.		=	35.0 kVA
	Total Connected Load		=	**53.4 kVA**
5.0	**Spec. Ed.**	**5,000 Sq.ft.**		
	Lighting @ 3 VA/sq.ft. x 125%		=	18.8 kVA
	General Purpose Power @ 1 VA/sq.ft.		=	5.0 kVA
	Special Purpose Power @ 3 VA/sq.ft.		=	15.0 kVA
	HVAC Speculated @ 10 VA/sq.ft.		=	50.0 kVA
	Total Connected Load		=	**88.8 kVA**
6.0	**Classrooms Estimate (45 classrooms @1400sq.ft & 7 HUB Spaces**	**70,000 Sq.ft.**		
	Lighting @ 3 VA/sq.ft. x 125%		=	262.5 kVA
	General Purpose Power @ 1 VA/sq.ft.		=	70.0 kVA
	Special Purpose Power @ 3 VA/sq.ft.		=	210.0 kVA
	HVAC Speculated @ 10 VA/sq.ft.		=	700.0 kVA
	Total Connected Load		=	**1,242.5 kVA**
7.0	**Site Loads**			
	(1) Sports Lighting speculated @ 20 KVA		=	20.0 kVA
	Site Lighting Speculated @ 15 kVA (Lump Sum Est.)		=	15.0 kVA
	Total Connected Load		=	**35.0 kVA**
8.0	**Largest Motor**			
	+ 25% Largest Motor Load		=	**12.9 kVA**
9.0	**EV Charging Stations**	**(175) Estimated Parking Stalls**		
	(22) EV Capable Stalls @ 6.656 kVA @ 125%		=	183.0 kVA
	(8) Installed EVC Stations @ 6.656 kVA @ 125%		=	66.6 kVA
	If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.			
	Total Connected Load		=	**249.6 kVA**
	Total House Load		=	**2,476.6 kVA**
	Grand Total Demand Load in Amps at 480/277V, 3-PH, 4-W		=	**2982.4 A**

Provide (1) 3000A Main Circuit Breaker

Seal

Consultant

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
SCHOOL

Preliminary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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FIRE STATION
MAIN SERVICE BOARD "MSA"
PRELIMINARY ELECTRICAL LOAD CALCULATION
SALAS O'BRIEN PROJECT NUMBER 2023-03392

1.0	General Lighting and Power	4,800 Sq.Ft.					
.1	General Lighting and Power Estimated at 3.0VA/ sq. ft. per NEC 220.3:					=	14.4 KVA
.2	Small Appliance Circuits(4) at 1500 Watts each:					=	6.0 KVA
.3	Laundry Circuits(2) at 1500 Watts each:					=	3.0 KVA
					Total (1)	=	23.4 KVA
2.0	Small Appliance Loads						
	Appliance	*Quantity*		*Estimated Load*			
.1	Refrigerator/Freezer:	4	0.6	KVA		=	2.4 KVA
.2	Dishwasher:	1	1.2	KVA		=	1.2 KVA
.3	Garbage Disposal:	1	1.25	KVA		=	1.3 KVA
.4	Range hood:	1	0.7	KVA		=	0.7 KVA
.5	Microwave:	4	1.4	KVA		=	5.6 KVA
					Total (2)	=	11.2 KVA
3.0	Special Equipment Loads						
.1	Garage Door Motor(Estimated (3) @ 1000W each):					=	3.0 KVA
.2	AV System Equipment – (10) Circuits at 750W each					=	7.5 KVA
.3	Electric Dryer (2) @5KW each					=	10.0 KVA
.4	Electric Water Heater provisions (2) @5KW					=	10.0 KVA
.5	Access Security/Special Systems speculated 10KW					=	10.0 KVA
					Total (3)	=	40.5 KVA
4.0	Miscellaneous Site Lighting						
.1	Estimated Lump Sum:				Total (4)	=	1.5 KVA
5.0	Electric Vehicle Charging Stations	Estimating (15) Stalls Total					
.1	EV Station 7 @	40 Amps Each - 230V. 1 Phase				=	53.8 KVA
.2	Plus 125% for LCL					=	13.4 KVA
					Total (5)	=	67.2 KVA
6.0	Electric Cooktops/Ovens/Ranges						
.1	Electric Cooktops/Ovens/Ranges (1)					=	8.0 KVA
					Total (6)	=	10.0 KVA
					Sub-Total (1.0 – 6.0):	=	153.8 KVA
	Application of Demand (Per NEC 220.31):						
	1st 10 kVA at 100% :					=	10.0 KVA
	Remainder of Load at 40% :					=	57.5 KVA
					Total (1.0 – 6.0):	=	67.5 KVA
7.0	HVAC System Equipment (Speculated)						
.1	Outdoor Unit:	3 @25A 230V-1PH				=	18.0 KVA
.2	Fan Coil Units:					=	3.0 KVA
.4	Exhaust Fans:					=	0.5 KVA
.5	Misc. Mech/Plmbg Units:					=	5.0 KVA
.6	Plus 25% Of Largest Rated Motor					=	1.5 KVA
					Total (7)	=	28.0 KVA
					Grand-Total (1.0 – 7.0):	=	95.5 KVA
					÷ 240V:	=	397.9 AMPS
	Estimated	600A – 240V – 1Ø – 3W Service					
					÷ (√3)208V:	=	265.3 AMPS
	Estimated	400A – 208V – 3Ø – 4W Service					

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION FIRE & POLICE BUILDINGS

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

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ELECTRICAL LOAD CALCULATION (NEC 220.84)
Salas O'Brien Project No. 2023-03392 --- Date Prepared: 2023-08-14
Solomon Hills Amenity Bldg
Utility Service Section - Active Living Amenity

1.0 Club House	**3,000 Sq.ft.**		
Lighting @ 3.5 VA/sq.ft. x 125%		=	13.1 kVA
General Purpose Power @ 1 VA/sq.ft.		=	3.0 kVA
Special Purpose Power @ 4 VA/sq.ft.		=	12.0 kVA
HVAC Speculated @ 8 VA/sq.ft.		=	24.0 kVA
	Total Connected Load	=	**52.1 kVA**
2.0 Fitness	**1,000 Sq.ft.**		
Lighting @ 3.5 VA/sq.ft. x 125%		=	4.4 kVA
General Purpose Power @ 1 VA/sq.ft.		=	1.0 kVA
Special Purpose Power @ 5 VA/sq.ft.		=	5.0 kVA
HVAC Speculated @ 10 VA/sq.ft.		=	10.0 kVA
	Total Connected Load	=	**20.4 kVA**
3.0 EV Charging Stations	**Estimated 20 Stalls**		
(1) EVC Stations @ 6.656 kVA @ 125%		=	8.3 kVA
(3) Future EVC Stations @ 6.656 kVA @ 125%		=	25.0 kVA
If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.			
	Total Connected Load	=	**33.3 kVA**
4.0 Courtyard (Estimated)	**10,000 Sq.ft.**		
Lighting @ 0.25 VA/sq.ft. x 125%		=	3.1 kVA
General Purpose Power @ 0.5 VA/sq.ft.		=	5.0 kVA
HVAC Speculated @ 0 VA/sq.ft.		=	0.0 kVA
Site Lighting Speculated @ 5 kVA (Lump Sum)		=	5.0 kVA
	Total Connected Load	=	**13.1 kVA**
5.0 Mechanical Loads			
(1) Pool Equip. (Est) @ 36 kVA		=	36.0 kVA
	Total Connected Load	=	**36.0 kVA**
	Grand Total Connected Load	=	**154.9 kVA**
	Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**430 A**

Provide a 600A 208Y/120V, 3-PH, 4-W Residential Main

ELECTRICAL LOAD CALCULATION (NEC 220.84)
Salas O'Brien Project No. 2023-03392 --- Date Prepared: 2023-08-14
Solomon Hills Amenity Bldg
Utility Service Section - Amenity Building

1.0 Club House	**6,500 Sq.ft.**		
Lighting @ 3.5 VA/sq.ft. x 125%		=	28.4 kVA
General Purpose Power @ 1 VA/sq.ft.		=	6.5 kVA
Special Purpose Power @ 4 VA/sq.ft.		=	26.0 kVA
HVAC Speculated @ 8 VA/sq.ft.		=	52.0 kVA
	Total Connected Load	=	**112.9 kVA**
2.0 Fitness	**3,000 Sq.ft.**		
Lighting @ 3.5 VA/sq.ft. x 125%		=	13.1 kVA
General Purpose Power @ 1 VA/sq.ft.		=	3.0 kVA
Special Purpose Power @ 7 VA/sq.ft.		=	21.0 kVA
HVAC Speculated @ 12 VA/sq.ft.		=	36.0 kVA
	Total Connected Load	=	**73.1 kVA**
3.0 EV Charging Stations: Estimated (50) Stalls Total	**Estimated (50) Stalls**		
(3) EVC Stations @ 6.656 kVA @ 125%		=	25.0 kVA
(7) Future EVC Stations @ 6.656 kVA @ 125%		=	58.2 kVA
If Additional EV are to be added to the system that brings total EV load above the indicated MAX EV load, a networked load management system shall be provided.			
	Total Connected Load	=	**83.2 kVA**
4.0 Courtyard (Estimated)	**20,000 Sq.ft.**		
Lighting @ 0.25 VA/sq.ft. x 125%		=	6.3 kVA
General Purpose Power @ 0.5 VA/sq.ft.		=	10.0 kVA
HVAC Speculated @ 0 VA/sq.ft.		=	0.0 kVA
Site Lighting Speculated @ 10 kVA (Lump Sum)		=	10.0 kVA
	Total Connected Load	=	**26.3 kVA**
5.0 Mechanical Loads			
(0) Elevator @ 50 HP		=	0.0 kVA
(1) Pool Equip. (Est) @ 72 kVA		=	72.0 kVA
	Total Connected Load	=	**72.0 kVA**
	Grand Total Connected Load	=	**367.5 kVA**
	Grand Total Demand Load in Amps at 208Y/120V, 3-PH, 4-W	=	**1020 A**

Provide a 1200A 208Y/120V, 3-PH, 4-W Residential Main

Seal

Consultant

Salas O'Brien

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Project No.: #2023-03392

Client

SOLOMON HILLS
SANTA BARBARA COUNTY, CA

LOAD CALCULATION
AMENITY BUILDING

Prelimanary Design 08/04/2023
Project Number: 2023-03392
Plan Check Number: #

SHEET

E0.35

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