

File No. 131172

Committee Item No. 2

Board Item No. _____

COMMITTEE/BOARD OF SUPERVISORS

AGENDA PACKET CONTENTS LIST

Committee: Budget and Finance Committee

Date: 1/8/2014

Board of Supervisors Meeting

Date: _____

Cmte Board

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| <input type="checkbox"/> | <input type="checkbox"/> | Legislative Digest |
| <input type="checkbox"/> | <input type="checkbox"/> | Budget and Legislative Analyst Report |
| <input type="checkbox"/> | <input type="checkbox"/> | Legislative Analyst Report |
| <input type="checkbox"/> | <input type="checkbox"/> | Youth Commission Report |
| <input type="checkbox"/> | <input type="checkbox"/> | Introduction Form |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Department/Agency Cover Letter and/or Report |
| <input type="checkbox"/> | <input type="checkbox"/> | MOU |
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| <input type="checkbox"/> | <input type="checkbox"/> | Form 126 – Ethics Commission |
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Completed by: Victor Young

Date January 3, 2014

Completed by: _____

Date _____

1 [Interconnection Agreement - Pacific Gas and Electric Company - Solar Power Project - 201
2 Van Ness Avenue]

3 **Resolution authorizing the Public Utilities Commission's General Manager to enter into**
4 **a long term interconnection agreement with Pacific Gas and Electric Company, to**
5 **commence following Board approval, for a Solar Power Project at Davies Symphony**
6 **Hall, 201 Van Ness Avenue, pursuant to Charter, Section 9.118(b).**

7
8 WHEREAS, The San Francisco Public Utilities Commission (PUC) is responsible for
9 development of renewable energy generating facilities for the City and County of San
10 Francisco (San Francisco); and

11 WHEREAS, In October 2013, the PUC, and the San Francisco Department of Public
12 Works Bureau of Building Repair (DPW/BBR) entered into a letter agreement formalizing
13 terms for DPW/BBR to act as general contractor for construction of a 182 kilowatt solar power
14 project at Davies Symphony Hall at 201 Van Ness Avenue, San Francisco (the Project); and

15 WHEREAS, Funding for the Project was included in the PUC's capital plan for small
16 renewable energy projects; and

17 WHEREAS, The DPW has nearly completed the construction and installation of the
18 Project, and the PUC expects that the Project may begin generating electricity in December
19 2013, upon execution of an interconnection agreement with Pacific Gas and Electric Company
20 (PG&E); and

21 WHEREAS, In a determination dated May 2009, the San Francisco Planning
22 Department found that the Project was categorically exempt from environmental review under
23 the California Environmental Quality Act; and

24 WHEREAS, The PUC must enter into a Generating Facility Interconnection Agreement
25 (Agreement) with PG&E to interconnect the Project to the electrical grid; and

1 WHEREAS, In Resolution Nos. 554-07, 441-11, 374-12, and 371-13, the Board of
2 Supervisors approved similar interconnection agreements for other San Francisco on-site
3 solar photovoltaic systems, and

4 WHEREAS, The term of the Agreement is of an indefinite duration in order to ensure
5 that the Project can remain interconnected to PG&E's electrical system for its useful life,
6 which is expected to exceed ten (10) years; and

7 WHEREAS, The Agreement is subject to termination by San Francisco for any reason
8 upon sixty (60) days notice; and

9 WHEREAS, The City Attorney has approved the limitation of liability language set forth
10 in section 7 of the Agreement; and

11 WHEREAS, San Francisco's Risk Manager has approved the insurance language set
12 forth in section 8 of the Agreement and has provided to PG&E a letter certifying that San
13 Francisco is self-insured and describing the terms of the City's self insurance program; and

14 WHEREAS, The terms and conditions of the Agreement do not require the payment of
15 any fees or costs by San Francisco to PG&E; and

16 WHEREAS, A copy of the Agreement is on file with the Clerk of the Board of
17 Supervisors in File No. 131172, which is hereby declared to be a part of this Resolution as if
18 set forth fully herein; now, therefore, be it

19 RESOLVED, That the Board of Supervisors authorizes the San Francisco Public
20 Utilities Commission General Manager to enter into the Agreement with PG&E for
21 interconnection of the Project at the Davies Symphony Hall at 201 Van Ness Avenue,
22 San Francisco, pursuant to San Francisco Charter, Section 9.118(b); and, be it

23 FURTHER RESOLVED, That within thirty (30) days of the Agreement being fully
24 executed by all parties, the General Manager of the San Francisco Public Utilities
25

1 Commission shall provide the final Agreement to the Clerk of the Board for inclusion into the
2 official file.

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**San Francisco
Water Power Sewer**

Services of the San Francisco Public Utilities Commission

525 Golden Gate Avenue, 7th Floor
San Francisco, CA 94102
T 415.554.1537

LETTER OF AGREEMENT BETWEEN

**SAN FRANCISCO PUBLIC UTILITIES COMMISSION /
POWER ENTERPRISE
AND
THE DEPARTMENT OF PUBLIC WORKS /
BUREAU OF BUILDING REPAIR
FOR
DAVIES SYMPHONY HALL
182 kW SOLAR ELECTRIC PROJECT**

This LETTER OF AGREEMENT (LOA) between the SAN FRANCISCO PUBLIC UTILITIES COMMISSION'S POWER ENTERPRISE (POWER), and the DEPARTMENT OF PUBLIC WORKS BUREAU OF BUILDING REPAIR (DPW/BBR), formalizes the roles and responsibilities, project scopes, costs, and other terms associated with the CONSTRUCTION SERVICES to be provided by DPW/BBR to POWER for the above named project.

The purpose of this LOA is for POWER to secure project management, construction, and procurement services from DPW/BBR to support the construction phase of the project as is further defined below, for the 182kW solar electric project to be located at Davies Symphony Hall (DSH). DPW/BBR shall become the construction entity on behalf of the project owner, POWER.

RECITALS

The "Davies Symphony Hall Solar Electric Project" is a clean distributed generation resource to be developed on DSH's property; promoting sustainability and good stewardship of our resources. This project will put to good use the available roof space at DSH to generate cost effective renewable energy in accordance with the Mayor's Executive Directive 05-107 (Roof Tops for Municipal Solar), dated October 26, 2005.

The resulting renewable greenhouse gas-free electric energy will serve the City's municipal loads as served by POWER.

And whereas,

1. POWER oversees energy policy and energy trading and strives to increase the City's Renewables Portfolio Standard (RPS) qualifying energy generation; and, as such, typically funds, develops, and owns renewable generation projects, and;
2. POWER has, at the date of execution of this LOA, sufficient funding in place to cover project development, design engineering, and construction.
3. Whereas the essence of the agreement between DPW/BBR and POWER is:
 - a. POWER will fully fund the solar electric plant.

Edwin M. Lee
Mayor

Art Torres
President

Vince Courtney
Vice President

Ann Moller Caen
Commissioner

Francesca Vietor
Commissioner

Anson Moran
Commissioner

Harian L. Kelly, Jr.
General Manager



- b. POWER will plan, design, permit, and provide project engineering support for the project.
- c. DPW/BBR will perform all aspects of the construction of the project.
- d. POWER shall retain ownership of the project, and the energy benefits, i.e. capacity, energy, and renewable energy certificates, per the Memorandum of Understanding (MOU) between the San Francisco Public Utilities Commission (SFPUC) and San Francisco War Memorial and Performing Arts Center (SFWMPAC).

ROLES AND RESPONSIBILITIES OF PARTIES

Roles and responsibilities of the parties shall be in accordance with the Project Scope of Services (see **Attachment A -- Scope of Services, October 18, 2013**). Attachment A spells out the detailed plan for the project.

More generally,

- SFPUC shall be considered the Project Owner, and POWER the Project Manager, and shall perform design engineering, permitting, and project engineering support.
- DSH shall be considered the Host with its primary focus on design and construction activity approval.
- DPW/BBR shall be considered the General Contractor for construction, with assistance from POWER in providing project engineering and technical support.

SCOPES OF WORK AND BUDGETS

The Cost for DPW/BBR construction services to be provided herein shall not exceed \$213,431.94. Funds will be transferred from the SEA Civic Center Solar Project (CUH988 03). The services are explained, estimated, and itemized per **DPW/BBR Service Order – 431418 (Attachment B)** and are based on the Scope of Services document, Attachment A. Any change orders to the cost proposal, as submitted by DPW/BBR, shall be reviewed and approved by POWER prior to any work being performed. DPW/BBR shall submit its Change Order Request with the scope of services described, cost estimate, and reason for change or deviation from the original scope of work.

POWER may also submit a Change Order Request to DPW/BBR for work requested by POWER which is a change from the base scope of work. DPW/BBR will submit its proposal for this requested change with cost, schedule, and other information to POWER for approval prior to proceeding with the work.

PROJECT SCHEDULE

The project schedule is provided in **Attachment C, Davies Symphony Hall Forecasted Schedule**. Construction activities will occur starting Friday, October 18, 2013 and be complete by Friday, November 15, 2013. It will be incumbent upon the parties to work diligently toward this goal, yet necessary adjustments from unforeseen or uncontrolled influences may extend the schedule. DSH has schedule and noise constraints since the Symphony Hall is in its Fall Season. Any disruption/cancellation of rehearsals or performances as a result of DPW/BBR's performance of the work will result in the following liquidated damages:

LIQUIDATED DAMAGES

DPW/BBR acknowledges that during performance of the Work under this LOA, regularly scheduled rehearsals and performances will continue at Davies Symphony Hall. As set forth in

the MOU between SFPUC and SFWMPAC, DPW/BBR must coordinate its Work to avoid the disruption, delay, and cancellation of such rehearsals and performances.

It is understood and agreed by and between DPW/BBR and POWER that in accordance with the MOU between SFPUC and SFWMPAC the SFWMPAC will suffer financial loss if rehearsals or performances are cancelled resulting from, arising out of, or connected with DPW/BBR's performance of the Work. Accordingly, DPW/BBR agrees that as liquidated damages (but not as a penalty), DPW/BBR shall pay SFWMPAC the following amounts:

1. *For each rehearsal at Davies Symphony Hall cancelled resulting from, arising out of, or connected with DPW/BBR's performance of the Work — \$20,000*
2. *For each performance at Davies Symphony Hall cancelled resulting from, arising out of, or connected with DPW/BBR's performance of the Work — \$100,000*

The total amount of SFWMPAC Liquidated Damages payable under this LOA shall not exceed \$500,000.

TERM

This LOA shall become effective on the date of execution by all parties. However, due to unforeseen circumstances, DPW/BBR has begun work prior to an execution date. Termination of this LOA shall be upon the completion of the solar electric plant and project acceptance by POWER as defined in the Scopes of Services, Attachment A.

MISCELLANEOUS

A. Communication: The parties shall communicate at all times to support the work effectiveness of the project team. A POWER and DPW/BBR organization chart and a list of all staff / project team personnel with roles and contact information shall be developed at the start of the work and updated as necessary.

Routine progress reports shall be shared and project and progress meetings held.

B. Documentation Control: DPW/BBR shall follow typical POWER documentation control procedures and requirements in the execution of this work. Details will be worked out between the parties at the beginning of the project.

C. Payment: SFPUC will establish an interdepartmental reallocation for the project based on the following payment schedule:

- a. Project Initiation (Executed LOA) 40% Contract Labor Value and 100% Materials and Equipment Rental Value
- b. Payment #2 – 20% Contract Value
- c. Payment #3 – 20% Contract Value
- d. Payment #4 – 20% Contract Value

Changes in cost shall be approved prior to any work being performed. DPW/BBR shall provide bi-weekly project reports covering labor hours expended to date, tasks accomplished, costs expended, and updated schedule. DPW/BBR shall charge to that account as needed. However, should the project work stop or be canceled by POWER, POWER may request

DPW/BBR to itemize and calculate actual work completed, and reimburse POWER the unspent balance whether or not remaining in the project reallocation index fund.

D. Notices: All notices and principal communications shall be directed to the following:

SFPUC – Power Enterprise:
Jamie Seidel, Project Manager
SFPUC – Power Enterprise
525 Golden Gate Avenue, 7th Floor
San Francisco, CA 94103

DPW/BBR:


Sue Black, Superintendent
DPW/BBR
2323 Cesar Chavez Street
San Francisco, CA 94124

RECOMMENDED BY:



Sue Black
Superintendent
San Francisco Department of Public Works
Bureau of Building Repair

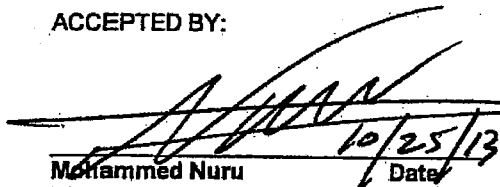
10/29/13
Date



Barbara Hale
Assistant General Manager
San Francisco Public Utilities Commission
Power Enterprise


10/28/13
Date

ACCEPTED BY:



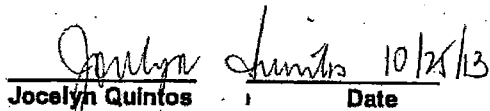
Mohammed Nuru
Director
San Francisco Department of Public Works

10/25/13
Date




Harlan L. Kelly, Jr.
General Manager
San Francisco Public Utilities Commission

10/31/13
Date



Jocelyn Quintos
Acting Deputy Director
San Francisco Department of Public Works

10/25/13
Date



Todd Rydstrom
Chief Finance Officer
San Francisco Public Utilities Commission

10-25-13
Date



**San Francisco
Water Power Sewer**
Services of the San Francisco Public Utilities Commission

**ATTACHMENT A
Davies Symphony Hall 182 kW Solar Electric Project
Scope of Services
October 18, 2013**

Attached Documents:

- Appendix A – Power Enterprise Solar Material
- Appendix B – Davies Symphony Hall – PV Project Design Drawings
– DBI Permit Set

1. SUMMARY OF PROJECT

The goal and intent of this Scope of Services is for the Department of Public Works – Bureau of Building Repair (DPW/BBR) to provide project management, procurement, construction, and commissioning services for the 182kW solar electric system (the “PV System”) to be installed at Davies Symphony Hall (DSH) located at 201 Van Ness Avenue – San Francisco, CA. DPW/BBR shall project manage, procure, construct, and commission such measurers in accordance with the design drawings and bill of materials provided by the San Francisco Public Utilities Commission – Power Enterprise – Renewables (Power).

This Scope of Services is the controlling document for all matters relating to the specific work and services to be provided by the DPW/BBR in accordance with the terms and conditions of the Letter of Agreement (LOA). DPW/BBR will perform this work and provide these services in a good and workmanlike manner, to the satisfaction of Power. The DPW/BBR shall furnish all labor, and any incidental materials and equipment not provided by Power in its design drawings and bill of materials. Costs and fees shall be included in the agreed upon Contract Sum for the Scope of Services delineated in this attachment and such work and services shall be provided within the Contract Time.

2. SCOPE OF WORK

The scope of work responsibilities will be shared between three parties: Power, DPW/BBR, and the Roofing Contractor.

Power will provide design engineering, procurement of solar materials (modules, inverter, racking, etc.), electrical materials, and project management. See specific details in Section 2.B.

The scope of work for the Roofing Contractor will include the roofing recover project, protective sheet installation, seismic stanchion attachment, and flashing. See specific details in Section 2.C.

DPW/BBR will be responsible for the items detailed below in Section 2.A

2.A – WORK AND SERVICES BY DPW/BBR

DPW/BBR shall furnish all labor, incidental materials not yet identified and not provided by Power, tools, transportation, and equipment not yet identified to perform work as listed herein, as shown on drawings and all work related to provide the specified structure, ready for inspection and acceptance by Power and other Authorities having jurisdiction. This includes but is not limited to, the following list of work items.

DPW/BBR must thoroughly read all notes on drawings and build accordingly.

DPW/BBR must coordinate and schedule work with all other trades on job site.

DPW/BBR will provide Power with a thorough and detailed list of activities, project progress meetings, and timeline as soon as possible.

Provide appropriate staging and lifting equipment, and qualified operating, rigging, and traffic control personnel to remove debris and excess materials at the end of construction activities. Power will pay for required crane service and will coordinate with DPW/BBR to determine schedule. DPW will issue the PO for the crane.

All wires installed and/or terminated by DPW/BBR shall be properly labeled.

All coring has been completed by others.

If roof is damaged in any way, DPW/BBR will notify Power.

DPW/BBR must red line any changes to construction drawings.

Complete all work required to layout and construct the solar racking system, including but not limited to:

- Coordinate with Roofing Contractor for stanchion/baseplate flashing
- Construct SunLink racking system per drawings and manufacturer instructions
- Power to arrange for adequate training of personnel by SunLink for proper installation of racking system
- Mount solar modules per drawings

Complete all work required for array wiring (solar modules to string inverters), including but not limited to:

- Install wire tray and conduit for homerun routes
- Make Multi-contact (MC) connections and assemble homerun wires

- Label homeruns in color sequence accordingly
- Array grounding per drawings
- Install safety signage

Complete all electrical work from string inverters to tie-in point (electrical room), including but not limited to:

- Install rooftop string inverters, disconnects, & load center per drawings
- Make wire terminations at string inverters
- Install conduit and wire from string inverters to tie-in point (electrical room)
- Perform tie-in to existing to DSH switchboard designated in drawings
- Install and wire inverters, disconnect switches, meter cabinet and socket as per drawings and test for proper operation
- Install safety signage

Arrange for and be on-site during electrical inspection of the system.

- Install equipment
- Install Weather Station

Startup system, including tests for open circuit voltage, amperage, temperature, meggering, phase rotation, and utility compatibility.

At such time as DPW/BBR determines that the project is completed, notification shall be given to Power for the scheduling of the final inspection and testing of the system.

Remove from the site all construction materials.

- Crane lift for material removal to be coordinated with Power
- DPW/BBR to unpackage "crates" containing individual panels, reducing damage as much as possible and remove from site for transport to Power designated location
- Power to arrange for transportation and pay for any associated costs of "crate" packaging

Conduct initial Operations and Maintenance training.

Clean site and prepare for turnover to Power.

Schedule a final inspection meeting.

Testing of the PV Solar System shall include the following:

- System testing of installed PV array shall be performed on all strings of modules, including open circuit voltage, DC amperage, and meggering. This data will then be recorded in the Operation and Maintenance manual (provided by Power) in a clear tabular format.
- Each voltage measurement will include the following ancillary data: the date, time of day, sample panel temperature, ambient temperature, and the solar irradiation at the time in coordination with Power staff.
- After inverter startup, current shall be recorded for each string, each sub-array, and the entire array. Each current measurement will also include the same ancillary data as taken above during voltage measurements.

2.B – WORK AND SERVICES BY POWER

- Construction drawings and engineering design
- Roofing Contractor through Job Order Contract
- PG&E Interconnection Agreement
- PG&E Shut Down and Coordination
- Technical Support
- Special Inspection
- Refer to Section 3 – Material Procurement for material to be supplied by Power
- Crane services for removing items from roof, DPW will issue the PO and schedule the crane lift, Power will reimburse DPW for costs.
- Transportation of packaging "crates"

2.C – WORK AND SERVICES BY JOC CONTRACTORS

- Roofing Recover
- Stanchion Attachment and Flashing

3. MATERIAL PROCUREMENT

All material required for the Work, except those materials specifically designated as furnished by Power or the Roofing Contractor, regardless of whether or not it is specifically mentioned herein or listed on the Drawings, shall be furnished by DPW/BBR. DPW/BBR will be reimbursed for any materials or equipment purchased for project. DPW/BBR will submit material and/or equipment needs for prior approval by Power before purchasing or acquiring same. DPW/BBR will not be responsible for materials and/or equipment already purchased and supplied by Power for this project should they not meet the project requirements.

Power-Supplied Materials:

Solar Modules/Racking
Solar Inverters
Additional Solar Material:
See Appendix A – Power Solar and Electrical Material
(Bid Sheet)

Roofing Contractor-Supplied Materials:

Flashing material for roof penetrations

Roof Recover material

DPW/BBR-Supplied Materials:

DPW/BBR-Supplied Material – As Needed: all orders to be approved by SFPUC – Power Enterprise prior to orders being placed.

DPW/BBR shall review packing slips for all Power supplied materials loaded on to roof by others to determine any non-conforming or missing items as soon as possible. Upon review of Power supplied packing slips and conducting an inventory of materials and equipment, DPW/BBR will accept materials and diligently work with Power to resolve any field discrepancies to move the project forward and meet the construction schedule. DPW/BBR shall be responsible for all such material and equipment once accepted by DPW/BBR and DPW taking control of the job site beginning Monday, October 21, 2013. DPW/BBR shall take all necessary precautions to ensure its safe handling, storage and installation at the Site.

DPW/BBR shall be responsible for coordinating all shipments of DPW/BBR-supplied equipment and materials.

DPW/BBR shall take delivery of Power-supplied materials and equipment and Roofing Contractor-supplied materials, as well as its own materials. Materials and equipment shall be inspected and signed for, with any damage listed and reported without undue delay after October 21, 2013..

DPW/BBR shall provide all required general tools and materials for its work. Power will reimburse DPW/BBR for any materials not previously provided by Power at cost and with Power's prior approval before purchase.

4. QUALITY OF WORK

DPW/BBR shall furnish and perform the work to the highest quality standard. All work shall conform to the detailed requirements specified herein. Where specific instructions are not given, the work shall be performed to the best practices known to the trade. All Work shall be done by skilled and experienced workers for the appropriate trade, and shall be of the highest possible caliber throughout. DPW/BBR shall adhere to equipment manufacturer's instructions and recommendations.

5. SYSTEM INSPECTION AND TESTING

Scope of Services – DPW/BBR – DSH Solar Electric Project 10/28/2013

Power will inspect the work regularly.

At various stages of completion, DPW/BBR shall ask Power to inspect and review the work. Additionally, Power may wish to inspect the work at any time during construction. DPW/BBR shall allow reasonable time for Power to perform work inspections.

DPW/BBR shall work in coordination with the Authority having jurisdiction (Department of Building Inspection -- DBI) to obtain final approvals.

Any work found to be not satisfactory to the inspector, and within the responsibility of DPW/BBR unless performed in accordance to the project requirements and drawings, shall be redone at DPW/BBR's sole expense.

6. PROTECTION OF EXISTING FACILITY, EQUIPMENT, AND PERSONNEL

The work is to be performed at Davies Symphony Hall, and DPW/BBR shall exercise extreme caution at all times to avoid damage to existing facilities and landscaping or to jeopardize their safety or continuity of operation

Power reserves the right to require DPW/BBR to modify or eliminate any construction techniques or methods, which may endanger personnel or adversely affect any existing infrastructure and or equipment.

7. CLEAN UP

During the Work, DPW/BBR shall be responsible, on a daily basis, for the sanitary and physical cleanliness of the area affected by its work. All debris, tools, hoses, ladders, and unused construction materials shall be gathered up by the end of each shift and/or stored in proper areas or receptacles. DPW/BBR's work areas should be kept continuously clean and orderly to prevent accidents or unwarranted use of material, tools, etc. that are for use in the Work. Upon completion of the Work, DPW/BBR's area shall be cleared of all equipment, surplus material, and debris. The Roofing Contractor is responsible for clearing all of its equipment, surplus materials, and debris. Such material shall be disposed of in a manner acceptable to Power and SFWMPAC. DPW/BBR's work shall be subject to stoppage by Power if DPW/BBR does not correct any of its "housekeeping" deficiencies or violations to the satisfaction of Power within 24 hours of receipt from Power of a non-conformance report identifying such deficiencies or violations.

8. INFORMATION REQUIRED AFTER COMPLETION OF WORK

Following completion of the work, DPW/BBR shall provide red line notes and field changes from the original drawings.

These noted changes shall include, but not be limited to, changes in location, changes in elevation, changes in size, changes in adjustments or settings, changes in equipment, and changes in materials

DRAWINGS

The engineering and construction drawings (here in referred to as the drawings – Appendix B of Attachment A) are incorporated into and made part of this Scope of Services by this reference.

Where there are any apparent conflicts between the drawings, this Scope of Services, specifications and latest applicable codes, standards and specifications, provisions specifically set forth in the contract shall generally govern. However, DPW/BBR shall bring the matter to the attention of Power for resolution.

TECHNICAL SPECIFICATIONS

9. REFERENCE STANDARD

This PV System project shall be designed and constructed in accordance with the applicable codes including but not limited to the following list of codes and standards. The codes and standards utilized shall be the latest editions in effect on the date of this proposal.

A.	American Concrete Institute	ACI
B.	American Institute of Steel Construction	AISC
C.	American National Standards Institute	ANSI
D.	American Society for Testing Materials	ASTM
E.	American Society of Mechanical Engineers	ASME
F.	American Welding Society	AWS
G.	Division of State Architect	DSA
H.	Institute of Electrical & Electronic Engineers IEEE	
I.	Instrument Society of America	ISA
J.	National Electric Code	NEC
K.	Occupation Safety and Health Administration	OSHA
L.	National Fire Protection Agency	NFPA
M.	Uniform Building Code	UBC
N.	City and County of San Francisco Administrative Code	
O.	City and County of San Francisco Building Code	
P.	City and County of San Francisco Plumbing Code	
Q.	City and County of San Francisco Electrical Code	
R.	City and County of San Francisco Mechanical Code	
S.	California Building Code	
T.	Concrete Reinforcing Steel Institute	CRSI
U.	PG&E Power Producers Handbook Requirements	

10. SYSTEM SPECIFICATION

Circuit Disconnects Switches and Enclosures:

- Enclosures shall be surface mounted type, unless otherwise noted, and of NEMA type 4X stainless steel, waterproof.

- Disconnect switches shall be heavy duty, AC or DC-rated as required and with appropriate ampere ratings. They shall be UL listed and of NEMA type 4X stainless steel, waterproof, meet proper AIC requirements, and be "load-break" capable.
- Disconnects and enclosures must be properly supported and braced to Seismic Zone 4 requirements, where required.
- All mounting hardware (strut), fasteners, and miscellaneous parts shall be high grade stainless steel. Roof-mounted conduit supports to be UV resistant and use recycled rubber.
- When used for disconnecting, disconnects for branch circuit protection shall be located as near as practical to the supply end of the conductors being protected.
- Power will provide the meter cabinet specification.

Fuses:

- All fuses for disconnects must be current limiting UL Ccs J, RK1, or RK5 and of the appropriate voltage, delay or non-delay characteristic, and current rating to provide both complete short circuit and overload protection per NEC sections regarding component protection.
- Fuses in the combiner boxes protecting PV string branch circuits must be UL Class CC midget-type, be in "touch safe" type fuse holders, providing load break disconnect capabilities when changing fuses. Midget fuses and fuse holders used in these circuits must be fully DC-rated, have adequate DC short circuit withstand capability, and must be provided for all power situations including "back-fed" conditions.
- All fuses and other protective devices and holders must be engineered to safely protect system components under "worst case" expected field conditions including temperature extremes. Appropriate temperature derate factors must be used.
- PV panel strings must be individually protected from short circuit conditions that may originate within the panels themselves.

Wiring and Connectors:

- Wire shall be copper and sizes referred to on the drawings refer to copper wire sizes.
- For conductors 600V or less, the minimum size shall be #12AWG.
- Insulation types are as follows:
 - Use "PV-WIRE", #12 or appropriate size for DC exposed locations for wiring of modules to combiner boxes.

- #12 to #1AWG: THWN or XHHW for wet or underground locations and THHN or XHHW for dry locations.
 - #1/0 through #4/0AWG: XHHW, THHN, or THWN.
 - #250MCM and larger, XHHW, THHN, or THWN.
 - When installed in underground conduits, use THWN or THWN-2.
- For signal and communications circuits, use wires and cables as shown in manufacturer's specifications.
 - Install copper wires, cables, and connection devices in accordance with the manufacturer's instructions and CEC-2001, Part 3. Do not bend cables to a smaller radius than is recommended by the manufacturer.
 - Quick connect, multi-contact connectors will be used where appropriate and all DC wiring including PV strings in the combiner boxes shall be clearly labeled.
 - Voltage drop must be limited to 2% on main AC circuit and 2% on DC circuits.

Raceways:

- Outdoor conduit shall be RGC
- Indoor conduit shall be EMT

Connections to Existing Circuit Breakers:

- Circuit breakers of the appropriate phase and voltage with the required AIC rating (rms symmetrical amperage short circuit rating) shall be utilized and this breaker rating along with the available short circuit available at the breaker bus bar shall be noted on the one line diagram.

Grounding:

- Provide driven ground rod and provide green equipment ground conductors sized in accordance with NEC on main AC power circuit and DC collector circuits. Ground rods shall be copper-clad steel ¾-inch x 10 feet unless otherwise indicated on one-line diagram.
- In the case of roof-mounted inverters, the proper size ground wire shall be used to connect to the ground system per NEC and manufacturer guidelines.
- Appropriate tie in and grounding of the entire PV system, including roof-mounted components, shall be per NEC-250 requirements.

Operational Identification and Warnings:

- Install engraved signs for instruction or warning identifying that a solar PV system is operational on the premises at appropriate locations and that there are potentially multiple power sources on the premises.
- Provide identification of all DC power circuits on switches and clearly identify individual module strings in DC combiner boxes. Use appropriate wire color codes (i.e. Red & Black) for negative and positive circuits.
- PV panels must include serial numbers on the frame and be easily viewed from the topside of the panel.
- Install any additional signage as required by code or PG&E.

Signage:

- Install signage as required by the PG&E Interconnection Application such as, but not limited to the following:
 - If the AC Disconnect Switch location is not near Point of Common Coupling, permanent signage must be installed providing a clear description of the location of the device. Switchgear must be accessible.
 - The location of the AC Disconnect Switch is acceptable as long as it is accessible 24/7. If the revenue meter is inside a locked room, install one sign on the pad mount transformer and one sign on the door to the electrical room identifying the presence of a generator and describing with a map the location of the AC Disconnect Switch.
 - The AC Disconnect Switch signs are as follows (Letter size, etc. should be ½-inch engraved on plastic sign with a red background):
 - At the AC Disconnect Switch: "**GENERATOR DISCONNECT SWITCH**"
 - On the electric room door and at the transformer: "**PV GENERATOR DISCONNECT SWITCH LOCATED**"
- The AC Disconnect Switch should only de-energize PV units. The AC Disconnect Switch should not be the "main breaker" and de-energize applicant's resident load. A single AC Disconnect Switch should isolate all the PV units.
- Install signage identified on the Commissioning Checklist, including but limited to the following signs and locations:
 - "Data Acquisition System (DAS)" sign posted on the outside of the enclosure.
 - "Meter – High Voltage Inside" sign posted.
- Signs shall be maintained in good condition for the duration of the Agreement. Signs shall be promptly cleaned of graffiti and other

defacements, cleaned semi-annually of dirt and grime, and replaced if damaged or stolen.

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APPENDIX A - POWER ENTERPRISE MATERIAL

LD TO ATTACHMENT A

ITSF14000079/CD
APPENDIX 1

201 Van Ness Avenue
183KW Solar Electric Project
BID SHEETS

Item #	Manufacturer	Part #	Qty.	Unit	Unit Price	Extended Price
<p>APPENDIX 1 - PV PANELIZED RACKING</p> <p>The following items are parts for the PV Panelized Racking as specified in Attachment B - V.A. Bidder must submit bid prices on all bid line items. Failure to enter a bid price on each bid line item will deem bidder's bid as non-responsive. If there is a discrepancy between the Bid Unit and the Extend Price, the Bid Unit Price shall prevail. For Bid Alternate please use Appendix 1.A</p>						
<p>PHOTOVOLTAIC RACKING COMPONENTS - SunLink Precision RMS Roof Mount Assembly 1700 (or Equivalent)</p>						
1.1	SunLink	630-000125	377	E.A.	\$5.67	\$2,117.91
1.2	SunLink	09-00002-01	772	E.A.	\$0.15	\$113.56
1.3	SunLink	09-00121-01	772	E.A.	\$0.22	\$171.84
1.4	SunLink	09-00126-01	388	E.A.	\$0.15	\$58.20
1.5	SunLink	09-00132-01	772	E.A.	\$0.29	\$223.88
1.6	SunLink	09-00133-01	772	E.A.	\$0.14	\$107.88
1.7	SunLink	63-0001-125	377	E.A.	\$0.02	\$7.54
1.8	SunLink	64-0001-001	752	E.A.	\$1.01	\$757.92
1.9	SunLink	64-0003-013	377	E.A.	\$1.76	\$663.72
1.10	SunLink	690-000006	5	E.A.	\$135.18	\$675.90
1.11	SunLink	690-000007	5	E.A.	\$125.18	\$625.90

APPENDIX 1 -- PV PANELIZED RACKING

The following items are parts for the PV Panelized Racking as specified in Attachment 8 -- V.A. Bidder must submit bid prices on all bid line items. Failure to enter a bid price on each bid line item will deem bidder's bid as non-responsive. If there is a discrepancy between the Bid Unit and the Extend Price, the Bid Unit Price shall prevail. For Bid Alternates please use Appendix 1.A

Item #	Manufacturer	Part #	Qty.	Unit	Unit Price	Extended Price
1	PHOTOVOLTALIC RACKING COMPONENTS -- SunLink Precision RMS Roof Mount Assembly 1700 (or Equivalent)					
1.12	SunLink	09-00001-01	2,296	E.A.	\$0.14	\$321.44
1.13	SunLink	09-00002-01	2,348	E.A.	\$0.15	\$352.20
1.14	SunLink	09-00004-01	87	E.A.	\$3.26	\$283.62
1.15	SunLink	09-00005-01	1,697	E.A.	\$0.11	\$186.67
1.16	SunLink	09-00008-01	87	E.A.	\$0.75	\$65.25
1.17	SunLink	09-00121-01	762	E.A.	\$0.22	\$167.64
1.18	SunLink	09-00127-01	1,697	E.A.	\$0.05	\$84.85
1.19	SunLink	09-00133-01	390	E.A.	\$0.14	\$54.60
1.20	SunLink	09-00139-01	1,201	E.A.	\$0.65	\$780.65
1.21	SunLink	09-00140-01	1,697	E.A.	\$0.37	\$628.41
1.22	SunLink	09-00145-01	10	E.A.	\$0.18	\$1.80

ITSF14000079/CD
APPENDIX 1

201 Van Ness Avenue
183kW Solar Electric Project
BID SHEETS

Item #	Manufacturer	Part #	Qty.	Unit	Unit Price	Extended Price
<p>APPENDIX 1 - PV PANELIZED RACKING</p> <p>The following items are parts for the PV Panelized Racking as specified in Attachment B - V.A. Bidder must submit bid prices on all bid line items. Failure to enter a bid price on each bid line item will deem bidder's bid as non-responsive. If there is a discrepancy between the Bid Unit and the Extend Price, the Bid Unit price shall prevail. For Bid Alternate please use Appendix 1.A</p>						
<p>PHOTOVOLTAIC RACKING COMPONENTS -- SunLink Precision RMS Roof Mount Assembly 1700 (or Equivalent)</p>						
1	SunLink	09-00146-01	2,296	E.A.	\$0.11	\$252.56
1.23	SunLink	61-0001-059	74	E.A.	\$2.86	\$211.64
1.24	SunLink	61-0001-183	200	E.A.	\$1.77	\$354.00
1.25	SunLink	61-0001-307	94	E.A.	\$7.07	\$664.62
1.26	SunLink	62-0001-001	429	E.A.	\$5.13	\$2,210.87
1.27	SunLink	62-0002-001	850	E.A.	\$1.00	\$850.00
1.28	SunLink	64-0002-001	377	E.A.	\$2.41	\$908.47
1.29	SunLink	64-0004-001	377	E.A.	\$2.04	\$769.08
1.30	SunLink					

201 Van Ness Avenue
183KW Solar Electric Project
BID SHEETS

ITSF1400079/CD
APPENDIX I

APPENDIX 1 - PV PANELIZED RACKING		The following items are parts for the PV Panelized Racking as specified in Attachment B - V.A. Bidder must submit bid prices on all bid line items. Failure to enter a bid price on each bid line item will deem bidder's bid as non-responsive. If there is a discrepancy between the Bid Unit and the Extend Price, the Bid Unit Price shall prevail. For Bid Alternate please use Appendix 1A.					
Item #	Manufacturer	Part #	Qty.	Unit	Unit Price	Extended Price	
1	PHOTOVOLTAIC RACKING COMPONENTS - SunLink Precision RMS Roof Mount Assembly 1700 (or Equivalent)						
1.31	SunLink	64-0005-001	220	E.A.	\$5.11	\$1,104.20	
1.32	SunLink	66-0001-001	78	E.A.	\$20.06	\$1,564.68	
1.33	SunLink	66-0002-001	156	E.A.	\$6.79	\$1,059.24	
1.34	SunLink	66-0003-001	78	E.A.	\$12.56	\$980.88	
1.35	SunLink	66-0006-001	78	E.A.	\$18.38	\$1,433.24	
1.36	SunLink	67-0003-001	139	E.A.	\$17.70	\$2,460.30	
1.37	SunLink	67-0004-001	278	E.A.	\$11.72	\$3,258.16	
1.38	SunLink	67-0006-001	556	E.A.	\$1.11	\$615.24	
1.39	SunLink	68-0001-001	1,989	E.A.	\$0.17	\$338.13	
1.40	SunLink	68-0003-001	2,319	E.A.	\$0.60	\$1,391.40	
1.41	SunLink	69-0007-001	8	E.A.	\$19.08	\$152.64	

201 Van Ness Avenue
183kW Solar Electric Project
BID SHEETS

Item #	Manufacturer	Part #	Qty.	Unit	Unit Price	Extended Price
<p>APPENDIX 1 - PV PANELIZED RACKING</p> <p>The following items are parts for the PV Panelized Racking as specified in Attachment B - V.A. Bidder must submit bid prices on all bid line items. Failure to enter a bid price on each bid line item will deem bidder's bid as non-responsive. If there is a discrepancy between the Bid Unit and the Extend Price, the Bid Unit Price shall prevail. For Bid Alternate please use Appendix LA</p>						
<p>PHOTOVOLTAIC RACKING COMPONENTS -- SunLink Precision RMS Roof Mount Assembly 1700 (or Equivalent)</p>						
1.42	SunLink	PANELIZATION	1	E.A.	\$10,565.50	\$10,565.50
1.43	SunLink	030-1001	36	E.A.	\$67.35	\$2,424.60
1.44	SunLink	030-2003	30	E.A.	\$1.71	\$51.30
1.45	SunLink	030-1003	36	E.A.	\$4.13	\$148.68
1.46	SunLink	030-2101	99	E.A.	\$3.76	\$372.84
<p>PV PANELIZED RACKING EXTENDED TOTAL</p>						
<p>NOTE: Total extended price from Appendix 1 must be shown on Bid Line 001</p>						

201 Van Ness Avenue
183KV Solar Electric Project
BID SHEETS

ITSF1400079/CD
APPENDIX 2

APPENDIX 2 -- PV STRING INVERTERS									
The following items are parts for six string inverters as specified in Attachment B - V.B. Bidder must submit bid prices on all bid line items. Failure to enter a bid price on each bid line item will deem bidder's bid as non-responsive. If there is a discrepancy between the Bid Unit and the Extend Price, the Bid Unit Price shall prevail. For Bid Alternate please use Appendix 2.A									
Bid Line #	Manufacturer	Part #	Qty.	Unit	Unit Price	Extended Price			
2	PHOTOVOLTAIC STRING INVERTERS								
2.1	Power-One	TRIO-27.6-TL-OUTD-SI-US-480	6	EA.	\$16,126.00	\$96,756.00			
	27.6kW, 480VAC, 60Hz, 1000VDC, with DC Disconnect Switch, DC Input Fuses (Two Dual 4x15A fused inputs), 2 MPPT, 15 year warranty, ungrounded, RS485, NEMA 4X Enclosure								
2.2	Power-One	TRIO-LIFTING-KIT	1	EA.	\$3,000.00	\$3,000.00			
	Power-One . Kit for handling TRIO inverters during installation Includes four handles for manual lifting and two eyebolts for lifting with winch/crane.								
						PV STRING INVERTER EXTENDED TOTAL	\$100,756.00		
NOTE: Total extended price from Appendix 2 must be shown on Bid Line 002									

APPENDIX 3 -- ELECTRICAL COMPONENTS		PHOTOVOLTAIC - ELECTRICAL COMPONENTS		Manufacturer	Part #	Qty.	Unit	Unit Price	Extended Price
<p>The following items are parts for six string inverters as specified in Attachment B - V.C. Bidder must submit bid prices on all bid line items. Failure to enter a bid price on each bid line item will deem bidder's bid as non-responsive. If there is a discrepancy between the Bid Unit and the Extend Price, the Bid Unit Price shall prevail. For Bid Alternate please use Appendix 3.A</p>									
Bid Line #									
3									
3.1	Square D Panel Board (for AC tie-in of the six (6) TRIO inverters)	Square D	NF430L2C with MH3RVJPFSSUL INF	1	EA.	\$1,741.00		\$1,741.00	
3.2	Panel Board with 250A bus, 480/277V 3 phase, 3 wire, MLO (Main Lugs Only), with NEMA 4X (Stainless Steel) Enclosure Square D Panel Board Circuit Breaker (one for each inverter to allow individual AC isolation; breakers to be installed in Square D Panel board included in parts list) 50A 3P 480V Bi-directional circuit breaker, with 65kA interrupt rating, with Copper lugs	Square D	EJB34050LC	6	EA.	\$239.00		\$1,554.00	
3.3	Square D AC Disconnect (Visible AC disconnect required for PV system by PG&E) 400 amp AC disconnect, non-fusible, heavy duty, rated 600V AC/DC; Enclosure Finish: NEMA 4X Stainless Steel	Square D	HU365DS	1	EA.	\$2,716.00		\$2,716.00	
ELECTRICAL COMPONENT EXTENDED TOTAL									\$6,011.00

201 Van Ness Avenue
183kW Solar Electric Project
BID SHEETS

ITSF1400079/CD
APPENDIX 3

NOTE: Total extended price from Appendix 3 must be shown on Bid Line 003

CITY AND COUNTY OF SAN FRANCISCO
SFPUC RENEWABLES, POWER ENTERPRISE
Davies Symphony Hall - 201 Van Ness Avenue
Photovoltaic Project - Parts List
FDR DSG - Utility Services Group

Item #	Item	Description	Manufacturer	Model# / Item#	Est. Qty.	Add Spares	Final Qty.	Unit	Unit Price	Extended Price
1	BALLAST BLOCKS/INVERTERS RELATED Ballast Blocks / Inverters - Required for placement in SunLink ballast holders to secure PV racking Minimum Panel Size (height): 12" x 12" x 2.38" - Required Min. Ballast Power Weight (lbs): 26		USG to select	USG to select	1647	13	1,660			
2	MC4 CONNECTORS RELATED MC4 connector with Box (Female) - connector for +ve PV lead MC4 connector with Box for 2.5 to 9 mm OD - for #12 PV Wires (1000 V), Female (+)		Multi-Connect	32.0016P001-1UR	175	25	200			
3	MC4 connector with Box (Male) - connector for -ve PV lead MC4 connector with Box for 2.5 to 9 mm OD - for #12 PV Wires (1000 V), Male (-)		Multi-Connect	32.0017P001-1UR	175	25	200			
4	GROUNDING RELATED: DC CONDUITS, CABLE TRAYS, AD CONDUITS, SUNLINK BACKING Ground bushing w/ DC and AC conduits		USG to select					EA.		
5	Grounding lug (to be installed on SunLink cable trays)		ULSCO	GRL-4DBT	36	4	40	EA.		
6	#10 Stainless Steel Screw, 3/4" length (also purchase 1/2" length - see note to the right)		USG to select		36	4	40	EA.		
7	Stainless Steel Star Washer (for use with #10 Stainless Steel screw)		USG to select		36	4	40	EA.		
8	#10 Stainless Steel Nut		USG to select		36	4	40	EA.		
9	Parts for grounding SunLink racking array (See SunLink Assembly Instructions for Precision RMS, Part V) 1/4-20 x 1.50" Stainless Steel Hex Head Cap Screw		Granger	3A154 (pkg qty = 100)	100		100	EA.		
10	18-8 Stainless Steel Flat Washer for 1/4" Screw (size: 0.15" - 0.08" thick)		Granger	6FDG4 (pkg qty = 100)	100		100	EA.		
11	18-8 Stainless Steel External Tooth Lock Washer 1/4" Screw Size, 0.51" OD, 0.02" - 0.03" thick		Granger	1EAD3 (pkg qty = 50)	50		50	EA.		
12	SunLink Extruded Washer		Provided by SunLink	Provided by SunLink						
13	1/4" Direct Bural Grounding Lug (in-plate Copper)		ULSCO	GRL-4DBT-14	6	4	10	EA.		
14	18-8 Stainless Steel Hex Nut 1/4-20, 7/16" width, 3/16" height		Granger	2WA30	100		100	EA.		
15	CONDUIT RELATED ITEMS: Galvanized Rigid Conduit 1 1/2" - for conduit run to route PV DC string bus from SunLink wire trays to inverters (exterior run on the roof) Galvanized Rigid Conduit 1" - for conduit run to route AC output from inverters to AC lay-in wire way; for 1" spare conduit for future SFPUC communications use (from inverters slightly to inside MCE; near MCE-E; Exterior run on roof)		USG to select					LF		
16	Galvanized Rigid Conduit 2" - for conduit run from AC lay-in wire way to AC Load Center LC-1		USG to select					LF		
17	Galvanized Rigid Conduit 3" - for conduit run from AC lay-in wire way to AC Load Center LC-1		USG to select					LF		
18	Galvanized Rigid Conduit 4"		USG to select					LF		

Notes/Comments:
based upon SunLink cable, Rev 4.

#12 PV Wire (1000V) had outside diameter = 6.05 mm; need the MCA female and male cable connectors to build longer jumper wires to tie PV modules in series per string diagram.

USG to select and estimate qty, based upon take-offs

for the 36 x 12 SunLink wire tray sections (will use fewer if SunLink confirms that the wire tray joints are UL rated to serve as grounding conductor)

Note: Consider purchasing 1/2" length screws too; prefer to use shorter screws, if it works to secure the grounding lug to the wire tray.

Note: Ground additional SunLink foot brackets to sync up with the SunLink wire tray grounding

Note: Part # in SunLink install manual under Part V Grounding Recommendations is incorrect - material is not U.S.

USG to estimate qty, based upon take-offs

USG to estimate qty, based upon take-offs

USG to estimate qty, based upon take-offs

USG to estimate qty, based upon take-offs

Dayes Symphony Hall - 201 Van Ness Avenue
Photovoltaic Project - Parts List
FOR USG - Utility Services Group

Attachment _____
FOR _____

Item #	Description	Manufacturer	Model# / Item#	Est. Qty.	Unit	Final Qty.	Unit Price	Extended Price	Notes/Comments
19	AC Disconnect and from AC Disconnect to MCC-E to room M02 (Extender not required)	Choper B-Line	Dura-Block - Item #100 by USG		EA				USG to estimate qty. based upon take-offs
20	Circuit Breaker - to secure available to conduct supports	USG to select			EA				USG to estimate qty. based upon take-offs
21	Electro metallic Tubing 3" - Inverter run for AC conductor from entry into M02 to MCC-E	USG to select			EA				USG to estimate qty. based upon take-offs
22	Electro metallic Tubing 1" - Inverter run from entry into M02 to MCC-E	USG to select			EA				USG to estimate qty. based upon take-offs
23	Electro metallic Tubing fittings - as required (Note: see comparison drawings)	USG to select			EA				USG to estimate qty. based upon take-offs
24	PULL BOX: to be wall-mounted inside Room M02 for routing AC output conduit (wires in 3" conduit) towards MCC-E for electrical tie-in	USG to select	USG to select	1	EA	1			USG to estimate qty. based upon take-offs
25	GROUNDING RELATED ITEMS: Ground Wire #6G: from array to inverters. for grounding steel link first brackets in cable trays; for grounding conductors to cable trays; for grounding conductors to inverter ground bus; from LC-1 to PORE Visible AC Disconnect; from AC Disconnect to MCC-E	USG to select							USG to estimate qty. based upon take-offs
26	Ground Wire #10G: from inverters to LC-1	USG to select							USG to estimate qty. based upon take-offs
27	Photovoltaic Copper Conductor Wire - for DC wiring frame runs, jumpers for connecting PV panels #12 AWG PV wire, rated for 1000 V	Enron Wire Corporation or equal							USG to estimate qty. based upon take-offs
28	AC wire, #8 - from inverters to LC-1	USG to select							USG to estimate qty. based upon take-offs
29	AC wire, 250KCMIL - from LC-1 to Meter Socket, PORE AC Disconnect and MCC-E (in room M02)	USG to select							USG to estimate qty. based upon take-offs
30	SCORING RELATED ITEMS: Includes materials as required for cutting and finishing (including available penetrations through exterior parapet wall into M02. See electrical drawing E7.1, detail 4	USG to select per drawing E7.1 Detail 4 requirements							USG to estimate qty. based upon take-offs
31	MCC-E PV AC TIE-IN RELATED ITEMS: 24" bucket for 250A breaker with door for Westinghouse 5 Star MCC	Enron	FSJ1821 with 24" bucket	1	EA	1			USG to estimate qty. based upon take-offs
32	250A molded-case circuit breaker, circuit breaker type JCH250, # of poles: 3, 480V, 65KALC. Note: Breaker to be factory-installed in the new 24" bucket (noted above) being ordered for the Westinghouse 5 Star MCC	Enron	JCH250 - 3 poles, 480V, 65KALC	1	EA	1			USG to estimate qty. based upon take-offs
33	AC WIREWAY RELATED ITEMS: 12" Straight Section	Hoffman	R44T3R12						USG to estimate qty. based upon take-offs
34	60" Straight Section	Hoffman	R44T3R60						USG to estimate qty. based upon take-offs
35	Universal U-Connector	Hoffman	R44T3RUC						USG to estimate qty. based upon take-offs
36	Chester Plate	Hoffman	R44T3RCP	2	EA	2			USG to estimate qty. based upon take-offs
37	30-Degree Sweep Elbow	Hoffman	R44T3R30SE						USG to estimate qty. based upon take-offs
38	METER RELATED ITEMS: Meter Socket - for installation of SFPUC revenue meter Mullbank, 310 amp, 7 terminal, lugless, 3 phase 4 wire	Mullbank	U2594-X	1	EA	1			USG to estimate qty. based upon take-offs

Contact Thomas Adams Jr., District Inside Sales Engineer, Eaton Corp. - Electrical Section, email: thomas.adams@eaton.com, tel: (925) 454-3720 to re-confirm and coordinate for ordering. Confirm breaker will be factory-installed in the new bucket.

USG to determine qty. based upon its plan to construct unit/rack (to mount) inverters, disconnect, AC panel and meter per suggested layout on sheet E7.1.
Note: might require this part if wire-way needs to follow curved parapet wall

Note: USG: Please confirm acceptability of specified meter socket for SFPUC metering requirements prior to ordering.

Attachment _____
 PO# _____

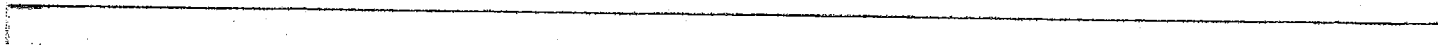
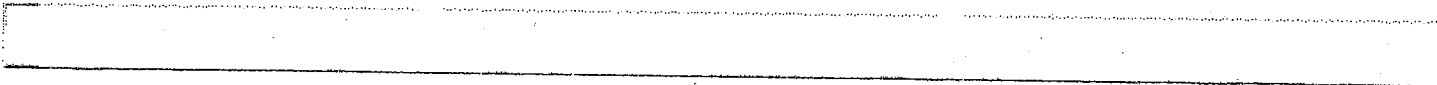
CITY AND COUNTY OF SAN FRANCISCO
 SEVIC RENEWABLES, LOWER ENTERPRISE

Davies Symphony Hall - 201 Van Ness Avenue
 Photovoltaic Project - Paris Ltd
 FOR USG - Utility Services Group

Item #	Description		Manufacturer	Model# / Item#	Est. Qty.	Add. Spares	Final Qty.	Unit	Unit Price	Extended Price	Notes/Comments
	Item	Description									
39	UNSTRUCT ITEMS: Unisat components to build support frame on curved parapet wall to mount inverters, AC load panel, inverter, AC disconnect and lay-in wire way; also support frame-rail complete and output conductors towards MW2		USG to select	USG to select							USG to determine optimal layout of unisat frame to support components. Use sheet E7.1 for suggested layout.
TOTAL:										\$1.00	


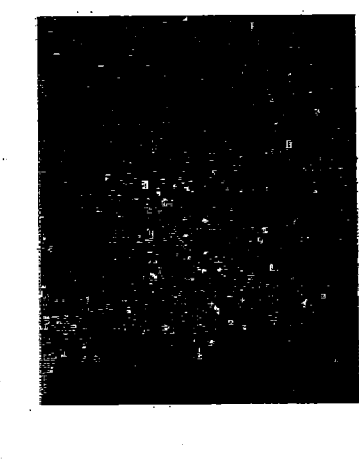
END OF ATTACHMENT

EA = EACH; LF = LINEAR FOOT




APPENDIX B - PV PROPOSAL DESIGN DRAWINGS
 ↳ TO ATTACHMENT A

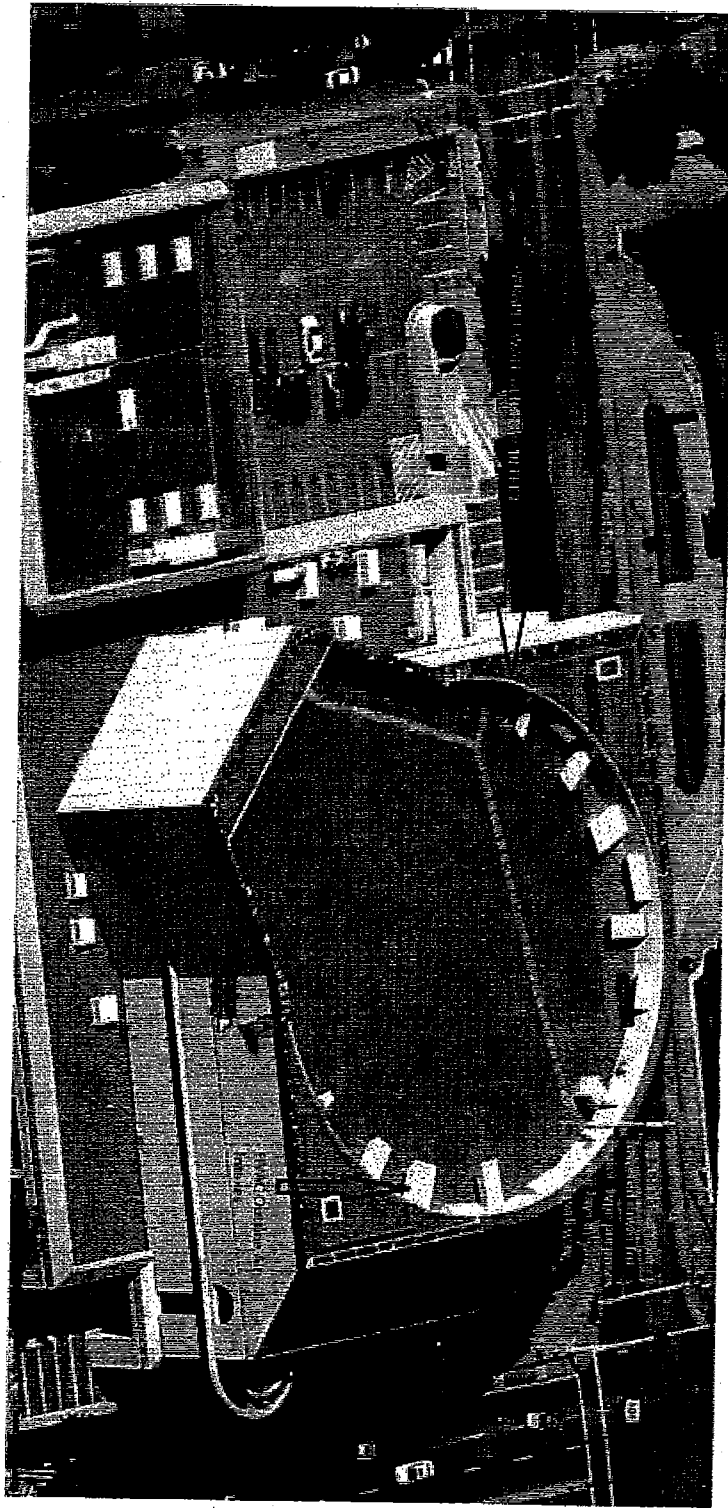
DAVIES SYMPHONY HALL PHOTOVOLTAIC (PV) PROJECT 201 VAN NESS AVENUE, SAN FRANCISCO, CA 94102

<p style="text-align: center;">LOCATION MAP</p> 	<p style="text-align: center;">SCOPE OF WORK</p> <p>DESIGNED BY: [REDACTED] ARCHITECTS (P) INC. 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 PROJECT NO: [REDACTED] DRAWING NO: [REDACTED]</p> <p>THIS DRAWING IS THE PROPERTY OF [REDACTED] ARCHITECTS (P) INC. AND IS NOT TO BE REPRODUCED, COPIED, OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF [REDACTED] ARCHITECTS (P) INC. ANY UNAUTHORIZED USE OF THIS DRAWING IS PROHIBITED AND WILL BE CONSIDERED A VIOLATION OF THE PROFESSIONAL ETHICS OF THE ARCHITECT. THE ARCHITECT ASSUMES NO LIABILITY FOR ANY DAMAGE, INCLUDING CONSEQUENTIAL DAMAGES, ARISING FROM THE USE OF THIS DRAWING. THE USER OF THIS DRAWING IS ADVISED THAT THE ARCHITECT HAS NOT CONDUCTED A VISUAL SURVEY OF THE SITE AND HAS NOT BEEN ADVISED OF ANY CHANGES TO THE SITE SINCE THE DATE OF THE ORIGINAL DESIGN. THE USER OF THIS DRAWING IS ADVISED THAT THE ARCHITECT HAS NOT CONDUCTED A VISUAL SURVEY OF THE SITE AND HAS NOT BEEN ADVISED OF ANY CHANGES TO THE SITE SINCE THE DATE OF THE ORIGINAL DESIGN.</p>	<p style="text-align: center;">DRAWING INDEX</p> <p>GENERAL 01.1 SITE PLAN 01.2 SITE PLAN 01.3 SITE PLAN</p> <p>PHOTOVOLTAIC 02.1 PHOTOVOLTAIC SYSTEM AND INSTALLATION 02.2 PHOTOVOLTAIC SYSTEM AND INSTALLATION 02.3 PHOTOVOLTAIC SYSTEM AND INSTALLATION</p> <p>ARCHITECTURAL 03.1 ARCHITECTURAL PLAN AND SECTION 03.2 ARCHITECTURAL PLAN AND SECTION 03.3 ARCHITECTURAL PLAN AND SECTION</p> <p>MECHANICAL 04.1 MECHANICAL SYSTEM AND INSTALLATION 04.2 MECHANICAL SYSTEM AND INSTALLATION 04.3 MECHANICAL SYSTEM AND INSTALLATION</p> <p>ELECTRICAL 05.1 ELECTRICAL SYSTEM AND INSTALLATION 05.2 ELECTRICAL SYSTEM AND INSTALLATION 05.3 ELECTRICAL SYSTEM AND INSTALLATION</p>	<p style="text-align: center;">APPLICABLE CODES AND STANDARDS</p> <ol style="list-style-type: none"> 1. 2015 CALIFORNIA BUILDING CODE (CBC) VOLUME 11 AND 12 PART 2, TITLE 24, CODE 2. 2015 CALIFORNIA ELECTRICAL CODE (CEC) PART 9, TITLE 24, CODE 3. 2015 CALIFORNIA MECHANICAL CODE (CMC) PART 9, TITLE 24, CODE 4. 2015 CALIFORNIA PLUMBING CODE (CPC) PART 9, TITLE 24, CODE 5. 2015 CALIFORNIA FIRE CODE (FC) PART 9, TITLE 24, CODE 6. 2015 CALIFORNIA ENERGY CODE (CEC) PART 9, TITLE 24, CODE 7. 2015 CALIFORNIA GREEN BUILDING CODE (CBC) PART 9, TITLE 24, CODE
<p style="text-align: center;">SITE MAP</p> 	<p style="text-align: center;">PROJECT TEAM</p> <p>ARCHITECT [REDACTED] ARCHITECTS (P) INC. 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p> <p>ENGINEER [REDACTED] ENGINEERS 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p> <p>MECHANICAL ENGINEER [REDACTED] MECHANICAL ENGINEERS 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p> <p>ELECTRICAL ENGINEER [REDACTED] ELECTRICAL ENGINEERS 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p>	<p style="text-align: center;">TITLE SHEET</p> <p style="text-align: center;">T0.1</p>	<p style="text-align: center;">PROJECT TEAM</p> <p>ARCHITECT [REDACTED] ARCHITECTS (P) INC. 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p> <p>ENGINEER [REDACTED] ENGINEERS 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p> <p>MECHANICAL ENGINEER [REDACTED] MECHANICAL ENGINEERS 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p> <p>ELECTRICAL ENGINEER [REDACTED] ELECTRICAL ENGINEERS 1000 CALIFORNIA STREET, SAN FRANCISCO, CA 94109 (415) 774-1100 WWW.[REDACTED].COM</p>

DAVIES SYMPHONY HALL
 PHOTOVOLTAIC (PV) PROJECT
 201 Van Ness Ave. San Francisco, CA 94102







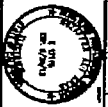
SITE PLAN
SCALE: 1/8" = 1'-0"



T0.2

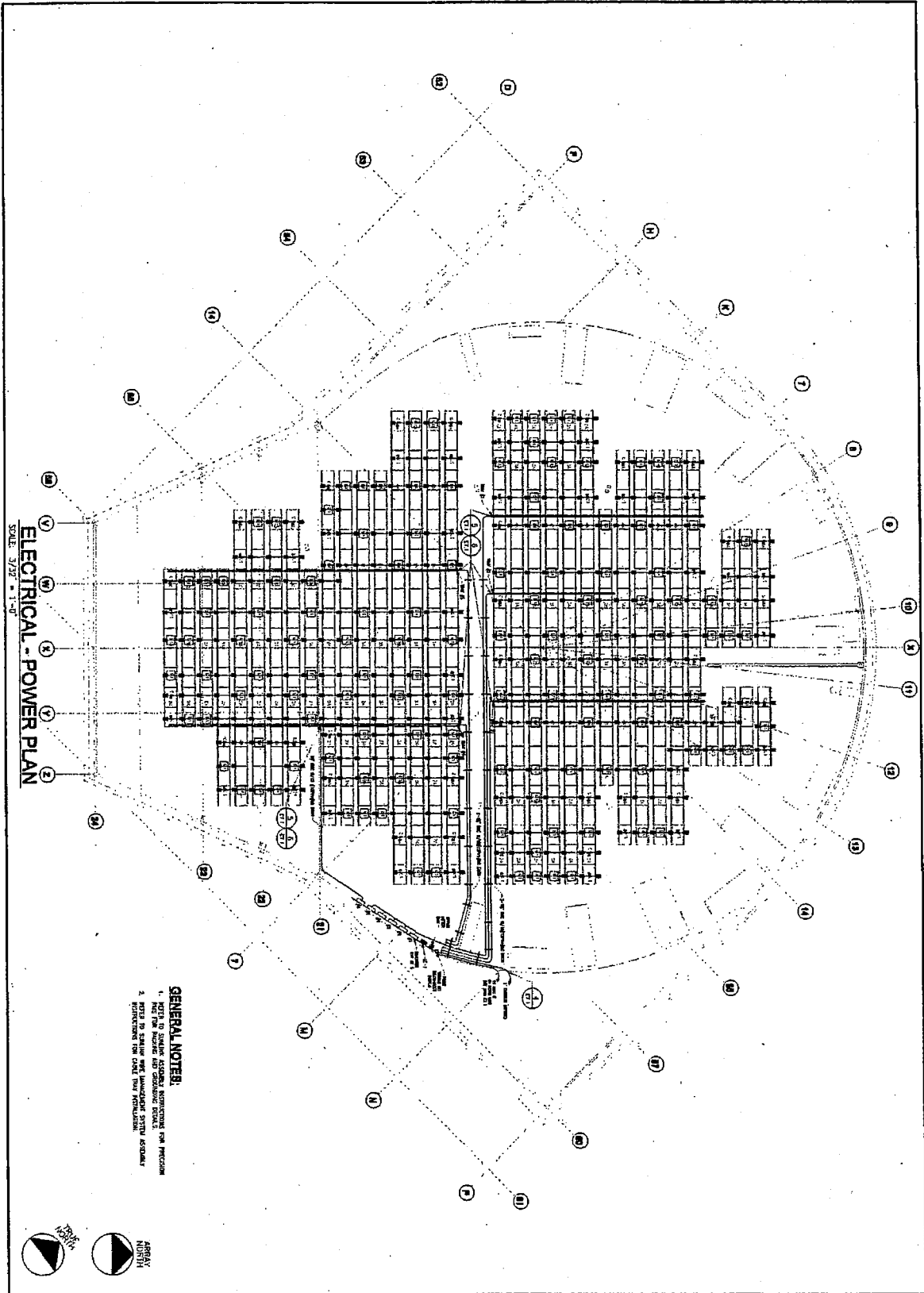
SITE PLAN

NO.	DATE	REVISIONS



NO.	DATE	REVISIONS

**DAVIES SYMPHONY HALL
PHOTOVOLTAIC (PV) PROJECT**
201 Van Ness Ave. San Francisco, CA 94102

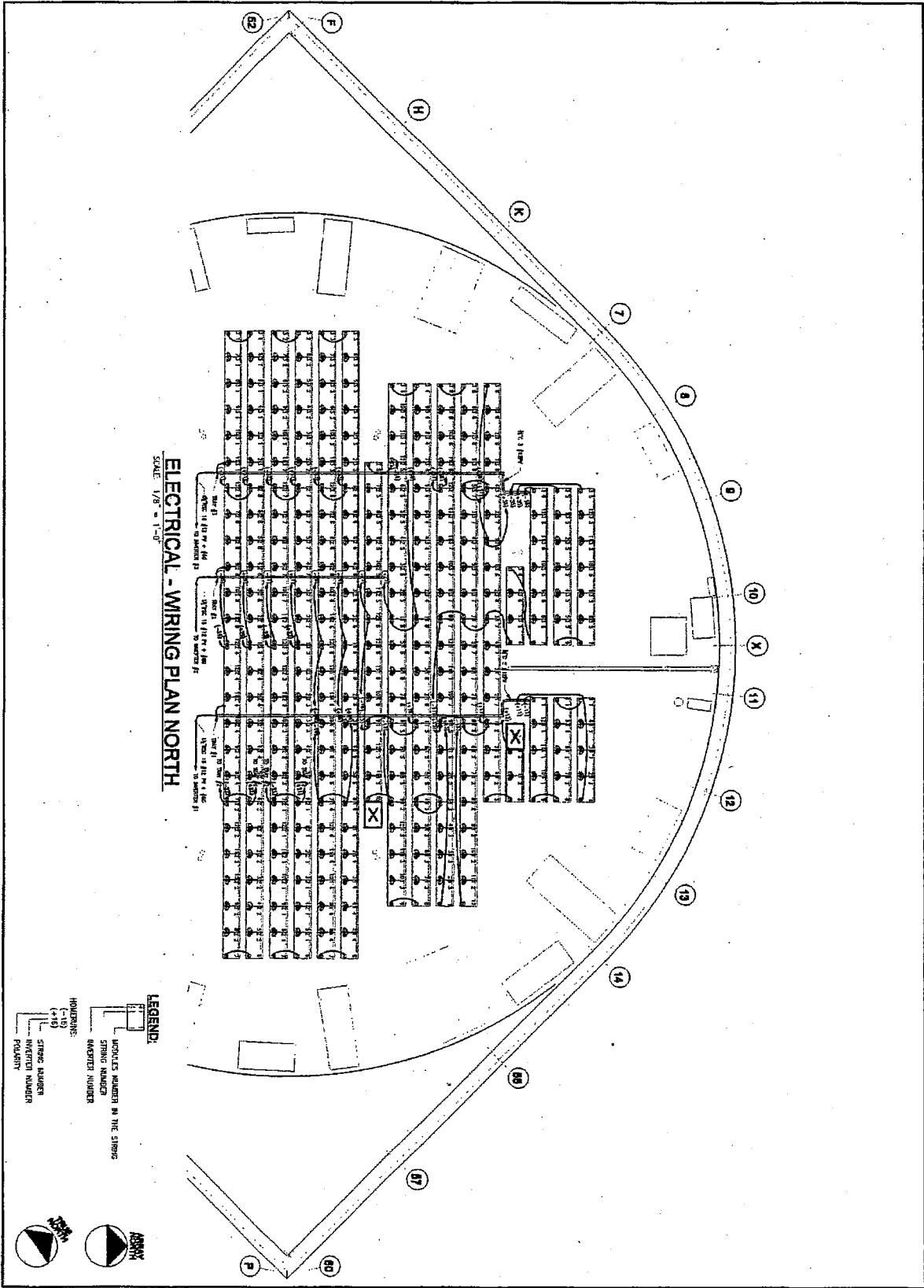


ELECTRICAL - POWER PLAN
SCALE: 3/32" = 1'-0"

GENERAL NOTES:
1. REFER TO ALL APPROPRIATE SPECIFICATIONS FOR PROVISIONS.
2. REFER TO ALL APPROPRIATE DRAWINGS FOR PROVISIONS.
3. REFER TO ALL APPROPRIATE DRAWINGS FOR PROVISIONS.



DATE: 12/12/2013	TIME: 10:57:13 AM	PROJECT: DAVIES SYMPHONY HALL PHOTOVOLTAIC (PV) PROJECT	DESCRIPTION: ELECTRICAL POWER PLAN
DRAWN BY: [Name]	CHECKED BY: [Name]	DATE: 12/12/2013	
DAVIES SYMPHONY HALL PHOTOVOLTAIC (PV) PROJECT			
201 Van Ness Ave., San Francisco, CA 94102			
APPC Group, Inc.			
TRIS			
TM			
ELECTRICAL POWER PLAN			
E1.1			



ELECTRICAL - WIRING PLAN NORTH
 SCALE: 1/8" = 1'-0"

LEGEND:

PV MODULES IN THE STRINGS
 STRING NUMBER
 AISLE NUMBER
 STRING NUMBER AND AISLE NUMBER
 SWITCH
 FUSE
 CABLE
 CONDUIT
 RACEWAY
 PANEL



E1.2

ELECTRICAL WIRING PLAN NORTH

NO.	DATE	DESCRIPTION

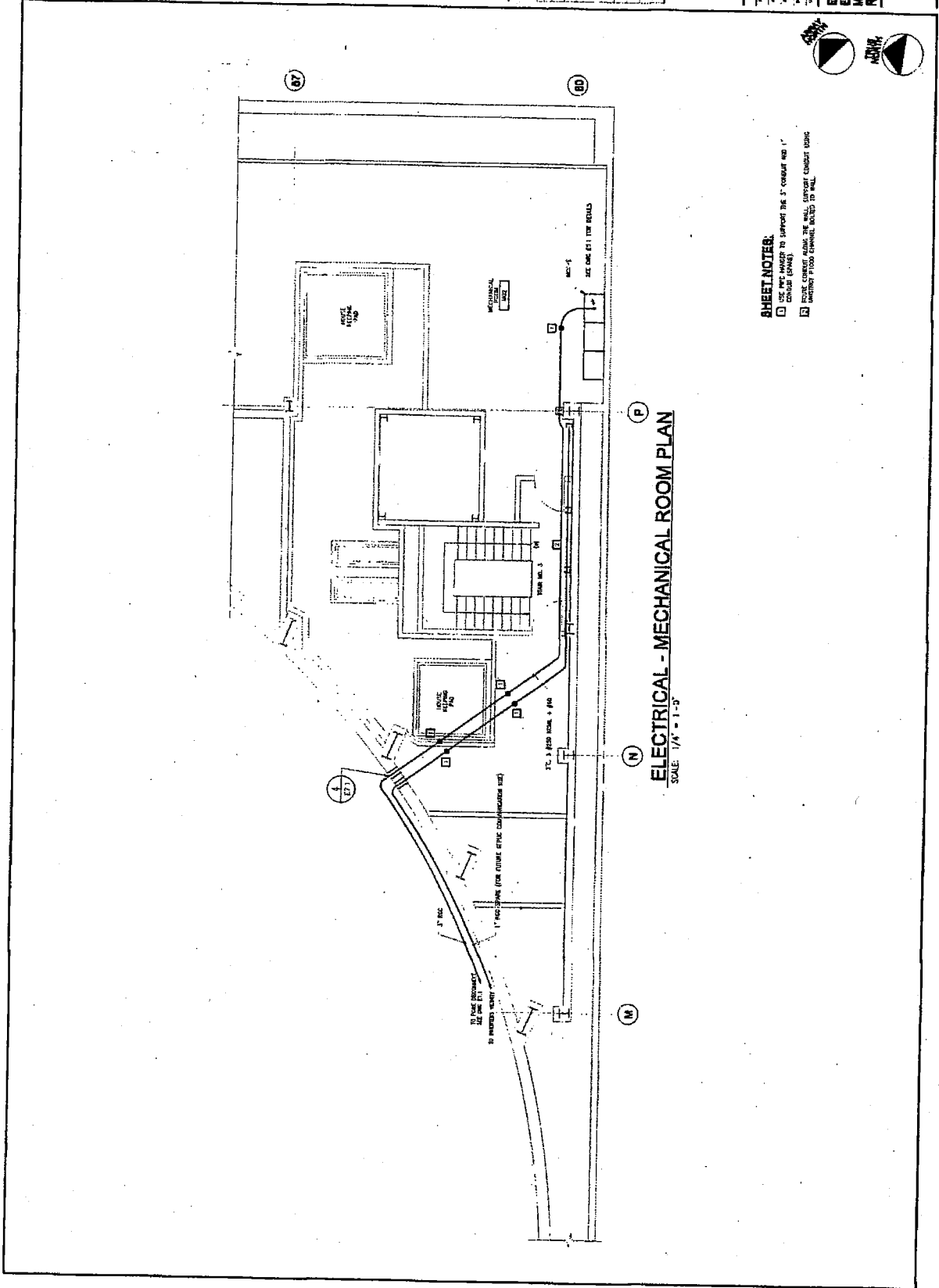
**DAVIES SYMPHONY HALL
 PHOTOVOLTAIC (PV) PROJECT
 201 Van Ness Ave. San Francisco, CA 94102**

TRRS
 TRANSMISSION RESOURCES
 CONSULTING ENGINEERS

TM
 CONSULTING ENGINEERS

ALPC
 ALPINE CONSULTING

NO.	DATE	DESCRIPTION
1	7/2/13	ISSUE FOR PERMIT
2		
3		
4		
5		

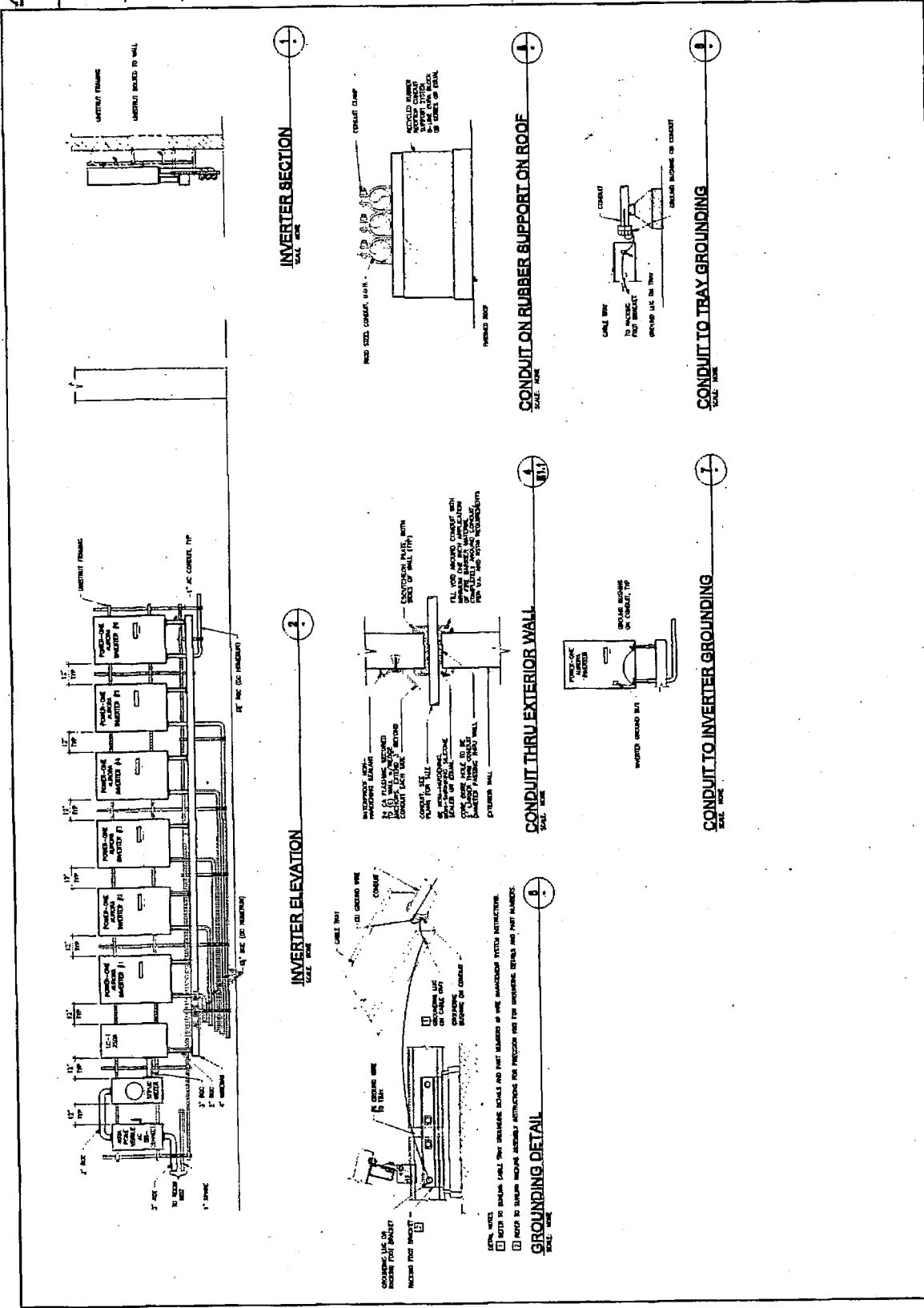


SHEET NOTES:
 1. USE PVC WAZER TO SUPPORT THE 3" CONDUIT AND 1" CONDUIT (EWS).
 2. ROUTE CONDUIT ALONG THE WALL. SUPPORT CONDUIT USING BRASS PIVOT CONNECT BUCK TO WALL.

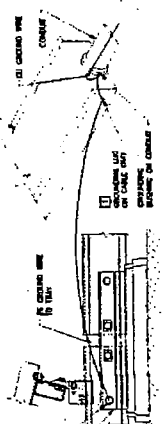
ELECTRICAL - MECHANICAL ROOM PLAN
 SCALE: 1/4" = 1'-0"



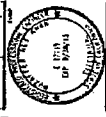
NO.	DESCRIPTION	DATE



SEE NOTES
 1. REFER TO STANDARD SCHEDULES FOR THE SPECIFICATION OF THE MANUFACTURER'S INSTRUCTIONS.
 2. REFER TO STANDARD MANUFACTURER'S INSTRUCTIONS FOR PRECISION FOR THE INVERTER DETAILS AND PART NUMBERS.



GROUNDING DETAIL
 SCALE: 1/4" = 1'-0"



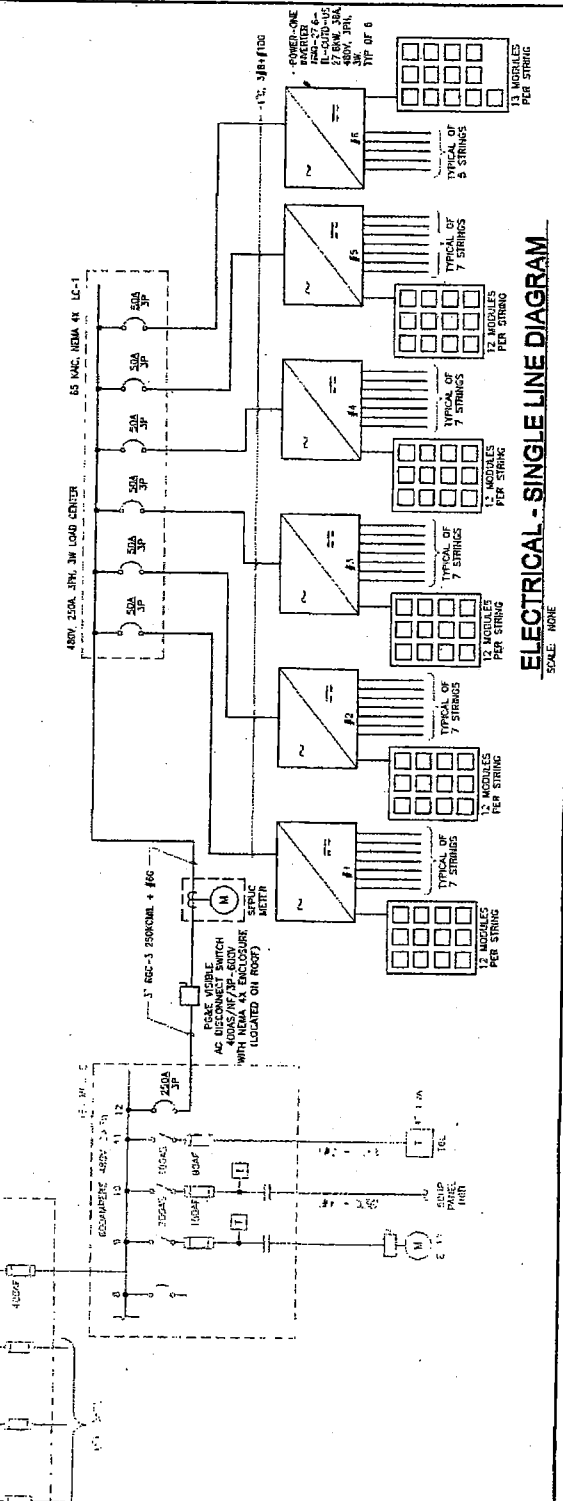
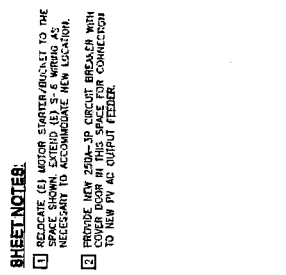
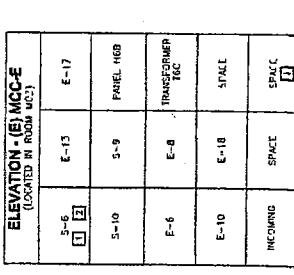
ELEVATION - (E) MGC-E (LOCATED IN ROOM M2)

5-6	E-15	E-17
5-10	5-9	PANEL 160
F-6	E-8	TRANSFORMER 160
E-10	E-18	SPACE
REQUIRED	SPACE	SPACE

POWER-ONE INVERTER #8 STRING CALCULATIONS

NUMBER OF MODULES PER STRING	12
VOLTS PER MODULE (VMP) (1)	31.5
STRING VOLTAGE (VSP) (2)	378
MAXIMUM STRING VOLTAGE (VSM) (3)	400
MAXIMUM STRING CURRENT (ISC) (4)	8.0
MAXIMUM STRING POWER (PSP) (5)	2424
MAXIMUM STRING ENERGY (ESE) (6)	19392
MAXIMUM STRING TORQUE (TSP) (7)	19392
MAXIMUM STRING WEIGHT (SW) (8)	19392
MAXIMUM STRING LENGTH (SL) (9)	19392
MAXIMUM STRING AREA (SA) (10)	19392
MAXIMUM STRING PERIMETER (SP) (11)	19392
MAXIMUM STRING WEIGHT (SW) (12)	19392
MAXIMUM STRING LENGTH (SL) (13)	19392
MAXIMUM STRING AREA (SA) (14)	19392
MAXIMUM STRING PERIMETER (SP) (15)	19392
MAXIMUM STRING WEIGHT (SW) (16)	19392
MAXIMUM STRING LENGTH (SL) (17)	19392
MAXIMUM STRING AREA (SA) (18)	19392
MAXIMUM STRING PERIMETER (SP) (19)	19392
MAXIMUM STRING WEIGHT (SW) (20)	19392
MAXIMUM STRING LENGTH (SL) (21)	19392
MAXIMUM STRING AREA (SA) (22)	19392
MAXIMUM STRING PERIMETER (SP) (23)	19392
MAXIMUM STRING WEIGHT (SW) (24)	19392
MAXIMUM STRING LENGTH (SL) (25)	19392
MAXIMUM STRING AREA (SA) (26)	19392
MAXIMUM STRING PERIMETER (SP) (27)	19392
MAXIMUM STRING WEIGHT (SW) (28)	19392
MAXIMUM STRING LENGTH (SL) (29)	19392
MAXIMUM STRING AREA (SA) (30)	19392
MAXIMUM STRING PERIMETER (SP) (31)	19392
MAXIMUM STRING WEIGHT (SW) (32)	19392
MAXIMUM STRING LENGTH (SL) (33)	19392
MAXIMUM STRING AREA (SA) (34)	19392
MAXIMUM STRING PERIMETER (SP) (35)	19392
MAXIMUM STRING WEIGHT (SW) (36)	19392
MAXIMUM STRING LENGTH (SL) (37)	19392
MAXIMUM STRING AREA (SA) (38)	19392
MAXIMUM STRING PERIMETER (SP) (39)	19392
MAXIMUM STRING WEIGHT (SW) (40)	19392
MAXIMUM STRING LENGTH (SL) (41)	19392
MAXIMUM STRING AREA (SA) (42)	19392
MAXIMUM STRING PERIMETER (SP) (43)	19392
MAXIMUM STRING WEIGHT (SW) (44)	19392
MAXIMUM STRING LENGTH (SL) (45)	19392
MAXIMUM STRING AREA (SA) (46)	19392
MAXIMUM STRING PERIMETER (SP) (47)	19392
MAXIMUM STRING WEIGHT (SW) (48)	19392
MAXIMUM STRING LENGTH (SL) (49)	19392
MAXIMUM STRING AREA (SA) (50)	19392
MAXIMUM STRING PERIMETER (SP) (51)	19392
MAXIMUM STRING WEIGHT (SW) (52)	19392
MAXIMUM STRING LENGTH (SL) (53)	19392
MAXIMUM STRING AREA (SA) (54)	19392
MAXIMUM STRING PERIMETER (SP) (55)	19392
MAXIMUM STRING WEIGHT (SW) (56)	19392
MAXIMUM STRING LENGTH (SL) (57)	19392
MAXIMUM STRING AREA (SA) (58)	19392
MAXIMUM STRING PERIMETER (SP) (59)	19392
MAXIMUM STRING WEIGHT (SW) (60)	19392
MAXIMUM STRING LENGTH (SL) (61)	19392
MAXIMUM STRING AREA (SA) (62)	19392
MAXIMUM STRING PERIMETER (SP) (63)	19392
MAXIMUM STRING WEIGHT (SW) (64)	19392
MAXIMUM STRING LENGTH (SL) (65)	19392
MAXIMUM STRING AREA (SA) (66)	19392
MAXIMUM STRING PERIMETER (SP) (67)	19392
MAXIMUM STRING WEIGHT (SW) (68)	19392
MAXIMUM STRING LENGTH (SL) (69)	19392
MAXIMUM STRING AREA (SA) (70)	19392
MAXIMUM STRING PERIMETER (SP) (71)	19392
MAXIMUM STRING WEIGHT (SW) (72)	19392
MAXIMUM STRING LENGTH (SL) (73)	19392
MAXIMUM STRING AREA (SA) (74)	19392
MAXIMUM STRING PERIMETER (SP) (75)	19392
MAXIMUM STRING WEIGHT (SW) (76)	19392
MAXIMUM STRING LENGTH (SL) (77)	19392
MAXIMUM STRING AREA (SA) (78)	19392
MAXIMUM STRING PERIMETER (SP) (79)	19392
MAXIMUM STRING WEIGHT (SW) (80)	19392
MAXIMUM STRING LENGTH (SL) (81)	19392
MAXIMUM STRING AREA (SA) (82)	19392
MAXIMUM STRING PERIMETER (SP) (83)	19392
MAXIMUM STRING WEIGHT (SW) (84)	19392
MAXIMUM STRING LENGTH (SL) (85)	19392
MAXIMUM STRING AREA (SA) (86)	19392
MAXIMUM STRING PERIMETER (SP) (87)	19392
MAXIMUM STRING WEIGHT (SW) (88)	19392
MAXIMUM STRING LENGTH (SL) (89)	19392
MAXIMUM STRING AREA (SA) (90)	19392
MAXIMUM STRING PERIMETER (SP) (91)	19392
MAXIMUM STRING WEIGHT (SW) (92)	19392
MAXIMUM STRING LENGTH (SL) (93)	19392
MAXIMUM STRING AREA (SA) (94)	19392
MAXIMUM STRING PERIMETER (SP) (95)	19392
MAXIMUM STRING WEIGHT (SW) (96)	19392
MAXIMUM STRING LENGTH (SL) (97)	19392
MAXIMUM STRING AREA (SA) (98)	19392
MAXIMUM STRING PERIMETER (SP) (99)	19392
MAXIMUM STRING WEIGHT (SW) (100)	19392

- SHEET NOTES:**
- 1) REVERSE SIDE OF THIS SHEET IS SUBJECT TO THE SPACE REQUIREMENTS. REVISIONS NECESSARY TO ACCOMMODATE NEW LOCATION.
 - 2) REVERSE SIDE OF THIS SHEET IS SUBJECT TO THE SPACE REQUIREMENTS. REVISIONS NECESSARY TO ACCOMMODATE NEW LOCATION.



ELECTRICAL - SINGLE LINE DIAGRAM
SCALE: NONE

PRECISION ROOF MOUNT SYSTEM FOR PHOTOVOLTAIC ARRAY AT Davies Symphony Hall 201 Van Ness Avenue, San Francisco, CA 94102

ARRAY CHANGES:

Row	Col	Area	Area	Area	Area	Area	Area	Area	Area	Area	Area
1	1	1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5	5	5

ARRAYS:

Array	Area	Area	Area	Area	Area	Area	Area	Area	Area
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5

At Project/Proprietor: Project/Proprietor/EPCC Group LLC/Field Engineer/Divide Half Project/EPCC

GENERAL NOTES:

1. The drawings show the proposed location of the PV array. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
2. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
3. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
4. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
5. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
6. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
7. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
8. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
9. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.
10. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.

ABBREVIATIONS:

ALL: All
 C: Change
 D: Delete
 E: Add
 F: Finish
 G: Ground
 H: Hole
 I: Install
 J: Join
 K: Kill
 L: Line
 M: Move
 N: Note
 O: Offset
 P: Point
 Q: Quantity
 R: Radius
 S: Size
 T: Type
 U: Under
 V: Vertical
 W: Width
 X: X-axis
 Y: Y-axis
 Z: Z-axis

BASE INFORMATION:

Project: Davies Symphony Hall
 Location: 201 Van Ness Avenue, San Francisco, CA 94102
 Date: 10/15/10
 Scale: 1/8" = 1'-0"

CONSTRUCTION INFORMATION:

1. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.



Array	Area	Area	Area	Area	Area	Area	Area	Area	Area
1	1	1	1	1	1	1	1	1	1
2	2	2	2	2	2	2	2	2	2
3	3	3	3	3	3	3	3	3	3
4	4	4	4	4	4	4	4	4	4
5	5	5	5	5	5	5	5	5	5

PRECISION ROOF MOUNT SYSTEM SPECIFICATIONS:

1. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.

CONNECTIONS:

1. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.

NOTES:

1. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.

CONTACT:

Project/Proprietor: Project/Proprietor/EPCC Group LLC/Field Engineer/Divide Half Project/EPCC

DATE: 10/15/10

SCALE: 1/8" = 1'-0"

SHEET: 1 of 1

PROJECT: Davies Symphony Hall

LOCATION: 201 Van Ness Avenue, San Francisco, CA 94102

DATE: 10/15/10

SCALE: 1/8" = 1'-0"

SHEET: 1 of 1



PRECISION ROOF MOUNT SYSTEM SPECIFICATIONS:

1. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.

CONNECTIONS:

1. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.

NOTES:

1. The proposed PV array location is subject to change without notice. The proposed PV array location is subject to change without notice.

CONTACT:

Project/Proprietor: Project/Proprietor/EPCC Group LLC/Field Engineer/Divide Half Project/EPCC

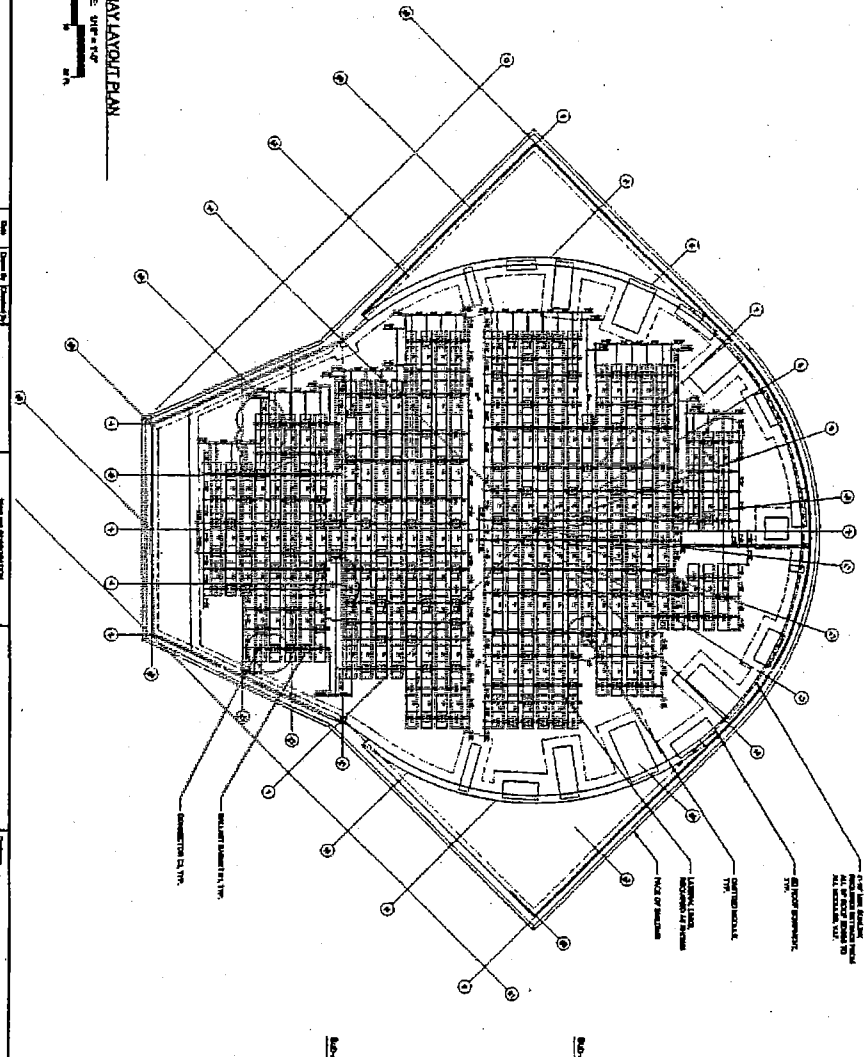
DATE: 10/15/10

SCALE: 1/8" = 1'-0"

SHEET: 1 of 1



SCALE 1/8" = 1'-0"
1" = 8'-0"



Callout 1
Callout 2

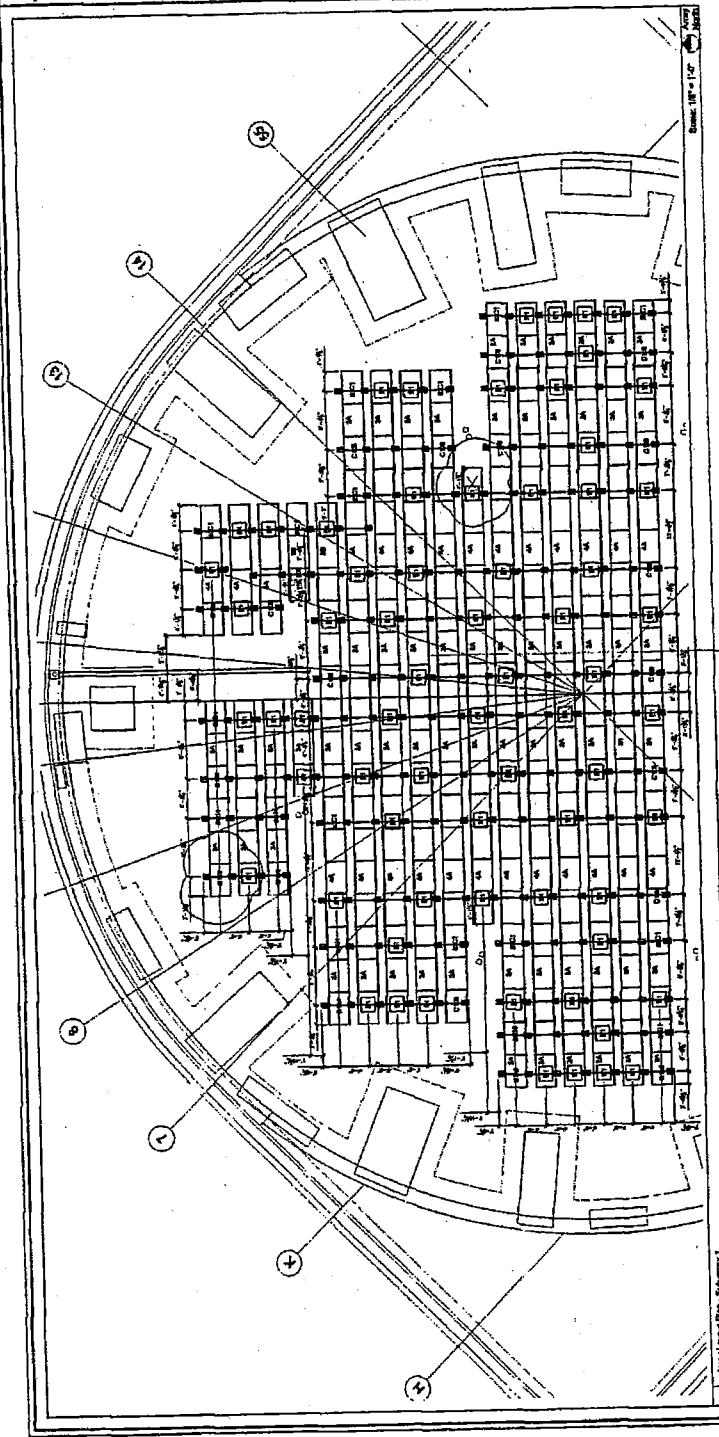
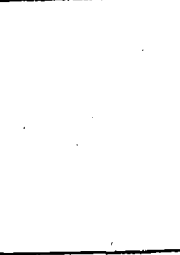
<p>8</p> <p>PRECISION ROOF FACILITY SYSTEM</p> <p>Model: Precision 225-207-208</p> <p>Year: 2021</p> <p>Version: 1.0</p> <p>Author: Precision Roof Facility Systems, Inc.</p> <p>Part Number: 8-84</p> <p>Quantity: 1</p> <p>Material: Steel</p> <p>Weight: 15.10</p>	<p>APRC Group, LLC</p> <p>Project: Charles Brydging Hall</p> <p>Address: 307 Third Street, Apt 201, Philadelphia, PA 19108</p> <p>Phone: (215) 555-1234</p> <p>Website: www.aprcgroup.com</p>	<p>UNLINK</p> <p>INSTALL CONFERENCE</p>	<p>Array Panel Schedule Legend:</p> <ul style="list-style-type: none"> ☐ Metal Deck ☐ Cable Trays ☐ Cable Lugs ☐ Terminals ☐ Array Layout Plan
---	--	--	--

Panel Details:

Panel No.	1	2	3	4	5
Area (sq ft)	100	100	100	100	100
Weight (lb)	100	100	100	100	100

Summary:

Panel No.	Area (sq ft)	Weight (lb)	Quantity	Total Area (sq ft)	Total Weight (lb)
1	100	100	1	100	100
2	100	100	1	200	200
3	100	100	1	300	300
4	100	100	1	400	400
5	100	100	1	500	500
Total	500	500	5	500	500



Customer: ASFC Group, LLC
Project: Daniels Symposium Hall
Location: 271 West Main Street, Salt Lake City, UT 84102

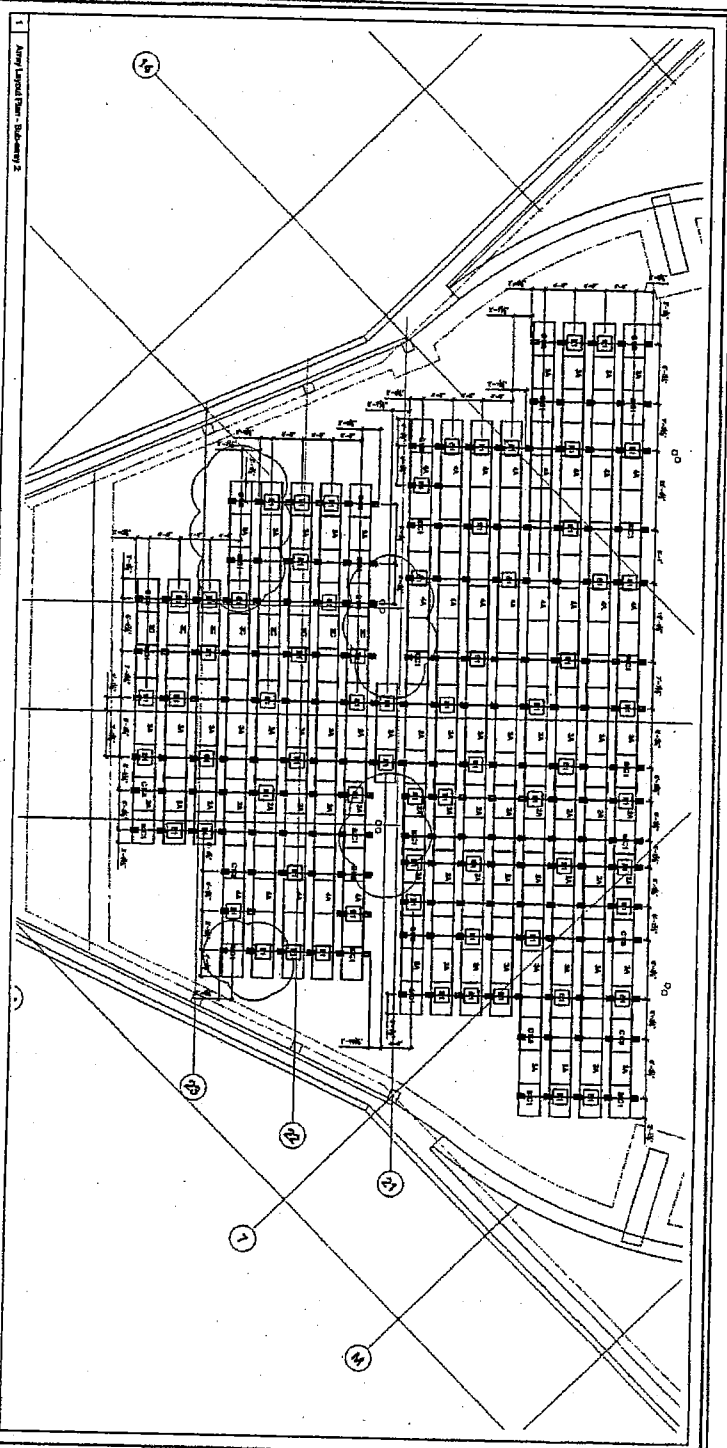
Product: PRECISION ROOF MOUNT SYSTEM
Model: Precision
Color: R-150
Finish: Army Layout Plan - Panel

Manufacturer: Sunlink
Address: 271 West Main Street, Salt Lake City, UT 84102

Contract No.: 2018-001
Project No.: 2018-001
Drawn By: [Name]
Checked By: [Name]
Date: 10/11/18

Scale: 1/8" = 1'-0"

Sheet No.: 1 of 1



Project Name	Army Layout Plan - Highway 2
Client	ASFC Group LLC
Architect	ASFC Group LLC
Contract No.	
Revision	
Date	
Scale	1/8" = 1'-0"
Sheet No.	101
Total Sheets	102
Project Location	301 Van Ness Avenue, San Francisco, CA 94102
Project Description	
Architect's License No.	
Professional Seal	

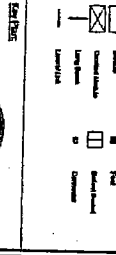
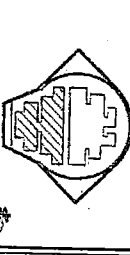
SUNLINK
 INSTALL CONFIDENCE

PRECISION ROOF MOUNT SYSTEM
 Model: 100001
 Qty: 100001

Project: ASFC Group LLC
 Client: ASFC Group LLC
 Address: 301 Van Ness Avenue, San Francisco, CA 94102

Title: Army Layout Plan - Highway 2
 Date: 10/12/11
 Scale: 1/8" = 1'-0"

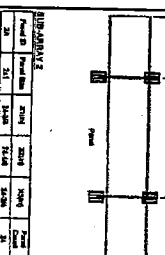
Project: Army Layout Plan - Highway 2
 Client: ASFC Group LLC
 Address: 301 Van Ness Avenue, San Francisco, CA 94102
 Project No.: 101
 Sheet No.: 101



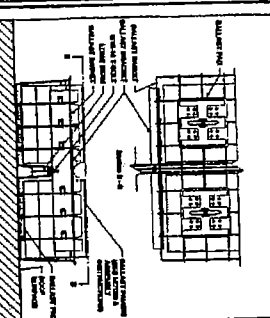
Room No.	Room Name	Area (sq ft)	Volume (cu ft)
101	Room 101	100	1000
102	Room 102	100	1000
103	Room 103	100	1000
104	Room 104	100	1000
105	Room 105	100	1000
106	Room 106	100	1000
107	Room 107	100	1000
108	Room 108	100	1000
109	Room 109	100	1000
110	Room 110	100	1000
111	Room 111	100	1000
112	Room 112	100	1000
113	Room 113	100	1000
114	Room 114	100	1000
115	Room 115	100	1000
116	Room 116	100	1000
117	Room 117	100	1000
118	Room 118	100	1000
119	Room 119	100	1000
120	Room 120	100	1000



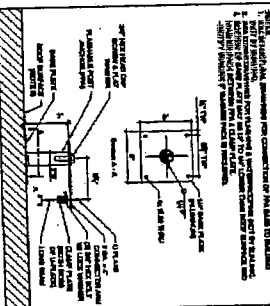
Room No.	Room Name	Area (sq ft)	Volume (cu ft)
101	Room 101	100	1000
102	Room 102	100	1000
103	Room 103	100	1000
104	Room 104	100	1000
105	Room 105	100	1000
106	Room 106	100	1000
107	Room 107	100	1000
108	Room 108	100	1000
109	Room 109	100	1000
110	Room 110	100	1000
111	Room 111	100	1000
112	Room 112	100	1000
113	Room 113	100	1000
114	Room 114	100	1000
115	Room 115	100	1000
116	Room 116	100	1000
117	Room 117	100	1000
118	Room 118	100	1000
119	Room 119	100	1000
120	Room 120	100	1000



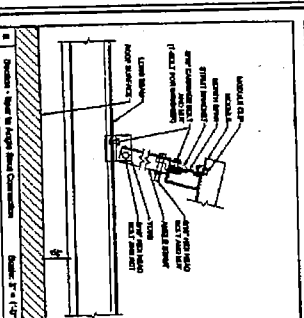
Room No.	Room Name	Area (sq ft)	Volume (cu ft)
101	Room 101	100	1000
102	Room 102	100	1000
103	Room 103	100	1000
104	Room 104	100	1000
105	Room 105	100	1000
106	Room 106	100	1000
107	Room 107	100	1000
108	Room 108	100	1000
109	Room 109	100	1000
110	Room 110	100	1000
111	Room 111	100	1000
112	Room 112	100	1000
113	Room 113	100	1000
114	Room 114	100	1000
115	Room 115	100	1000
116	Room 116	100	1000
117	Room 117	100	1000
118	Room 118	100	1000
119	Room 119	100	1000
120	Room 120	100	1000



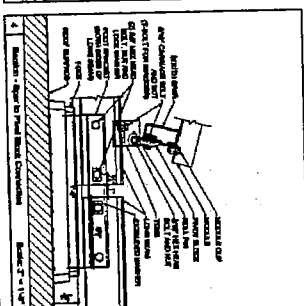
29 Section - Typical Interior Elevation
Scale: 1/4" = 1'-0"



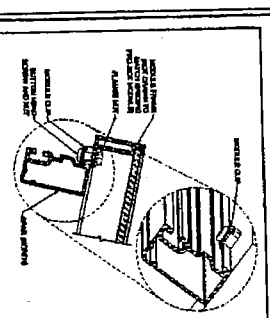
30 Section - Typical Ceiling Assembly
Scale: 1/4" = 1'-0"



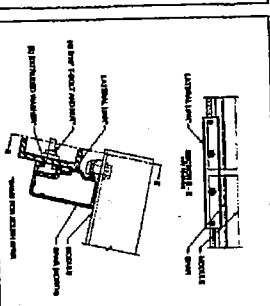
31 Section - Typical Panel Assembly
Scale: 1/4" = 1'-0"



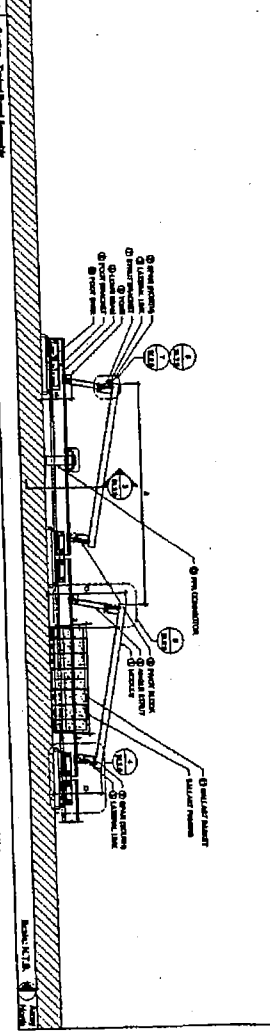
32 Section - Typical Ceiling Assembly
Scale: 1/4" = 1'-0"



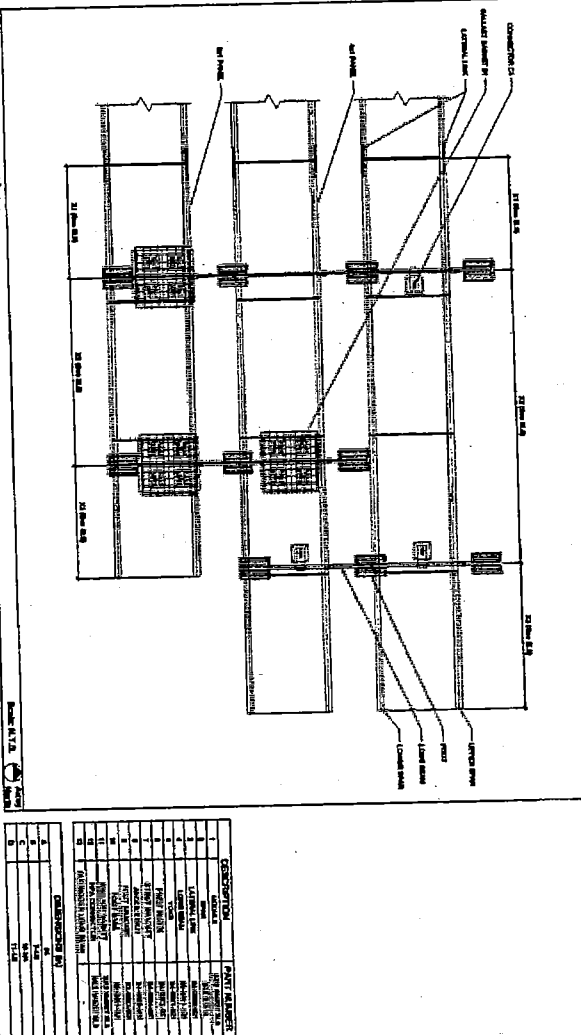
33 Section - Typical Panel Assembly
Scale: 1/4" = 1'-0"



34 Section - Typical Ceiling Assembly
Scale: 1/4" = 1'-0"



35 Section - Typical Panel Assembly
Scale: 1/4" = 1'-0"



36 Section - Typical Ceiling Assembly
Scale: 1/4" = 1'-0"

PRECISION ROOF MOUNT SYSTEM

Manufacturer: SUNLINK, INC. 201 West 11th Street, Dallas, TX 75201

Project: Dallas Skyline Hotel

Drawn: AGS Design LLC

Date: 01/20/11

Scale: As Shown

NO.	DESCRIPTION	QUANTITY	UNIT	AMOUNT	TOTAL
1	PRECISION ROOF MOUNT SYSTEM	10	sq. ft.	150.00	1500.00
2	ACROUSTICAL TILE	10	sq. ft.	10.00	100.00
3	GRID	10	sq. ft.	20.00	200.00
4	CEILING	10	sq. ft.	100.00	1000.00
5	WALL PANEL	10	sq. ft.	200.00	2000.00



5
1
1

Department of Public Works
Operations
Estimate Report (Detail): Service Order 431418
Internal Report Name: EST_CHECKV2_PARAM



OTHER COSTS

Item	Total
No Other Cost Reported	\$0.00
Total	\$0.00

TOTALS

Total Labor Cost	\$213,431.94
Total Material Cost	\$0.00
Total Other Cost	\$0.00
TOTAL ESTIMATE COST	\$213,431.94

APPROVALS

Deputy Director Approval
Date

Deputy Director Signature (optional if Approved in CMMS)

Bureau Approval
Date

Bureau Head Signature (optional if Approved in CMMS)

Client Approval
Date

Client Approver Signature (optional if Approved in CMMS)

NOTE: This estimate does not include the cost of abatement and/or removal of any hazardous materials that may present at your facility or job site unless otherwise indicated. If asbestos or other hazardous material are discovered, delays in completion of project may occur, and additional abatement costs will be the responsibility of the requesting agency.
*Contingency funds will not be expended without client department approval. Unexpended contingency funds to be credited back to client department.
**On project work supervision is required and listed accordingly.
*** Mark-up sales tax and freight charges are included.
This proposal expires on

ATTACHMENT B

**Department of Public Works
Operations
Estimate Report (Detail): Service Order 431418
Internal Report Name: EST_CHECKV2_PARAM**



Data Sent
Valid Until
Revision
Project Name Reissue: DAVIES SYMPHONY HALL, SOLAR PROJECT
Project Location 201 Van Ness Ave, San Francisco, 94102

Requestor's Department PUC
Requested By Jaime Seidel (415) 554-1537
Site Contact

Estimator
Bureau Lead
DPW Lead WILLIAM CABRERA 415-695-2053
Maintenance Dept DPW-BBR

Priority 4 - Non Urgent
Problem Code ELECTRIC
Requested Start Date

SCOPE OF WORK

City & County of San Francisco Department of Public Works
 Location: Davies Symphony Hall 201 Van Ness Ave

DPW-BBR Electric Shop Scope:

- 1) Mobilize crew layout of solar project.
- 2) Inventory materials provided by PUC.
- 3) Verify PUC's layout of array locations.
- 4) Layout stanchion anchor points per AEPC engineered drawings.
- 5) Layout PUC provided Sunlink solar rack and panels per AEPC engineered drawings.
- 6) Layout and install PUC provided solar inverter and load center per AEPC engineered drawings.
- 7) Setup of jig template for Sunlink rack connections.
- 8) Install solar inverters and load center per AEPC engineered drawings.
- 9) Install PUC provided Sunlink wire way onto rack system per AEPC engineered drawings.
- 10) Install 250 amp breaker assembly into existing MCC per AEPC engineered drawings.
- 11) Furnish and install 1" RGC for spurs from roof to room MO2 per AEPC engineered drawings.
- 12) Pull branch PV wires to solar panels from inverters per AEPC engineered drawings.
- 13) Pull feeders from load center to MCC per AEPC engineered drawings.
- 14) Terminate PV wires and jumpers for solar panels per AEPC engineered drawings.
- 15) Terminate feeders into MCC and load center per AEPC engineered drawings.
- 16) Test and megger all conductors.
- 17) Commission and test solar system.

NOTE: Per agreement with SFPUC, DPW will proceed without having any materials budget. Once we identify what is missing and required, we will submit a change order request accordingly.

ESTIMATES BY PHASE

		\$0.00		\$0.00		\$0.00
00 NONE		\$213,431.94		\$0.00		\$213,431.94
Totals		\$213,431.94		\$0.00		\$213,431.94

ESTIMATE BY PHASE AND SHOP

00 NONE	ELE	\$187,408.65		\$0.00		\$187,408.65
	ENG	\$0.00		\$0.00		\$0.00
00 NONE	ENG	\$26,023.29		\$0.00		\$26,023.29
Totals		\$213,431.94		\$0.00		\$213,431.94

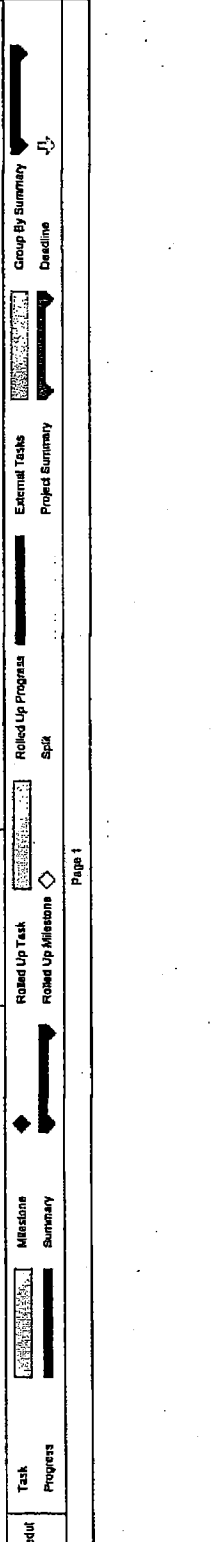
IN HOUSE COSTS

00 NONE	ELE(01)-Electrician Supervisor II (7276) - City Normal Rate	\$155.86	40	\$6,234.51		\$6,234.51
	ELE(02)-Electrician Supervisor I (7238) - City Normal Rate	\$140.06	100	\$14,005.98		\$14,005.98
	ELE(03)-Electrician (7345) - City Normal Rate	\$124.01	1,348	\$167,168.16		\$167,168.16
	ENG(06)-General Laborer (7514) -City Normal Rate	\$81.32	320	\$26,023.29		\$26,023.29

OTHER COSTS

ATTACHMENT C

ID	Task Name	Duration	Start	Finish
1	200KW - Davies Symposium Hall - Forecasted Schedule	365 days	Mon 1/14/13	Fri 1/17/14
2	Project Development Phase	30 days	Mon 1/14/13	Fri 2/1/13
18	Design Phase	105 days	Mon 1/14/13	Fri 4/12/13
33	Permit Phase	35 days	Mon 5/20/13	Fri 7/5/13
38	Purchasing Phase	115 days	Mon 2/4/13	Fri 6/28/13
40	Interconnection Agreement	105 days	Mon 4/1/13	Fri 8/23/13
50	Construction Phase	110 days	Mon 7/8/13	Fri 12/6/13
50	RE-ROOF PHASE	40 days	Mon 7/8/13	Fri 8/26/13
60	Construction Kick Off Meeting	5 days	Mon 7/8/13	Fri 7/12/13
61	Construction Mobilization	5 days	Mon 7/15/13	Fri 7/19/13
62	RE-ROOF	30 days	Mon 7/22/13	Fri 8/30/13
63	RE-ROOF COMPLETE	0 days	Fri 8/30/13	Fri 8/30/13
64	SOLAR PHASE	40 days	Mon 10/14/13	Fri 12/6/13
65	Jobsite Mobilization - Array Layout	4 days	Mon 10/14/13	Thu 10/17/13
66	LIR Materials (Crane)	1 day	Fri 10/18/13	Fri 10/18/13
67	Module/Rack - Array Layout	10 days	Mon 10/21/13	Fri 11/1/13
68	Array Wiring & Combiner Boxes	10 days	Mon 10/28/13	Fri 11/8/13
69	Solar Array Construction Complete	0 days	Fri 11/8/13	Fri 11/8/13
70	Conduit Run - Combiner -> Electrical Room	10 days	Mon 10/21/13	Fri 11/1/13
71	Inverter & Electrical Room Layout	10 days	Mon 10/28/13	Fri 11/8/13
72	Inverter Wiring	5 days	Mon 11/11/13	Fri 11/15/13
73	Electrical Tie In	5 days	Mon 11/11/13	Fri 11/15/13
74	DBI Final Inspection	5 days	Mon 11/18/13	Fri 11/22/13
75	PO&E Interconnection Inspection	10 days	Mon 11/25/13	Fri 12/6/13
76	Substantial Completion - System Online	0 days	Fri 12/6/13	Fri 12/6/13
77	Close Out	30 days	Mon 12/9/13	Fri 1/17/14



DRAFT MEMORANDUM OF UNDERSTANDING
BETWEEN
SAN FRANCISCO PUBLIC UTILITIES COMMISSION
AND
SAN FRANCISCO WAR MEMORIAL AND PERFORMING ARTS CENTER

THIS MEMORANDUM OF UNDERSTANDING (herein "MOU") dated hereof for reference purposes only as of January 20, 2010 is entered into by and between the Public Utilities Commission of the City and County of San Francisco ("SFPUC"), and the War Memorial Board of Trustees of the San Francisco War Memorial and Performing Arts Center ("SFWMPAC") hereinafter sometimes referred to individually as a "Party" and collectively as the "Parties".

RECITALS

- A. The purpose of this MOU is to provide for the installation and operation of an on-site solar photovoltaic system at Davies Symphony Hall as part of the City and County of San Francisco's (the "City") program to increase its development of solar energy in accordance with the Mayor's Executive Directive 05-107 (Rooftops for Municipal Solar) dated October 26, 2005.
- B. The SFWMPAC is the owner of a certain property located at Davies Symphony Hall, 201 Van Ness Avenue, San Francisco. On June 11, 2009, by Resolution No. 09-26, the War Memorial Board of Trustees approved the proposal of the SFPUC to install and operate, at the SFPUC's cost, a solar energy system on the roof of the Davies Symphony Hall, (the "Premises"), subject to the SFWMPAC and SFPUC developing and entering into a Memorandum of Understanding concerning the system's installation, operation and maintenance.
- C. On May 11, 2009 the San Francisco Planning Department issued a categorical exemption for the Solar Power Project pursuant to the California Environmental Quality Act.
- D. The SFPUC currently serves SFWMPAC electricity needs from various generating resources including hydroelectric power from the Hetch Hetchy system. The SFPUC and SFWMPAC desire to use an on-site photovoltaic system to serve some of the SFWMPAC load. Notwithstanding the change in generating resources used to serve SFWMPAC load, nothing in this MOU is intended to interfere with or alter the respective responsibilities of the SFPUC and SFWMPAC as to supply of electric service by the SFPUC to SFWMPAC.

NOW THEREFORE IT IS AGREED AS FOLLOWS:

AGREEMENT

1. **Recitals.**
The foregoing recitals are true and correct and are incorporated herein by this reference.

MEMORANDUM OF UNDERSTANDING
DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

2. **Definitions.**

Whenever used herein, including all appendices hereto, the following terms, when initially capitalized, shall for the purpose of this MOU have the following respective meanings. The singular of a term shall include the plural and the plural shall include the singular.

- (a) **Allowed Activities:** All activities associated with the design, construction, maintenance and operation of the Solar Power Project, including but not limited to project management and administration, permitting, design, equipment procurement, construction, installation, and commissioning, and all activities associated with contracting for such, including but not limited to, project management and administration, bidding, contracting, and the development and enforcement of performance guarantees and liquidated damages clauses.
- (b) **Emergency:** A condition that gives rise to, or imminently could give rise to, a serious health and/or safety hazard.
- (c) **Environmental Credits:** Any and all energy or emission credits or any other renewable energy, emissions reduction or other environmental benefit, whether related to any renewable portfolio standard or other renewable energy purchase requirement or otherwise, whether existing as of the Effective Date or enacted thereafter.
- (d) **Normal Operating Hours:** The normal operating hours of 8 a.m. to 5 p.m. Monday through Friday.
- (e) **Prudent Utility Practice:** Those practices, methods and procedures, as modified from time to time, that are currently and commonly used by electric utilities to design, construct and operate electric power facilities dependably, reliably, safely, efficiently and economically, with due regard to the state of the art in the electric power industry, as applied in the State of California or in the Western Electricity Coordinating Council area, whichever better represents the application of the considerations above. Such practices, methods and procedures are not limited to the optimum, but rather to any within the scope of those currently and commonly used.
- (f) **Solar Power Project:** A photovoltaic system installed at the Premises consisting of photovoltaic panels and their mountings, any bird avoidance devices, as well as associated wiring among panels, and wiring from the panels and other associated wiring (e.g. – data instruments) to the boundary of the Premises, inverter(s), an AC disconnect switch, a DC disconnect switch, junction boxes, the Solar Power Project Meter and wiring to the PG&E main meter.
- (g) **Solar Power Project Meter:** A time of use revenue-grade meter which will measure the output of the Solar Power Project.

3. **Effective Date.** The effective date of this MOU (the “Effective Date”) shall be the date that this MOU is executed by both Parties conditioned upon the subsequent approval by the SFPUC, in its sole discretion.

4. **Term.** The term of this MOU shall commence on the Effective Date and shall expire 25 years after the commencement of commercial operation of the Solar Power Project, hereafter (the “Expiration Date”). If, with the permission of SFWMPAC, the Solar Power Project remains on the Premises after the

MEMORANDUM OF UNDERSTANDING

DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies Symphony Hall

Expiration Date, such Premises shall continue to be used for the Solar Power Project on all the terms and conditions stated herein, terminable by either Party on ninety (90) days written notice to the other.

5. **Termination.** This MOU may be terminated by the SFPUC or the SFWMPAC upon thirty (30) days prior written notice, for any reason, including but not limited to, a failure to obtain reasonably priced bids for the design and construction of the Solar Power Project.

6. **Access To and Use of the Premises.**

- (a) **Permitted Uses.** Subject to the provisions of this MOU, SFWMPAC will make the Premises available to the SFPUC for the Allowed Activities. Any amendments or alterations to the Allowed Activities must be pre-approved in writing by SFWMPAC. SFWMPAC approval will not be unreasonably withheld, and in any event, notification by SFWMPAC of its decision will be given within two (2) weeks.
- (b) **Access to the Premises.** The SFPUC and its agents shall have the non-exclusive right of ingress and egress to and from the Premises over roads, ramps, walkways, and other areas of the Premises designated by the Buildings and Grounds Superintendent of the SFWMPAC (the "Superintendent") and at times designated by the Superintendent. Without limiting the foregoing, the Superintendent shall have the right to alter or amend access routes or access times at any time, and to impose reasonable restrictions on such access; provided SFWMPAC gives the SFPUC reasonable notice of any such alteration or amendment or imposition of any such restrictions. All such access shall be subject to SFWMPAC rules and regulations as amended from time to time, including those pertaining to badge, permitting, and other security requirements, and the requirements of this MOU. The SFPUC acknowledges that a wide variety of rehearsals and public performances are scheduled in the Premises and will use reasonable efforts to ensure that in undertaking the Allowed Activities, SFPUC will not interfere with, disrupt, or interrupt rehearsal and performance activities in the Premises.
- (c) **Rights-of-Way for the Benefit of the SFPUC.** The SFPUC shall have the use and enjoyment of suitable rights-of-way over lands at or near the Premises in a manner first to be approved by the Superintendent in writing. Such rights-of-way shall be for the purpose of enabling the SFPUC to install and maintain conduits, connections, ducts, pipes, wires, telephone, and incidental accessories, equipment and devices which are necessary or convenient in connection with the Allowed Activities, including any installations necessary to provide connectivity to the SFWMPAC electricity grid and the statewide interconnected electricity grid (collectively, the "Infrastructure"), and shall not interfere with the SFWMPAC facilities. All costs relative to the installation, maintenance, repair and replacement of the Infrastructure shall be paid for by the SFPUC, provided, the SFPUC shall not be required to pay for the use of the land or related facilities in which the Infrastructure is placed.
- (d) **Rights-of-Way for the Benefit of the SFWMPAC.** SFWMPAC shall have the right, at all times and for any purpose, to enter upon the Premises without unreasonably or unduly interfering with the Allowed Activities.
- (e) **Changes to SFWMPAC Premises.** The SFPUC acknowledges and agrees that (a) the SFWMPAC shall have the right at all times to reasonably change, alter, expand, and contract the Premises or

MEMORANDUM OF UNDERSTANDING

DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

any portion thereof, and (b) SFWMPAC has made no representations, warranties, or covenants to the SFPUC regarding the design, construction, pedestrian traffic, SFWMPAC schedules, or views of or relating to SFWMPAC or the Premises. Without limiting the generality of the foregoing, the SFPUC acknowledges and agrees that the SFWMPAC may from time to time adopt rules and regulations relating to security and other operational concerns that may affect the SFPUC's business and its use of the Premises. The SFWMPAC will use reasonable efforts to minimize the effect of SFWMPAC changes on the SFPUC's business.

- (f) Notice of Scheduled Work. Unless otherwise agreed by the Parties, at least two weeks before any scheduled work by the SFPUC, the SFPUC shall provide notice to the Superintendent.
- (g) Compliance with Laws/Permits and Approvals. The SFPUC, at its expense, shall comply with all laws, regulations and requirements of the Federal, State, County and Municipal authorities, now in force or which may hereafter be in force relative to the SFPUC's use of the Premises.
- (h) Roof Leak Test. As part of any eventual contract to install the Solar Power Project, the SFPUC may require the contractor to perform a roof leak test prior to the start of any construction. The SFPUC shall provide SFWMPAC at least five (5) business days advance written notice of any such roof leak test and shall afford SFWMPAC a reasonable opportunity to have a representative present upon such test.
- (i) Roof Repairs. The SFPUC will be responsible, at the SFPUC's sole cost and expense prior to the installation of the Solar Power Project, to perform any roof repair or maintenance necessitated by or required to enable or support the Solar Power Project. In the event that the SFPUC determines, in its sole discretion, that the cost associated with said roof repair or maintenance are prohibitive, the SFPUC may elect to terminate this MOU and not to proceed with the Solar Power Project on the Premises.
- (j) Removal. The SFPUC, at its sole cost and expense, shall remove the Solar Power Project upon the termination of this MOU within 180 days of such termination. The SFPUC shall surrender the Premises in the same condition as received, free from hazards and clear of all debris. Subject to any applicable building permits, the SFPUC shall remove all of its property and improvements from the Premises. The SFPUC shall provide at least thirty (30) days written notice to the SFWMPAC of its intention to remove the Solar Power Project and shall complete removal of the Solar Power Project within one hundred and eighty (180) days of such notice.
- (k) Repairs After the Installation of the Solar Power Project. The SFWMPAC shall provide the SFPUC Power Enterprise Energy Generation Projects Manager with written notice at least one hundred and eighty (180) days prior to any planned roof repair, rehabilitation projects or other projects that could affect a Solar Power Project. Subject to any applicable building permits, if a Solar Power Project must be moved or removed to accommodate such SFWMPAC projects, the SFPUC shall move or remove the Solar Power Project within one hundred and eighty (180) days, unless the Parties agree otherwise. Thereafter, the SFPUC, at its sole option, may reinstall the Solar Power Project on the Premises subject to the conditions of this MOU.
- (l) "As Is" Condition. Subject only to the requirements of subparagraph 6(n) below, the SFPUC accepts the Premises in its "As Is" condition, without representation, warranty or covenant of any

MEMORANDUM OF UNDERSTANDING

DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

kind by the SFWMPAC, including without limitation, the suitability of the Premises for the SFPUC's proposed use. The SFPUC waives any and all rights to seek reimbursement or indemnity from SFWMPAC for any loss or cost relating to the condition of the Premises.

- (m) Maintenance: SFPUC's Responsibilities. Except as set forth in subparagraph 6(n) below, the SFPUC shall at all times during the term of this MOU, at its sole expense and cost, maintain in good working order, condition and repair all improvements placed in or on the Premises pursuant to this MOU and shall promptly maintain and repair such improvements. The SFWMPAC shall not be obligated to make any repairs, replacement or renewals of any kind to the Solar Power Project. The SFPUC shall utilize best efforts to repair damage to the Premises caused by the SFPUC or its agents within ninety (90) days from receipt of written notice from the SFWMPAC.
- (n) Maintenance: SFWMPAC's Responsibilities. The SFWMPAC shall, at its sole cost and expense, maintain the structural and physical integrity of the Premises in the "As Is" condition in which it was made available for the installation of the Solar Power Project.
- (o) Charges. There shall be no charge for the use of the Premises for the Allowed Activities in accordance with this MOU. Any utilities or services provided by the SFWMPAC to the SFPUC in connection with the Allowed Activities shall be at the SFWMPAC's standard rates, as applied to other SFWMPAC tenants. If any possessory interest taxes are due as a result of the SFPUC's use of the Premises, then such taxes shall be the SFPUC's responsibility.
- (p) Limitations on Use. The SFPUC shall not
 - (i) create a nuisance or commit or permit any waste on the Premises;
 - (ii) permit the dumping or other disposal of landfill, refuse, hazardous material or any other material that could pose a hazard to health or safety or the environment, on the Premises;
 - (iii) create or permit any liens, including mechanic's, materialmen's or tax liens, to be placed on the Premises as a result of the SFPUC's activities without promptly discharging the same; and
 - (iv) do anything in, on, under or about the Premises that could cause damage or interference to any of SFWMPAC's facilities, or the programs, performances, or activities therein.
- (q) Antennae and Telecommunications Dishes. No antennae, telecommunications dish, wireless telecommunications system, or other similar facilities other than solar monitoring, metering, and meteorological equipment may be installed on the Premises without prior written approval of the Superintendent.
- (r) Exercise of Due Care. The SFPUC shall use, and shall cause its agents to use, due care at all times to avoid any damage or harm to SFWMPAC facilities and the Premises.

7. **Procurement and Installation of Solar Power Project by the SFPUC.**

- (a) Installation of Solar Power Project by the SFPUC. The SFPUC may install a Solar Power Project at the Premises in accordance with the requirements of this MOU. Before beginning any such work, the SFPUC shall obtain any and all permits and other approvals, including without limitation, building permits and other federal, state, county and municipal permits or approvals, necessary for the installation of the Solar Power Project on the Premises and shall maintain such approvals as necessary throughout the Term of this MOU. Upon request, the SFPUC shall provide to the SFWMPAC copies of all such permits and approvals.
- (b) Schedule and Conditions. Before issuance of the request for proposals for the design and construction of the Solar Power Project, the SFWMPAC and the SFPUC shall agree on conditions and a schedule for the work that minimize the likelihood of disruption of the SFWMPAC's operations. The SFPUC shall incorporate such conditions and schedule shall be incorporated into any third party agreements for the design and construction of the Solar Power Project.
- (c) Cost Responsibility for the Procurement and Installation of the Solar Power Project by the SFPUC. The SFPUC will be responsible for all the costs of the purchase and installation of the Solar Power Project, including but not limited to all utility services provided to the Premises for such purpose, and all of the construction management costs. In addition, subject to the receipt of adequate documentation of staff time expended, the SFPUC shall reimburse the SFWMPAC for its reasonable staff time devoted to providing access to the Premises and reviewing and commenting on the Solar Power Project design, in accordance with the schedule of fees attached as Appendix A, up to a total amount not to exceed five thousand dollars (\$5,000.00).
- (d) Warranty for the Photovoltaic System. Irrespective of the entity named in any warranty for a photovoltaic system component that comprises the Solar Power Project, all benefits from any such warranty shall accrue to the SFPUC.
- (e) Performance Guarantees and Liquidated Damages. Irrespective of the entity named in any performance guarantee or liquidated damages clause from a third party contractor for the installation of the Solar Power Project, all benefits from any such performance guarantee or liquidated damages clause shall accrue to the SFPUC except for Special SFWMPAC Liquidated Damages. The SFWMPAC shall promptly provide to the SFPUC any amounts collected pursuant to a performance guarantee and any liquidated damages it receives from a third party contractor associated with the installation of a Solar Power Project except for Special SFWMPAC Liquidated Damages.
- (f) Special SFWMPAC Liquidated Damages. The SFPUC will insert the following language regarding special liquidated damages into the contract with the Design Builder and SFPUC

Special SFWMPAC (Davies Symphony Hall) Liquidated Damages.

Design-Builder acknowledges that during performance of the Work under this Contract, regularly scheduled rehearsals and performances will continue at Davies Symphony Hall. As set forth in

MEMORANDUM OF UNDERSTANDING

DB-118, Sustainable Civic Center District; Solar Photovoltaic Renewable Energy Plants at City Hall & Davies Symphony Hall

the Contract Documents, Design-Builder must coordinate its Work to avoid the disruption, delay and cancellation of such rehearsals and performances. It is understood and agreed by and between Design-Builder and the City that the City will suffer financial loss if rehearsals or performances are cancelled resulting from, arising out of, or connected with Design-Builder's performance of the Work. Design-Builder and City further understand and agree that the actual cost to the City which would result from rehearsal or performance cancellations caused by Design-Builder's performance of the Work is extremely difficult, if not impossible, to determine. Accordingly, Design-Builder and the City agree that as liquidated damages (but not as a penalty), Design-Builder shall pay the City the following amounts:

1. For each rehearsal at Davies Symphony Hall cancelled resulting from, arising out of or connected with Design-Builder's performance of the Work -- \$20,000
2. For each performance at Davies Symphony Hall cancelled resulting from, arising out of or connected with Design-Builder's performance of the Work -- \$100,000

The total amount of Special SFWMPAC Liquidated Damages payable to City under this paragraph shall not exceed \$500,000.

8. Ownership of the Solar Power Project. The Solar Power Project shall be and shall remain the property of the SFPUC. Any and all of the Environmental Credits associated with the Solar Power Project shall be and shall remain the property of the SFPUC. The SFPUC will be solely responsible for the payment of federal, state, local and other taxes, fees or other assessments as may be applicable to the SFPUC by reason of its installation and ownership of the Solar Power Project. Fixed and unmovable parts of the Solar Power Project (including conduit and replacement roofing material) will become the property of the SFWMPAC upon final removal of the Solar Power Project by the SFPUC upon expiration or termination of this MOU.

9. Operation of the Solar Power Project.

- (a) Operation of the Solar Power Project. The SFPUC will be responsible for all the Allowed Activities, including operation, associated with the Solar Power Project that are not made the responsibility of the SFWMPAC pursuant to this MOU or an executed written agreement between the Parties. The SFPUC shall undertake the Allowed Activities in accordance with the terms of this MOU and Prudent Utility Practice; and in compliance with all permits and applicable laws and regulations.
- (b) Planned Service Interruptions. The SFPUC will work with the SFWMPAC to minimize the number and extent of any interruptions in electric service related to the Allowed Activities. All planned electric service interruptions related to the Allowed Activities shall be subject to approval by the SFWMPAC, which approval shall not be unreasonably withheld. In the event of a planned electric service interruption, the SFPUC shall submit a written request to the Superintendent at least ten (10) business days before the interruption date. A failure on the part of the SFWMPAC to respond within five (5) business days shall be deemed an approval of the service interruption. The SFPUC will not be responsible for any of the SFWMPAC's direct or indirect expenses caused by or related to an electric service interruption or its cancellation.

MEMORANDUM OF UNDERSTANDING

DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

- (c) Planned and Emergency Shut Downs by SFWMPAC. In the event that SFWMPAC needs to shut down all or a portion of the electrical system at the Premises, the SFWMPAC shall provide as much advance notice to the SFPUC Power Enterprise Energy Generation Projects Manager as possible. For planned shutdowns, the SFWMPAC shall provide at least ten (10) business days written notice to the SFPUC. In the event of an emergency shutdown, the SFWMPAC shall provide the SFPUC as much prior notice as possible.
- (d) Operation of the Solar Power Project during Emergencies. In an Emergency, if necessary to protect the health or safety of the public or the SFWMPAC employees, the SFWMPAC may shut down the Solar Power Project, provided that it notifies and seeks approval for these actions from the Manger of Energy Generation Projects of the SFPUC. The SFWMPAC shall make all reasonable attempts to notify the SFPUC and to obtain approval for such actions prior to taking them. If prior notice and approval are impossible, the SFWMPAC shall notify the SFPUC and obtain approval as soon as possible thereafter. The SFWMPAC shall work with the SFPUC to reconnect the Solar Power Project as soon as possible. The parties shall establish mutually agreeable emergency protocols for implementation during Emergencies.

10. Use of the Output from the Solar Power Project.

- (a) Use of the Output. The output from the Solar Power Project shall be used to serve the SFWMPAC's electric needs.
- (b) Metering. The SFPUC shall meter the output of the Solar Power Project using the Solar Power Project Meter owned, operated, maintained and read by the SFPUC. The SFPUC shall be solely responsible for all costs and charges associated with such metering. The SFWMPAC shall provide, at no expense to the SFPUC, a suitable location for all meters and associated equipment. The Solar Power Project Meter shall be sealed and the seals shall be broken only upon occasions when the meter is to be inspected, tested or adjusted, and representatives of the SFWMPAC shall be afforded reasonable opportunity to be present upon such occasions. The meters shall be tested at any reasonable time upon request therefore by either Party. Any metering equipment found to be defective or inaccurate shall be repaired and re-adjusted or replaced. If a meter fails to register or if the measurement made by a meter during a test varies by more than two (2) percent from the measurement made by the standard meter used in the test, an adjustment to correct all meter records of measurements made by the inaccurate meter shall be made for: (i) the period since the last meter test, or (ii) the actual period during which inaccurate measurements were made if the SFPUC determines this period can be established, provided that the period covered by the correction shall not exceed six (6) months or half the time since the previous test. If necessary, the corrections may be estimated from the best information available for the period of defect or inaccuracy.
- (c) Payment for Electricity from the Solar Power Project. The SFWMPAC shall pay the SFPUC for the output from the Solar Power Project used to serve the SFWMPAC's loads, as measured by the Solar Power Project Meter, at the otherwise applicable rates for the provision of electric service by the SFPUC to the SFWMPAC as set by the SFPUC and approved by the Board of Supervisors from time to time.

11. Insurance. The SFPUC shall require that its vendors, contractors, and agents obtain and

MEMORANDUM OF UNDERSTANDING

DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

maintain insurance coverage for the Solar Power Project in the types and amounts approved by the City's Risk Manager. All insurance policies shall name as additional insured the City and County of San Francisco, the SFWMPAC, the SFPUC, and their officers, directors, employees, and agents.

12. Security. The SFWMPAC shall provide the same level of security at the Premises as it otherwise provides at its other facilities.

13. Damages/Indemnity.

(a) It is the understanding of the parties that the SFWMPAC shall not expend any funds due to or in connection with the SFPUC's construction and installation or maintenance of the Solar Power Project, or use of the Premises, except as otherwise set forth herein. Therefore, the SFPUC agrees to indemnify the SFWMPAC and to be responsible for all costs associated with all claims, damages, liabilities or losses which arise out of the SFPUC's use of the Premises, including but not limited to the release or handling of hazardous materials on or about the Premises by the SFPUC, its agents or contractors, but excluding pre-existing hazardous materials (which are the responsibility of the SFWMPAC or its tenants) and any injury or death of any person or damage of any property caused solely by the negligence or willful misconduct of the SFWMPAC. In no event shall the SFPUC be liable, regardless of whether any claim is based on contractor or tort, for any special, consequential, indirect or incidental damages, including, but not limited to, lost profits, arising out of or in connection with this MOU or the services performed in connection with this MOU.

The foregoing obligation of the SFPUC shall survive the expiration or termination of this MOU. As used herein, "hazardous materials" shall mean any substance, water or material which has been determined by any state, federal or local government authority to be capable of posing a risk of injury to health, safety or property.

(b) The SFPUC will ensure that the SFWMPAC is indemnified to the same extent that the SFPUC is indemnified by any of the SFPUC's vendors, contractors or agents for the Solar Power Project.

14. No Assignment. The SFPUC shall not assign, sublet, encumber, or otherwise transfer, whether voluntarily or involuntarily or by operation of law, the Premises or any part thereof, or any interest herein, without the SFWMPAC's prior written consent.

15. Cooperation. Subject to the terms and conditions of this MOU, the SFWMPAC and SFPUC agree to use reasonable efforts to do, or cause to be done, all things reasonably necessary or advisable to carry out the purposes of this MOU and SFPUC's use of the Premises contemplated hereby as expeditiously as practicable, including, without limitation, performance of further acts and the execution and delivery of any additional documents in form and content reasonably satisfactory to both Parties. Notwithstanding anything to the contrary in this MOU, neither the SFWMPAC nor the SFPUC are in any way limiting their discretion or the discretion of any department, board or commission with jurisdiction over the Solar Power Project from exercising any discretion available to such department, board or commission with respect to the Solar Power Project, including but not limited to the discretion to

- (i) make such modifications deemed necessary to mitigate significant environmental impacts,
- (ii) select other feasible alternatives to avoid such impacts,
- (iii) balance the benefits against unavoidable significant impacts prior to taking final action if such

MEMORANDUM OF UNDERSTANDING

DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

significant impacts cannot otherwise be avoided, or
(iv) determine not to proceed with the proposed Solar Power Project.
In addition to any conditions described in this MOU, the obligations of the SFWMPAC and the SFPUC are expressly subject to the receipt of all legally required approvals following environmental review.

16. Dispute Resolution. The SFWMPAC and the SFPUC will cooperate to attempt to resolve issues that arise under this MOU informally, promptly and fairly. If staff involved in accomplishing the tasks set forth in this MOU are unable to resolve an issue after good faith attempts to do so, either Party may request a meeting of the appropriate managers of each department to address the issue. If such a meeting is requested, it shall be held within two (2) weeks unless the Parties agree to a later date.

17. Miscellaneous.

- (a) This MOU may be amended or modified only by a written agreement signed by the SFWMPAC and the SFPUC.
- (b) No waiver by any Party of any of the provisions of this MOU shall be effective unless in writing and signed by an authorized representative, and only to the extent expressly provided in such written waiver.
- (c) This MOU (including the Attachments) contains the entire understanding between the Parties as of the date of this MOU, and all prior written or oral negotiations, discussions, understandings and agreements are merged herein.
- (d) Notwithstanding anything to the contrary set forth herein, no officer, director or employee of the SFPUC has the authority to bind the SFPUC hereto unless and until the San Francisco Public Utilities Commission approves this MOU.
- (e) All transactions described herein are subject to and must be conducted in accordance with the applicable requirements of the City's Charter and codes and applicable state and/or federal laws.

18. Notices. All notices, demand, consents or approvals which are or may be required to be given by either Party to the other under this MOU shall be in writing and shall be deemed to have been fully given when delivered in person to such representatives of the SFWMPAC and the SFPUC as shall from time to time be designated by the Parties for the receipt of notices, or when deposited in the United States mail, postage prepaid, and addressed, if to the SFPUC to:

San Francisco Public Utilities Commission
Attn: Barbara Hale
Assistant General Manager, SFPUC Power Enterprise
1155 Market Street, 4th Floor
San Francisco CA, 94103

Tel No. (415) 934- 5751
Fax No. (415) 554-2465

and if to the SFWMPAC to:

Kevin Kelly, Buildings and Grounds Superintendent
San Francisco War Memorial and Performing Arts Center
401 Van Ness Avenue, Suite 110

MEMORANDUM OF UNDERSTANDING
DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

San Francisco, CA 94102

Fax No. (415) 621-5091

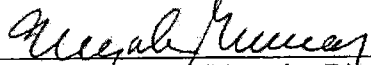
Tel No. (415) 554-6353

or such other address with respect to either Party as that Party may from time to time designate by notice to the other given pursuant to the provisions of this Paragraph.

IN WITNESS WHEREOF, the Parties have caused this agreement to be executed as of the date first written above.

AGREED TO AS WRITTEN ABOVE:

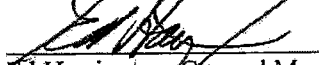
CITY AND COUNTY OF SAN FRANCISCO, a municipal corporation operating by and through its WAR MEMORIAL BOARD OF TRUSTEES

By: 
Elizabeth Murray, Managing Director

Date: 1/20/10

AGREED TO AS WRITTEN ABOVE:

CITY AND COUNTY OF SAN FRANCISCO, a municipal corporation operating by and through its PUBLIC UTILITIES COMMISSION

By: 
Ed Harrington, General Manager

Date: 01/20/2010

MEMORANDUM OF UNDERSTANDING
DB-118, Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Plants at City Hall & Davies
Symphony Hall

SCHEDULE OF FEES

Subject to the receipt of adequate documentation of staff time expended, the SFPUC shall reimburse the SFWMPAC for its reasonable staff time devoted to providing access to the Premises and reviewing and commenting on the Solar Power Project design, in accordance with the following schedule of fees:

<u>Employee Classification</u>	<u>7/1/09 - 6/30/10</u>	<u>7/1/10 - 6/30/11</u>
7120 Building & Grounds Superintendent		
Per Hour - Straight Time	\$56.60	*
Per Hour - Overtime	82.92	*
7205 Chief Engineer		
Per Hour - Straight Time	\$49.33	*
Per Hour - Overtime	72.27	*
7335 Senior Stationary Engineer		
Per Hour - Straight Time	\$44.06	*
Per Hour - Overtime	64.56	*
Hours worked between 5pm-12am	+8.5%	+8.5%
Hours worked between 12am-7am	+10%	+10%
7334 Stationary Engineer		
Per Hour - Straight Time	\$38.87	*
Per Hour - Overtime	56.96	*
Hours worked between 5pm-12am	+8.5%	+8.5%
Hours worked between 12am-7am	+10%	+10%
7377 Stage Electrician		
Per Hour - Straight Time	\$41.83	*
Per Hour - Overtime	62.74	*
8207 Building & Grounds Patrol Officer		
Per Hour - Straight Time	\$27.11	*
Per Hour - Overtime	40.52	*
Hours worked between 5pm-12am	+8%	+8%
Hours worked between 12am-7am	+10%	+10%

* Hourly rates for 7/1/10-6/30/11 to be confirmed following San Francisco Board of Supervisors' approval of Annual Salary Ordinance for Fiscal Year 2010-11.



Edwin M. Lee, Mayor
Naomi Kelly, City Administrator

**OFFICE OF THE
CITY ADMINISTRATOR
RISK MANAGEMENT DIVISION**



November 6, 2013

Pacific Gas and Electric Company
c/o EXIGIS LLC

**RE: PG&E GENERATING FACILITY INTERCONNECTION AGREEMENT FOR NON-EXPORT GENERATING FACILITIES – CITY AND COUNTY OF SAN FRANCISCO
GENERATING FACILITY ID 30S123447 – PRODUCER’S ELECTRIC SERVICE ACCOUNT
4734612089**

This letter certifies that the City and County of San Francisco is self-insured and self-funded for the following insurance programs, which cover the City and County of San Francisco, its officers and employees.

Comprehensive General Liability insurance in the amount of \$2,000,000 per occurrence and \$2,000,000 general aggregate limit for bodily injury, property damage, and personal injury to third parties for liability arising out of the City’s negligence in performance of this agreement.

Workers’ Compensation in Statutory amounts with Employer’s Liability of \$1,000,000 per accident, injury or illness.

Automobile Liability combined single limit per accident for bodily injury and property damage in the amount of \$1,000,000 per accident/incident.

The City and County of San Francisco’s self insurance program is not commercial insurance and has no legal capacity to name another entity as additional insured.

Do not hesitate to contact this office should you have any questions.

Sincerely,

Matt Hansen
Director

cc: Jamie Seidel, SFPUC

The PV system power output (from the PV system installed on the south roof area) would be routed along the roof floor level to the inverter to be located on the south-east portion of the roof (to convert the DC power to AC power). The PV system power output (from the PV system installed on the north roof area) would be routed over the east pediment mechanical room to the inverter at the location described above (please refer to Appendix D – Conduit Options). The PV system's overall power output would be routed in conduit down through the roof near the inverter to the mechanical attic space below the roof, and to the electrical bus duct located in the southeast 4th floor electrical room through this room's ceiling, and fed into the City Hall's electrical distribution system.

Davies Symphony Hall

The Davies Symphony Hall is located at 201 Van Ness Avenue in San Francisco. The proposed Solar System at Davies Symphony Hall would be a 214 kW solar photovoltaic (PV) low-height, rack-mounted, non-penetrating system installed on a portion of the top roof area, approximately 14,300 square feet, and a portion of the lower south roof area, approximately 3,500 square feet or a total of 17,800 square feet (please refer to Appendix B - PV System Layout Plan). The existing roof is an aggregate surface built-up membrane roof installed in 1998 (please refer to Appendix C – Roof Photographs). The PV system would reduce peak demand loads and daily energy consumption for the facility. The project would generate a minimum of 269,000 kWh per year and would offset a portion of the current load for the building.

The PV system power output (from the PV system installed on both roof levels) would be routed to the inverter to be located on the lower west roof in the sunken heating, venting, and air conditioning (HVAC) mechanical equipment area (to convert the DC power to AC power). The inverter power output would then be routed to the electrical bus duct located in the mezzanine level emergency generator electrical room adjacent to the sunken HVAC mechanical equipment, and fed into the Davies Symphony Hall's electrical distribution system. The conduit from the top roof solar array would go through the top roof mechanical room, down through the mechanical room floor into the attic truss area, across this attic truss area to a mechanical duct, down through this mechanical duct, exiting through the wall to the lower south roof area, and then to the inverter near the roof floor level. The conduit from the lower west roof solar array would be routed near the roof floor level to the inverter mentioned above (please refer to Appendix B – PV System Layout Plan).

Specifications Common to Both Sites

The PV systems would also include a small weather station to record weather data (wind speed and direction, ambient temperature, and solar insolation) and a data acquisition system to record PV system output. In addition, the SFPUC would install a flat panel, free-standing display unit (please refer to Appendix E – Display Unit Location Options) that shows the energy generated by the project, as well as the environmental savings of the project (e.g. – decrease in carbon dioxide emissions, etc.). The display would also showcase the SFPUC's other renewable energy projects that have been installed in the City of San Francisco. The display would show a series of images and information on each of the various projects. It would describe differences in the project's designs and technologies, as well as educate the public on how solar energy works. The display would also include some background information on the SFPUC, its hydroelectric power plants, and the customer's that the SFPUC serves.

Currently, three location options for the display unit in City Hall are being considered. One location would be the southeastern corner of the North Light Well, a second location option would be along the

southern wall of the North Light Court, and a third option would be adjacent to the information kiosk near the Sheriff's desk on the eastern side of City Hall's main lobby.

Currently, three location options for the display unit at Davies Symphony Hall are being considered. One location would be adjacent to the elevator, a second location option would be located in the lobby, and a third option would be adjacent to the Coat Check Room.

The crystalline PV panels would have a minimum rating of 12 watts (DC-Peak STC) per square foot. PV modules and inverters would have Underwriter's Lab (U/L) certification and California Energy Commission (CEC) approval. The PV Panels would maintain a Class C fire rating. The designs would provide a minimum 3-foot perimeter around the roof's perimeter and clear access to existing fire fighting standpipes or other emergency equipment on the roof, if present, as required by the San Francisco Building Code. In addition, the San Francisco Fire Department would review and approve an electrical permit to assure sufficient emergency access, and the San Francisco Building Inspection Department would review and approve the electrical design.

Background

San Francisco City Hall was built in 1915 in the Beau-Arts style. City Hall was designed by architect Arthur Brown, Jr. San Francisco City Hall is located within the San Francisco Civic Center Historic District. The San Francisco Civic Center Historic District was designated as an historic district in 1994 by the San Francisco Landmarks Preservation Advisory Board. City Hall, as part of the District, was designated as a Contributory building. City Hall was also designated a San Francisco Landmark (Landmark No. 21) in 1970. The United States Department of the Interior listed City Hall and the Civic Center Historic District as an historic resource on the National Register of Historic Places in 1978.

Davies Symphony Hall was built in 1980 and is the home of the San Francisco Symphony. In addition to the concert hall itself, an adjoining building contains the Robert H. Zellerbach Rehearsal Hall, comprising three separate rehearsal spaces. Davies Symphony Hall is also located within the San Francisco Civic Center Historic District and is deemed to be Noncontributory.

The proposed project would require a Certificate of Appropriateness per Section 1006 of the Planning Code and would be granted by the Planning Department following consideration and approval by the Planning Commission if the proposed alterations would have no significant impact upon the Civic Center Historic District or City Hall (Landmark No. 21). The standards for the review of applications for Certificates of Appropriateness include, but are not limited to a finding that the proposed alteration preserves the significant exterior architectural features and does not adversely affect the special character or historical, architectural, or aesthetic interest or value of the Landmark or Historic District.

Environmental Impacts:

Aesthetics:

The proposed solar PV systems would be installed on the roofs of both buildings and electrical conduit would be installed within the buildings and within existing electrical chases or walls out of view from the public. Architectural or historic features of the buildings would not be disturbed or altered due to the construction of the proposed solar PV project. The roofs have several existing

heating/ventilation/air conditioning (HVAC) mechanical equipment and vents extending above the roofline (see attached photographs), but they are not visible from the street level. The proposed solar PV panels would be mounted flat on a non-penetrating racking system on the roofs, set back a minimum of 3-feet from the roof perimeter, and would not be visible from the street level. The inverters would be installed adjacent to the mechanical equipment and would also not be visible from the street level. The proposed solar PV systems would not be visible from the street level and, therefore, would not have a substantial effect on scenic resources, vistas, or on the visual character of the area.

The proposed display unit at City Hall would be a free-standing unit and would not be attached to the walls. Therefore, there would be no impacts to the historic structure of the building.

Cultural Resources:

San Francisco City Hall was built in 1915 in the Beau-Arts style, is located within the San Francisco Civic Center Historic District and, as such, was designated as a Contributory building. City Hall was also designated a San Francisco Landmark (Landmark No. 21) in 1970. The United States Department of the Interior listed City Hall and the Civic Center Historic District as an historic resource on the National Register of Historic Places in 1978. Davies Symphony Hall was built in 1980, and is also located within the San Francisco Civic Center Historic District and is deemed to be Noncontributory.

The proposed solar PV systems would be installed on the two buildings' roofs and tied into the buildings' existing electrical systems through conduits to the existing buildings' electrical rooms and meters utilizing existing electrical conduit chases or inside of walls out of view from the public. Interior or exterior architectural or historic features of the buildings would not be disturbed or altered due to the construction of the proposed solar PV project. Therefore, it is not anticipated that the proposed solar PV project would cause impacts to cultural or historic resources.

Hazards & Hazardous Materials:

A record search was conducted, for both sites, on the California Department of Toxic Substances Control (DTSC; Cortese List; Envirostor) and the California State Water Quality Control Board (Geotracker) databases (see attached documentation). The DTSC database did not identify hazardous materials issue for either site. However, the Geotracker database one hazardous materials case file for each of the sites. Davies Symphony Hall had a leaking underground diesel fuel tank that was removed and the soil remediated. This case was closed as of January 30, 2007. The case file identified for City Hall is in error as the case involved a leaking underground gasoline fuel tank located at the Shell Oil Gas Station at 400 South Van Ness Avenue and not at City Hall located at 1 Dr. Carlton B. Goodlett Place. Copies of each of these case files are attached (please refer to Appendix F – Hazardous Materials Record Search) as verification of the database search and the resolution of each of the cases. Therefore, no hazardous materials releases or issues currently exist at either of the two proposed project sites, and it is not anticipated that the proposed solar PV project would cause any hazardous material impacts to the project sites.

Population & Housing:

The proposed project would install a 100 kW solar PV systems on the roof of City Hall and a 214 kW solar PV system on the roof of Davies Symphony Hall. The proposed solar PV systems would provide electricity consumed at each of the sites. There would be no net electricity exports to the

existing PG&E grid. The proposed project's electricity produced by the solar panels would offset the existing electricity provided to each of the sites by Hetch Hetchy (SFPUC). The Hetch Hetchy power offset by the project would ultimately be utilized by other City-owned buildings. Therefore, the proposed project would not provide additional electricity capacity to PG&E or induce population growth by serving new customers.

Transportation/Traffic:

The proposed solar PV project would require the use of a crane to place the solar panels, inverters and electrical conduit on each of the buildings' roofs. This would occur on the weekend, likely a Sunday morning, in order not to significantly impact street traffic. The traffic impacts associated with the project would not be significant relative to the existing capacity of the surrounding street system.

In addition to the use of the crane, several (three to five) employee vehicles would access the project sites to drop-off employees and tools. These vehicles would be required to utilize existing street parking. Because of the minor number of vehicles access the sites, the project's impact on area parking availability would not be substantial.

Therefore, construction-related impacts, as identified above, generally would not be considered significant due to their temporary and limited duration.

Air Quality:

The proposed solar PV project, once constructed, would have no air emissions and, therefore, would cause no significant impacts to air quality. The construction of the project, however, would temporarily release minor amounts of vehicle/equipment exhaust and particulate matter (vehicle/equipment exhaust and dust). These air emissions would be considered temporary impacts. Therefore, the proposed solar PV project would not exceed local and Bay Area Air Quality Management District (BAAQMD) regulations.

Utilities & Service Systems:

The proposed project would install a 100 kW solar PV systems on the roof of City Hall and a 214 kW solar PV system on the roof of Davies Symphony Hall. As stated above, the proposed project would not provide additional electricity capacity to PG&E's electrical grid, provide electricity to the public, or serve new customers. The proposed project's electricity produced by the solar panels would offset the existing electricity provided to each of the sites by Hetch Hetchy (SFPUC). Therefore, the proposed project would not require the construction of new electrical generation facilities or cause significant environmental impacts.

Public Services:

The proposed solar PV project would install solar systems on the roofs of City Hall and Davies Symphony Hall and be connected to each of the buildings' existing electrical systems. The proposed project construction would not require the closure of either of the buildings; would not cause significant adverse impacts to either building, or any significant adverse impacts to the service ratios, response times or other performance objectives for any of the public services. Therefore, no impacts to existing public services would occur because of the proposed project.

Land Use & Planning:

San Francisco's General Plan, Environmental Protection Element establishes several Policies to encourage local government departments to fund and construct renewable energy (solar PV) systems to reduce the use of fossil fuel energy sources. Some of these Policies are: Policy 12.4 - Encourage investment in capital projects that will increase municipal energy production in an environmentally responsible manner; Policy 16.1 - Develop land use policies that will encourage the use of renewable energy sources; Policy 16.2 - Remove obstacles to energy conservation and renewable energy systems in zoning and building codes; and Policy 18.1 - Promote government and private financing partnerships to carry out local energy programs.

In addition, the San Francisco Department of Building Inspection recently developed a streamlined permit process that allows applicants to complete their permit processing over the counter in a manner of minutes.

Therefore, the proposed solar PV project does not conflict with any existing land use plan or policy.

Cumulative Impacts:

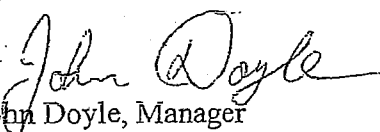
The proposed solar PV project would be designed to meet all local and State regulations. In addition, the above environmental issues were evaluated and it was determined that the proposed project would not cause any significant impacts. Therefore, the proposed solar PV project would not substantially contribute to any cumulative environmental impacts.

CEQA Compliance Recommendation

The SFPUC has determined that the proposed Sustainable Civic Center District: Solar Photovoltaic Renewable Energy Project at City Hall & Davies Symphony Hall is categorically exempt under CEQA Guidelines Section 15301, Class 1 – The operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of the lead agency's determination; and Section 15303, Class 3 – The construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure.

The proposed solar PV project would be constructed on the roofs of City Hall and Davies Symphony Hall, and would not cause significant or adverse impacts to the San Francisco Civic Center Historic District or to the historic resources of City Hall. Therefore, the SFPUC is requesting a Categorical Exemption under the above CEQA Sections. Should you have any questions regarding the proposed project, please contact Randall Smith, Utility Specialist at (415) 934-5716.

Sincerely,



John Doyle, Manager
Energy Generation Projects
Power Enterprise
San Francisco Public Utilities Commission

Attachments:

- Appendix A –
 - CEQA Environmental Checklist, Categorical Exemption Determination – City Hall
 - CEQA Environmental Checklist, Categorical Exemption Determination – Davies Symphony Hall
- Appendix B – Photovoltaic System Layout Plan
- Appendix C – Roof Pictures
- Appendix D – Conduit Options
- Appendix E – Display Unit Location Options
- Appendix F – Hazardous Materials Record Search

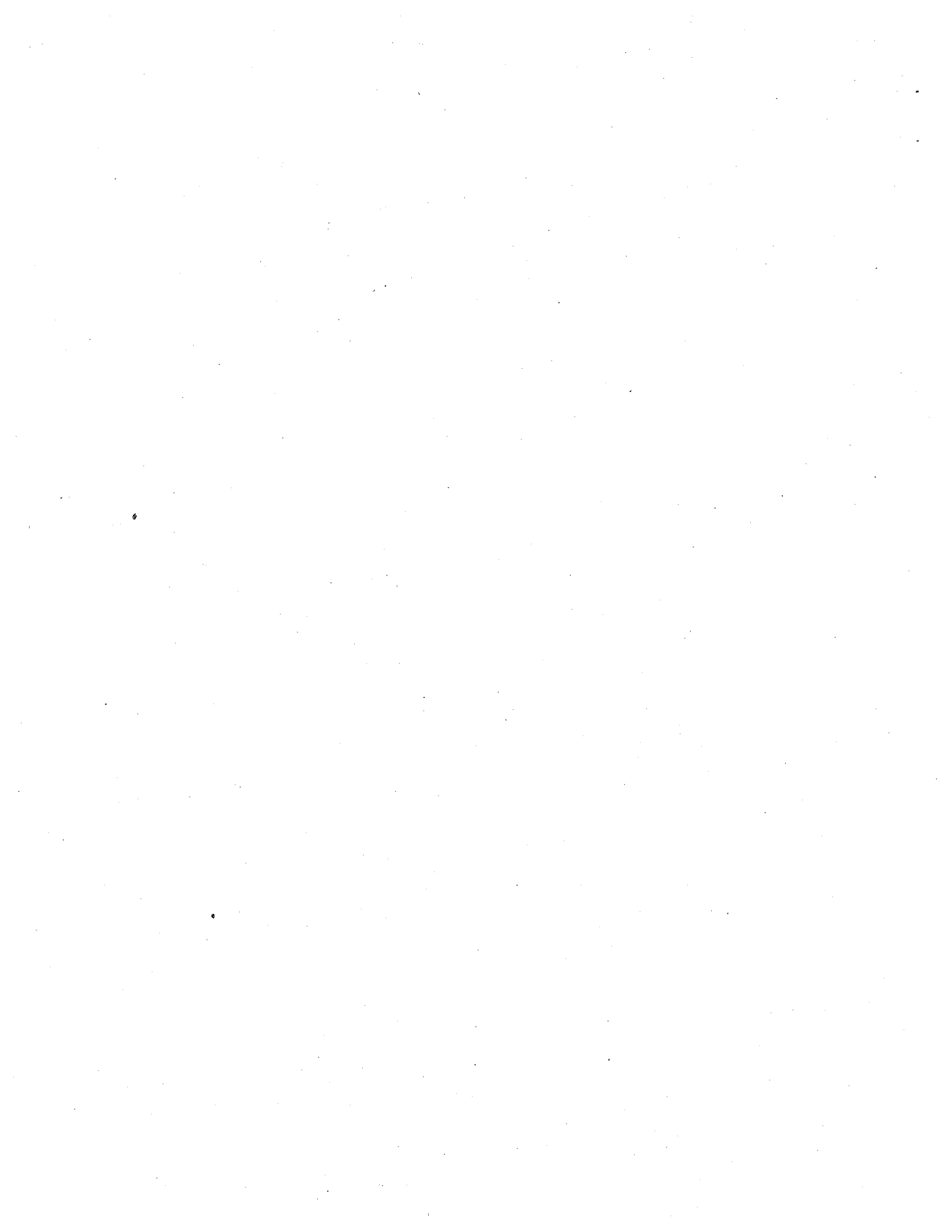
Cc: Tina Tam, Historic Resources Coordinator, San Francisco Planning Department
Karen Kubick, Manager, Infrastructure Development, SFPUC
Randall Smith, Utility Specialist, SFPUC
Irina Torrey, Manager, Bureau of Environmental Management, SFPUC

Categorical exemption class 1(c)(1):

Additions to existing structures provided that the addition will not result in an increase of more than 50% of the floor area of the structure before the addition, or 2,500 ft², whichever is less.

Sophia Middlebrook 05/11/09

CATEGORICALLY EXEMPT FROM ENVIRONMENTAL REVIEW
Class 1(c)(1)





SAN FRANCISCO PLANNING DEPARTMENT

Historical Resource Review Form

Address of Project: Davies Symphony Hall (270-290 Hayes Street)

Cross Streets: Franklin Street and Van Ness Avenue Block/Lot: 0810/001

Case No. 2009.0316E Permit No. _____

1650 Mission St.
Suite 400
San Francisco,
CA 94103-2479

Reception:
415.558.6378

Fax:
415.558.6409

Planning
Information:
415.558.6377

STEP 1: EXEMPTION CLASS

If neither class applies, an *Environmental Exemption Application* is required.

- Class 1 – Existing Facilities:** Operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures, facilities, mechanical equipment, or topographical features, involving negligible or no expansion of use beyond that existing at the time of this determination.
- Class 3 – New Construction or Conversion of Small Structures:** Construction and location of limited numbers of new, small facilities or structures; installation of small new equipment and facilities in small structures; and the conversion of existing small structures from one use to another where only minor modifications are made in the exterior of the structure.

STEP 2: HISTORICAL RESOURCE STATUS (Refer to *Preservation Bulletin 16.*)

- Category A: Known Historical Resource** Proceed to Step 3.
Preservation Technical Specialist Review
- Category B: Potential Historical Resource** Proceed to Step 3.
- Category C: Not a Historical Resource** Proceed to Step 4.
No Further Historical Resource Review Required.

STEP 3: APPROVED WORK CHECKLIST

Per plans dated: _____

- Project falls within the scope of work described below. Proceed to Step 4. No Further Historical Resource Review Required.
- Project does not fall within the scope of work described below. Proceed to Step 4. Further Historical Resource Review Required.
- If 4 or more boxes are initialed, Preservation Technical Specialist review is required.

Planner's Initials	Work Description
	1. Interior alterations. Publicly-accessible spaces (i.e. lobby, auditorium, or sanctuary) require Preservation Technical Specialist review.
	2. Regular maintenance or restorative work that is based upon documentation of the building's historic appearance (i.e., photographs, physical evidence, historic drawings or documents, or matching buildings).
	3. In-kind window replacement at visible facades. (The size, configuration, operation, material, and exterior profiles of the <i>historic</i> windows must be matched.)

	4. Window replacement or installation of new openings at non-visible facades.
	5. Construction of deck or terrace that is not visible from any immediately adjacent public right-of-way.
X	6. Installation of mechanical equipment at the roof which is not visible from any immediately adjacent public right-of-way.
	7. Installation of dormers that meet the requirements for exemption from public notification under <i>Zoning Administrator Bulletin: Dormer Windows, No. 96.2.</i>
	8. Installation of garage opening that meets the requirements of <i>Zoning Administrator Bulletin: Procedures and Criteria for Adding Garages to Existing Residential Structures, No. 2006.1b.</i>
	9. Horizontal addition that is not visible from the adjacent public right-of-way for 150' in each direction; does not extend vertically beyond the floor level of the top story of the structure; and does not have a footprint that is more than 50% larger than that of the original building.
	10. Vertical addition that is not visible from the adjacent public right-of-way for 150' in each direction; is only a single story in height; and does not cause the removal of architectural significant roofing features such as ornate dormers, towers, or slate shingles.

Preservation Technical Specialist Review Required for work listed below:

	11. Window replacement at visible facades that is not in-kind but meets the <i>Secretary of the Interior Standards for the Treatment of Historic Properties.</i>
	12. Sign installation at Category A properties.
	13. Façade alterations that do not cause the removal or alteration of any significant architectural features (i.e. storefront replacement, new openings, or new elements).
	14. Raising the building.
	15. Horizontal or vertical additions, including mechanical equipment, that are minimally visible from a public right-of-way and that meet the <i>Secretary of the Interior Standards for the Treatment of Historic Properties.</i>
X	16. Misc.

STEP 4: RECOMMENDATION

No Further Historical Resource Review Required.

Further Historical Resource Review Required: File *Environmental Exemption Application.*

Notes: The subject building - Davies Symphony Hall - is a non-contributor to the Civic Center historic district. The solar panels will have no significant impact to the historic district.

Planner Name: Sophie Middlebrook

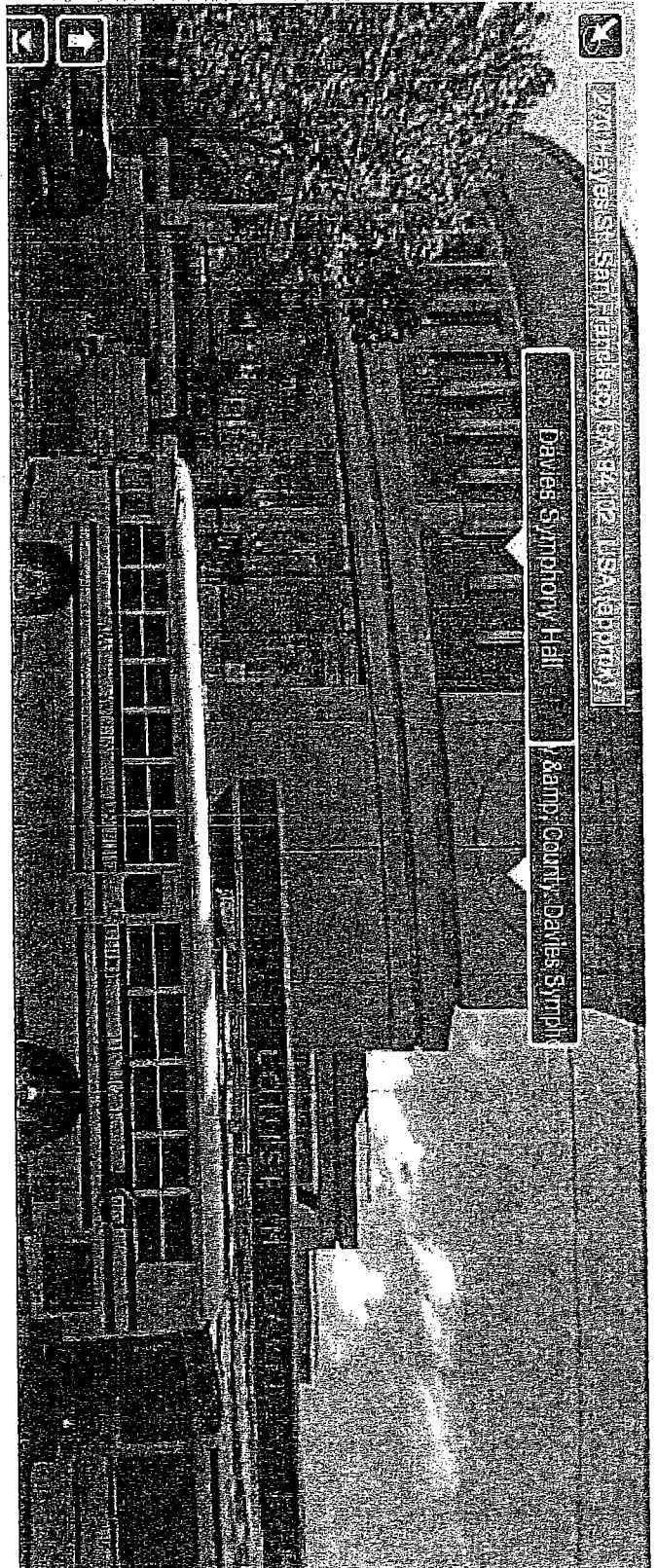
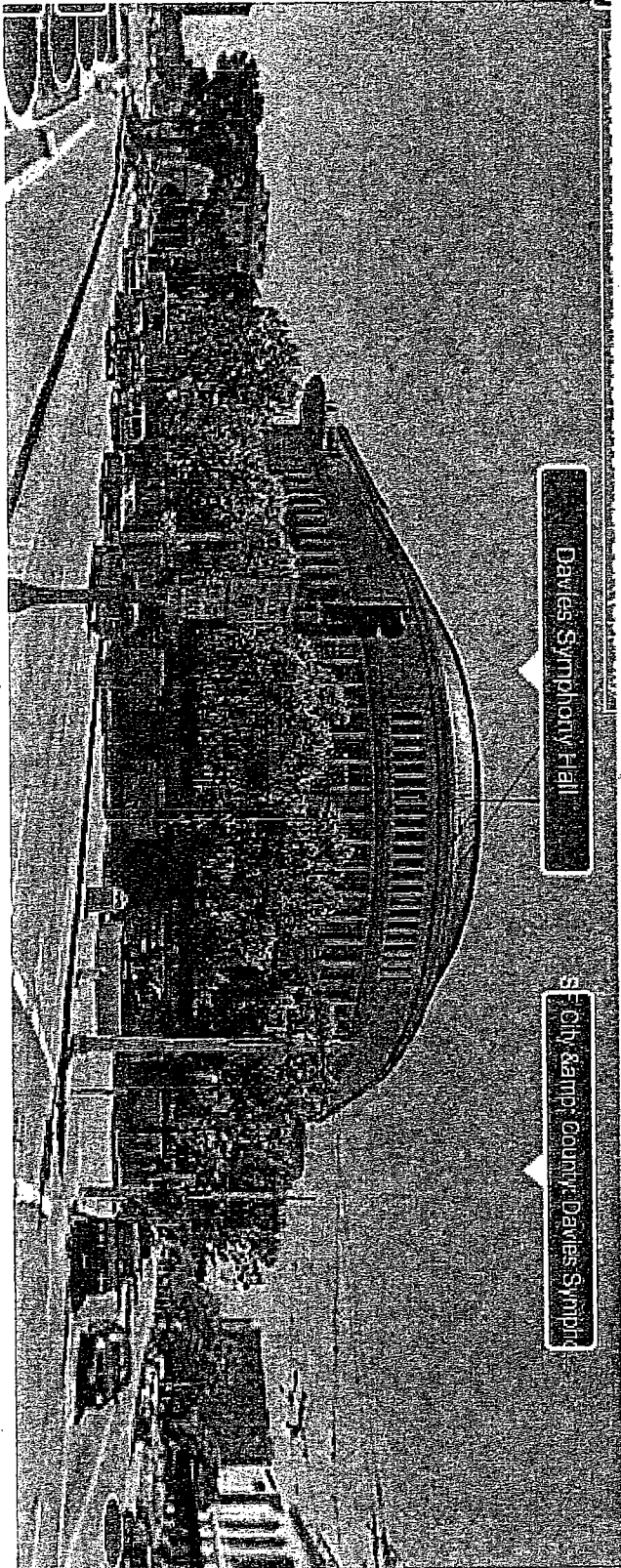
Signature: [Signature] Date: 05/11/09

Preservation Technical Specialist Name: Sophie Middlebrook

Signature: [Signature] Date: 05/11/09

Save to [I:\Building Permit Applications or I:\Cases].

If "Category A," save to [I:\MEA\Historical Resources\Category A Admin Catex].





Pacific Gas and Electric Company
San Francisco, California
U 39

Revised
Revised
Cancelling

Cal. P.U.C. Sheet No.
Cal. P.U.C. Sheet No.

32037-E*
26478-E

Electric Sample Form No. 79-973
Generating Facility Interconnection Agreement
For Non-Export Generating Facilities

T

Please Refer to Attached
Sample Form

Advice Letter No: 4110-E
Decision No. 12-09-018

Issued by
Brian K. Cherry
Vice President
Regulatory Relations

Date Filed September 20, 2012
Effective September 20, 2012
Resolution No. _____



**Pacific Gas and
Electric Company™**

WE DELIVER ENERGY.™

**PG&E GENERATING FACILITY
INTERCONNECTION
AGREEMENT FOR NON-
EXPORT GENERATING
FACILITIES**

This *Generating Facility Interconnection Agreement for Non-Export Generating Facilities* (Agreement) is entered into by and between City & County of San Francisco, a governmental agency (Producer), and Pacific Gas and Electric Company (PG&E) a California Corporation. Producer and PG&E are sometimes also referred to in this Agreement jointly as "Parties" or individually as "Party." In consideration of the mutual promises and obligations stated in this Agreement and its attachments, the Parties agree as follows:

1. SCOPE AND PURPOSE

This Agreement provides for Producer to interconnect and operate a Non-Export Generating Facility in parallel with PG&E's Distribution System to serve the electrical loads connected to the electric service account that PG&E uses to interconnect Producer's Generating Facility (or, where permitted under Section 218 of the California Public Utilities Code (PUC), the electric loads of an on-site or neighboring party lawfully connected to Producer's Generating Facility through Producer's circuits).

2. SUMMARY AND DESCRIPTION OF PRODUCER'S GENERATING FACILITY

2.1 A description of the Generating Facility, including a summary of its significant components and a single-line diagram showing the general arrangement of how Producer's Generating Facility and loads are interconnected with PG&E's Distribution System, are attached to and made a part of this Agreement. (Supplied by Producer as Appendix A).

2.2 Generating Facility identification number: 30S123447 (Assigned by PG&E).

2.3 Producer's electric service account number: 4734612089 (Assigned by PG&E).

2.4 Name and address used by PG&E to locate the electric service account used to interconnect the Generating Facility with PG&E's Distribution System:

Name: City & County of San Francisco (Davies Symphony Hall)

Address: 201 Van Ness Ave @ Grove St

City/Zip Code: San Francisco, CA 94102

2.5 The Gross Nameplate Rating of the Generating Facility is: 165.6 kW.

2.6 The Net Nameplate Rating of the Generating Facility is 163.9 kW.

2.7 The expected annual energy production of the Generating Facility is 230,000 kWh.

2.8 For the purpose of securing the Competition Transition Charge exemption available under Section 372 of the California Public Utilities Code (PUC), Producer hereby declares that the Generating Facility 0 does / ~~Ø~~ does not meet the requirements for Cogeneration as such term is used in Section 216.6 of the California Public Utilities Code.

PACIFIC GAS AND ELECTRIC COMPANY
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2.9 The Generating Facility's expected date of Initial Operation is December 20, 2013.
The expected date of Initial Operation shall be within two years of the date of this Agreement.

3. DOCUMENTS INCLUDED; DEFINED TERMS

3.1 This Agreement includes the following exhibits which are specifically incorporated herein and made a part of this Agreement.

Appendix A- Description of Generating Facility and Single-Line Diagram (Supplied by Producer).

Appendix B- Copies of Rules 2 and 21 and other selected rules and tariffs of PG&E (Supplied by PG&E).

Appendix C- A Copy of *PG&E's Agreement for Installation of Allocation of Special Facilities for Parallel Operation of Nonutility-Owned Generation and/or Electrical Standby Service* (Form 79-280) (Special Facility Agreement), if applicable, (Formed by the Parties).

3.2 When initially capitalized, whether in the singular or in the plural, the terms used herein shall have the meanings assigned to them either in this Agreement or in PG&E's Rule 21, Section C.

4. TERM AND TERMINATION

4.1 This Agreement shall become effective as of the last date entered in Section 16, below. The Agreement shall continue in full force and effect until the earliest date that one of the following events occurs:

(a) The Parties agree in writing to terminate the Agreement.

(b) Unless otherwise agreed in writing by the Parties, at 12:01 A.M. on the day following the date the electric service account through which Producer's Generating Facility is interconnected to PG&E's Distribution System is closed or terminated.

(c) At 12:01 A.M. on the 61st day after Producer or PG&E provides written Notice pursuant to Section 9 below to the other Party of Producer's or PG&E's intent to terminate this Agreement.

4.2 Producer may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for any reason. PG&E may elect to terminate this Agreement pursuant to the terms of Section 4.1(c) for one or more of the following reasons:

(a) A change in applicable rules, tariffs, and regulations, as approved or directed by the Commission, or a change in any local, state or federal law, statute or regulation, either of which materially alters or otherwise affects PG&E's ability or obligation to perform PG&E's duties under this Agreement; or,

PACIFIC GAS AND ELECTRIC COMPANY

GENERATING FACILITY INTERCONNECTION AGREEMENT
FOR NON-EXPORT GENERATING FACILITIES

- (b) Producer fails to take all corrective actions specified in PG&E's Notice that Producer's Generating Facility is out of compliance with the terms of this Agreement within the time frame set forth in such Notice; or,
- (c) Producer fails to interconnect and operate the Generating Facility per the terms of this Agreement prior to 120 days after the date set forth in Section 2.9, above, as the Generating Facility's expected date of Initial Operation; or,
- (d) Producer abandons the Generating Facility. PG&E shall deem the Generating Facility to be abandoned if PG&E determines, in its sole opinion, the Generating Facility is non-operational and Producer does not provide a substantive response to PG&E Notice of its intent to terminate this Agreement as a result of Producer's apparent abandonment of the Generating Facility affirming Producer's intent and ability to continue to operate the Generating Facility.

4.3 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application to terminate this Agreement.

4.4 Any agreements attached to and incorporated into this Agreement shall terminate concurrently with this Agreement unless the Parties have agreed otherwise in writing.

5. GENERATING FACILITY, OPERATION AND CERTIFICATION REQUIREMENTS

5.1 The electric power produced by Producer's Generating Facility shall be used solely to serve electrical loads connected to the electric service account that PG&E uses to interconnect Producer's Generating Facility (or, where permitted under Section 218 of the PUC, the electric loads of an on-site or neighboring party lawfully connected to Producer's Generating Facility through Producer's circuits). Producer shall attempt in good faith to regulate the electric power output of Producer's Generating Facility so as to prevent the flow of electric energy from the Generating Facility to PG&E's electric system. Unless otherwise agreed upon in writing by the Parties, this Agreement does not provide for, nor otherwise require PG&E to receive, purchase, transmit, distribute, or store the electrical power produced by Producer's Generating Facility.

5.2 If Producer declares that its Generating Facility meets the requirements for Cogeneration as such term is used in Section 216.6 of the PUC (or any successor definition of Cogeneration) (Cogeneration Requirements), Producer warrants that, beginning on the date of Initial Operation and continuing throughout the term of this Agreement, its Generating Facility shall continue to meet such Cogeneration Requirements. If Producer becomes aware that its Generating Facility has ceased to meet the Cogeneration Requirements, Producer shall promptly provide PG&E with Notice of such change pursuant to Section 9.1 below. If at any time during the term of this Agreement PG&E determines in its sole discretion that Producer's Generating Facility may no longer meet the Cogeneration Requirements, PG&E may require Producer to provide evidence that its Generating Facility continues to meet the Cogeneration Requirements within 15 business days of PG&E's request

PACIFIC GAS AND ELECTRIC COMPANY

GENERATING FACILITY INTERCONNECTION AGREEMENT FOR NON-EXPORT GENERATING FACILITIES

for such evidence. Additionally, PG&E may periodically (typically, once per year) inspect Producer's Generating Facility and/or require documentation from Producer to monitor the Generating Facility's compliance with Section 216.6 of the PUC. If PG&E determines in its sole judgment that Producer either failed to provide evidence in a timely manner or that it provided insufficient evidence that its Generating Facility continues to meet the Cogeneration Requirements, then the Cogeneration status of the Generating Facility shall be deemed ineffective until such time as Producer again demonstrates to PG&E's reasonable satisfaction that the Generating Facility meets the requirements for a Cogeneration facility (the Status Change).

- 5.2.1 PG&E shall revise its records and the administration of this Agreement to reflect the Status Change and provide Notice to Producer of the Status Change pursuant to Section 9.1 below. This Notice shall specify the effective date of the Status Change. This date shall be the first day of the calendar year for which PG&E determines in its sole discretion that the Generating Facility first ceased to meet the Cogeneration Requirements. PG&E's Notice shall include an invoice for Competition Transition Charges (CTCs) that were not previously billed during the period between the effective date of the Status Change and the date of the Notice in reliance upon Producer's representations that the Generating Facility complied with the Cogeneration Requirements and therefore was eligible for the exemption from CTCs available under Section 372 of the PUC.
- 5.2.2 Any amounts to be paid or refunded by Producer, as may be invoiced by PG&E pursuant to the terms of this Section 5.2, shall be paid to PG&E within 30 days of Producer's receipt of such invoice.

6. INTERCONNECTION FACILITIES

- 6.1 Producer and/or PG&E, as appropriate, shall provide Interconnection Facilities that adequately protect PG&E's Distribution System, personnel, and other persons from damage or injury, which may be caused by the operation of Producer's Generating Facility.
- 6.2 Producer shall be solely responsible for the costs, design, purchase, construction, operation, and maintenance of the Interconnection Facilities that Producer owns.
- 6.3 If the provisions of PG&E's Rule 21, or any other tariff or rule approved by the Commission, requires PG&E to own and operate a portion of the Interconnection Facilities, Producer and PG&E shall promptly execute a Special Facilities Agreement that establishes and allocates responsibility for the design, installation, operation, maintenance, and ownership of the Interconnection Facilities. This Special Facilities Agreement shall be attached to and made a part of this Agreement as Appendix C.

7. LIMITATION OF LIABILITY

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Each Party's liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney's fees, relating to or arising from any act or omission in its performance of this agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever.

8. INSURANCE

8.1 In connection with Producer's performance of its duties and obligations under this Agreement, Producer shall maintain, during the term of this Agreement, general liability insurance with a combined single limit of not less than:

- (a) Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than one hundred (100) kW;
- (b) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
- (c) Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is twenty (20) kW or less.
- (d) Two hundred thousand dollars (\$200,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is ten (10) kW or less and Producer's Generating Facility is connected to an account receiving residential service from PG&E.

Such general liability insurance shall include coverage for "Premises-Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations."

- 8.2 The general liability insurance required in Section 8.1 shall, by endorsement to the policy or policies, (a) include PG&E as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that PG&E shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.
- 8.3 If Producer's Generating Facility is connected to an account receiving residential service from PG&E and the requirement of Section 8.2(a) prevents Producer from obtaining the insurance required in Section 8.1, then upon Producer's written Notice to PG&E in accordance with Section 9.1, the requirements of Section 8.2(a) shall be waived.
- 8.4 Evidence of the insurance required in Section 8.2 shall state that coverage provided is primary and is not in excess to or contributing with any insurance or self-insurance maintained by PG&E.

PACIFIC GAS AND ELECTRIC COMPANY
GENERATING FACILITY INTERCONNECTION AGREEMENT
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- 8.5 Producer agrees to furnish the required certificates and endorsements to PG&E prior to Initial Operation. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance.
- 8.6 If Producer is self-insured with an established record of self-insurance, Producer may comply with the following in lieu of Sections 8.1 through 8.4:
- (a) Producer shall provide to, PG&E, at least thirty (30) calendar days prior to the date of Initial Operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under Section 8.1.
 - (b) If Producer ceases to self-insure to the level required hereunder, or if Producer are unable to provide continuing evidence of Producer's ability to self-insure, Producer agrees to immediately obtain the coverage required under Section 8.1.
- 8.7 All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted via email or fax to the following:

Pacific Gas and Electric Company
c/o EXIGIS LLC
support@exigis.com
Fax: 646-755-3327

9. NOTICES

- 9.1 Any written notice, demand, or request required or authorized in connection with this Agreement (Notice) shall be deemed properly given if delivered in person or sent by first class mail, postage prepaid, to the person specified below:

If to PG&E: Pacific Gas and Electric Company
Attention: Generation Interconnection Services- Contract
Management
245 Market Street
Mail Code N7L
San Francisco, California 94105-1702

If to Producer: Producer Name: City & County of San Francisco
Address: 201 Van Ness Ave.
City: San Francisco, CA 94102
Phone: () 415-544-1537
FAX: () _____

- 9.2 A Party may change its address for Notices at any time by providing the other Party Notice of the change in accordance with Section 9.1.
- 9.3 The Parties may also designate operating representatives to conduct the daily communications, which may be necessary or convenient for the administration of this Agreement. Such designations, including names, addresses, and phone

PACIFIC GAS AND ELECTRIC COMPANY
GENERATING FACILITY INTERCONNECTION AGREEMENT
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numbers may be communicated or revised by one Party's Notice to the other.

10. REVIEW OF RECORDS AND DATA

10.1 PG&E shall have the right to review and obtain copies of Producer's operations and maintenance records, logs, or other information such as, unit availability, maintenance outages, circuit breaker operation requiring manual reset, relay targets and unusual events pertaining to Producer's Generating Facility or its interconnection with PG&E's Distribution System.

10.2 Producer authorizes to release to the California Energy Commission (CEC) information regarding Producer's facility, including customer name, location, size, and operational characteristics of the unit, as requested from time to time pursuant to the CEC's rules and regulations.

11. ASSIGNMENT

Producer shall not voluntarily assign its rights nor delegate its duties under this Agreement without PG&E's written consent. Any assignment or delegation Producer makes without PG&E's written consent shall not be valid. PG&E shall not unreasonably withhold its consent to Producer's assignment of this Agreement.

12. NON-WAIVER

None of the provisions of this Agreement shall be considered waived by a Party unless such waiver is given in writing. The failure of a Party to insist in any one or more instances upon strict performance of any of the provisions of this Agreement or to take advantage of any of its rights hereunder shall not be construed as a waiver of any such provisions or the relinquishment of any such rights for the future, but the same shall continue and remain in full force and effect.

13. GOVERNING LAW, JURISDICTION OF COMMISSION, INCLUSION OF PG&E's TARIFF SCHEDULES AND RULES

13.1 This Agreement shall be interpreted, governed, and construed under the laws of the State of California as if executed and to be performed wholly within the State of California without giving effect to choice of law provisions that might apply to the law of a different jurisdiction.

13.2 This Agreement shall, at all times, be subject to such changes or modifications by the Commission as it may from time to time direct in the exercise of its jurisdiction.

13.3 The interconnection and services provided under this Agreement shall at all times be subject to the terms and conditions set forth in the Tariff Schedules and Rules applicable to the electric service provided by, PG&E, which Tariff Schedules and Rules are hereby incorporated into this Agreement by this reference.

13.4 Notwithstanding any other provisions of this Agreement, PG&E shall have the right to unilaterally file with the Commission, pursuant to the Commission's rules and regulations, an application for change in rates, charges, classification, service, tariff or rule or any agreement relating thereto.

PACIFIC GAS AND ELECTRIC COMPANY

GENERATING FACILITY INTERCONNECTION AGREEMENT
FOR NON-EXPORT GENERATING FACILITIES

14. AMENDMENT AND MODIFICATION

This Agreement can only be amended or modified in writing, signed by both Parties.

15. ENTIRE AGREEMENT

This Agreement, including any incorporated Tariff Schedules and rules, contains the entire agreement and understanding between the Parties, their agents, and employees as to the subject matter of this Agreement. Each party also represents that in entering into this Agreement, it has not relied on any promise, inducement, representation, warranty, agreement or other statement not set forth in this Agreement or in the incorporated tariff schedules and rules.

16. SIGNATURES

IN WITNESS WHEREOF, the Parties hereto have caused two originals of this Agreement to be executed by their duly authorized representatives. This Agreement is effective as of the last date set forth below.

PRODUCER'S NAME

PACIFIC GAS AND ELECTRIC COMPANY

By: _____
Name: _____
Title: _____
Date: _____

By: _____
Name: Kevin Galvin
Title: Supervisor, Electric Generation Interconnection
Date: _____

**GENERATING FACILITY INTERCONNECTION AGREEMENT
FOR NON-EXPORT GENERATING FACILITIES
PACIFIC GAS AND ELECTRIC COMPANY**

**APPENDIX A
DESCRIPTION OF GENERATING FACILITY
AND SINGLE-LINE DIAGRAM,
(Provided by Producer)**

PACIFIC GAS AND ELECTRIC COMPANY
GENERATING FACILITY INTERCONNECTION AGREEMENT
FOR NON-EXPORT GENERATING FACILITIES

APPENDIX B
RULES "2" AND "21"
(and any other Tariffs pertinent to the situation)
(Provided by PG&E)

(Note: PG&E's tariffs are included for reference only and shall at all times be subject to such changes or modifications by the Commission as the Commission may, from time to time, direct in the exercise of its jurisdiction.)

PACIFIC GAS AND ELECTRIC COMPANY
GENERATING FACILITY INTERCONNECTION AGREEMENT
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APPENDIX C
(If Applicable)
RULE 21 "SPECIAL FACILITIES" AGREEMENT
(Formed between the Parties)

1 [Solar Power Projects Long Term Interconnection Agreements.]
2

3 **Resolution authorizing the San Francisco Public Utilities Commission General Manager**
4 **to enter into long term interconnection agreements for photovoltaic power plants**
5 **projects on City buildings, pursuant to San Francisco Charter Section 9.118.**
6

7 WHEREAS, The San Francisco electorate in November 2001 adopted Propositions B
8 and H, requiring the development and use of renewable energy on buildings owned by the
9 City and County of San Francisco; and

10 WHEREAS, The San Francisco Public Utilities Commission (SFPUC) was given
11 responsibility for implementing those renewable energy projects; and,

12 WHEREAS, The SFPUC has installed several photovoltaic power plant systems on
13 City Buildings, including the Moscone Center, the Southeast Treatment Plant and the
14 recycling facility at Pier 96; and

15 WHEREAS, the construction, or installation and operation agreements for these
16 Projects were approved by the Board of Supervisors respectively in the following resolutions:
17 Moscone Center, Resolution 621-02; Southeast Treatment Plant, Resolution 443-04; and Pier
18 96, Resolution 189-06; and

19 WHEREAS, The SFPUC has authorized and developed five additional projects that
20 are nearing completion, including Chinatown Public Library, Maxine Hall Medical Center, City
21 Distribution Division (CDD) Warehouse, North Point Treatment Plant and San Francisco
22 International Airport Terminal 3 rooftop (the Solar Projects); and

23 WHEREAS, On August 8, 2006, the SFPUC authorized a contract with Design-Build
24 Solutions, Inc, the Power Enterprise funded agreement No. DB 112, Solar Photovoltaic
25 Renewable Energy Plants, for turnkey design and construction of two solar photovoltaic

1 renewable energy plants, for an amount not to exceed \$492,964.16 over the life of the
2 Chinatown Branch Public Library and Maxine Hall Neighborhood Medical Center projects;
3 and,

4 WHEREAS, On September 26, 2006, the SFPUC authorized a contract with Stellar
5 Energy Solutions, the Mayor's Energy Conservation Account-funded agreement No. DB-110-
6 R, Photovoltaic Power Plants at CDD and North Point, to provide design, construction, and
7 commissioning of a 86.75 kW photovoltaic system at City Distribution Division's warehouse
8 and a 157 kW system at North Point Wet Weather Facility for an amount not to exceed
9 \$2,968,434 ; and

10 WHEREAS, The Airport Commission awarded Airport Contract No. 8684, Terminal 3
11 Solar Power System to Bay Area Systems and Solutions, dba Bass Electric Company, in the
12 amount of \$5,533,608.00 and approved an additional \$100,000.00 for Type I Modifications;
13 and

14 WHEREAS, The SFPUC must enter into Generating Facility Interconnection
15 Agreements (GFIs) with Pacific Gas and Electric Company (PG&E) to interconnect and
16 operate the Solar Projects in parallel with PG&E's Distribution System and to serve the
17 electrical loads at the City buildings in question, and

18 WHEREAS, The GFIs for the Solar Projects are based on a form agreement
19 approved by the California Public Utilities Commission; and

20 WHEREAS, The term of the GFIs for the Solar Projects is indefinite and hence
21 exceeds ten (10) years, and thus is subject to approval by this Board of Supervisors pursuant
22 to San Francisco Charter section 9.118; and

23 WHEREAS, The GFIs for the Solar Projects are subject to termination by the City for
24 any reason upon sixty days notice; and

1 WHEREAS, It is to the City's benefit for the GFIA's to have indefinite terms since this
2 allows the Solar Projects to remain interconnected indefinitely subject to the City's right to
3 terminate the GFIA's and disconnect the Solar Projects for any reason, upon sixty days notice;
4 and

5 WHEREAS, In order to qualify for financial incentives for each of the pending Solar
6 Projects (with the exception of Chinatown Library, which is below the limit to qualify), the
7 SFPUC must execute the GFIA for each of the projects by certain deadlines to provide PG&E
8 with Proof of Authorization to interconnect the solar systems; such dates being Maxine Hall
9 (11/6/2007); City Distribution Division (11/8/2007); North Point (12/13/2007); and San
10 Francisco International Airport (12/29/2007); and

11 WHEREAS, Because of time considerations related to obtaining a sizeable financial
12 incentive, the SFPUC entered into a GFIA with PG&E for a solar project at Pier 96 with a term
13 of 9 year 11 months; and

14 WHEREAS, The SFPUC desires to amend the GFIA for Pier 96 to extend the term to
15 an indefinite term, subject to termination by the City for any reason, upon sixty days notice,
16 consistent with the GFIA's for the Solar Projects; and

17 WHEREAS, The City Risk Manager has approved the Limitation of Liability language
18 set forth in section 7 and the Insurance language set forth in section 8 of the GFIA's for the
19 Solar Projects and for Pier 96; and

20 WHEREAS, The SFPUC may also be required by PG&E to enter into an Export
21 Addendum (Uncompensated) to the GFIA to address the distribution of any unused energy
22 produced by those projects (the Export Addendums), which addendums modify the GFIA and
23 will remain in effect for the same term as the GFIA; and

1 WHEREAS, A copy of the GFIA's for the Solar Projects, with the exception of the
2 Chinatown Library project GFIA, which will be in substantially the same form as the other
3 Solar Project GFIA's, and the form of the Export Addendums are on file with the Clerk of the
4 Board of Supervisors in File No. ⁰⁷¹²⁹⁵, which is hereby declared to be a part of this resolution as
5 if set forth fully herein; and,

6 WHEREAS, This Board supports the use and development of renewable energy on
7 City Buildings; now, therefore, be it

8 RESOLVED, That this Board of Supervisors authorizes the San Francisco Public
9 Utilities Commission General Manager to enter into the GFIA's for the Solar Projects, and to
10 amend the Pier 96 GFIA to extend the term to an indefinite term, and to enter into Export
11 Addendums where required, pursuant to San Francisco Charter section 9.118.



City and County of San Francisco

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

Tails
Resolution

File Number: 071295

Date Passed:

Resolution authorizing the San Francisco Public Utilities Commission General Manager to enter into long term interconnection agreements for photovoltaic power plants projects on City buildings, pursuant to San Francisco Charter Section 9.118.

October 16, 2007 Board of Supervisors — ADOPTED


Ayes: 11 - Alioto-Pier, Ammiano, Daly, Dufty, Elsbernd, Chu, Maxwell,
McGoldrick, Mirkarimi, Peskin, Sandoval

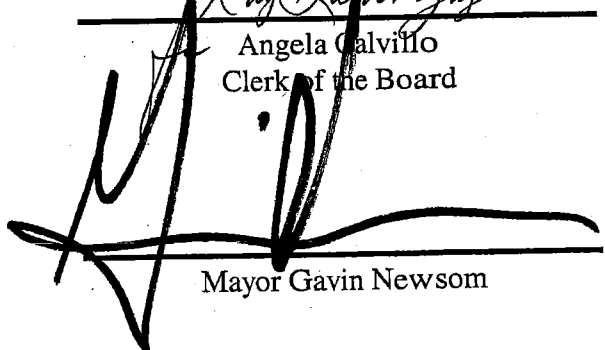
File No. 071295

I hereby certify that the foregoing Resolution was ADOPTED on October 16, 2007 by the Board of Supervisors of the City and County of San Francisco.

10/22/2007

Date Approved


Angela Galvillo
Clerk of the Board


Mayor Gavin Newsom

1 [Interconnection Agreements - Renewable Energy Generating Facilities]

2
3 **Resolution authorizing the San Francisco Public Utilities Commission General Manager**
4 **to enter into two long term interconnection agreements for renewable energy**
5 **generating facilities, pursuant to San Francisco Charter Section 9.118.**
6

7 WHEREAS, The San Francisco Public Utilities Commission (SFPUC) is responsible for
8 implementing renewable energy generating facilities for the City and County of San Francisco
9 (City); and,

10 WHEREAS, The SFPUC has installed renewable energy generating facilities on a
11 number of City properties; and

12 WHEREAS, The Board of Supervisors approved agreements for construction,
13 installation, and operating of these projects in the following resolutions: Moscone Center,
14 Resolution 621-02; Southeast Treatment Plant, Resolution 443-04; and Pier 96, Resolution
15 189-06; Chinatown Public Library, Maxine Hall Medical Center, City Distribution Division
16 Warehouse, North Point Treatment Plant and San Francisco International Airport Terminal 3,
17 Resolution 554-07; and

18 WHEREAS, The SFPUC has developed two additional solar projects at the Chinatown
19 Public Health Center and the MUNI Woods Motor Coach Facility (Solar Projects); and

20 WHEREAS, On November 12, 2009, the SFPUC authorized a contract with BASS
21 Electric in the amount of \$1,397,749, for turnkey design and construction of these two Solar
22 Projects (SFPUC Power Enterprise funded agreement No. DB 117 for Solar Photovoltaic
23 Renewable Energy Plants); and

24 WHEREAS, Construction and installation of the Solar Projects is nearly completed; and
25

1 WHEREAS, The SFPUC must enter into Generating Facility Interconnection
2 Agreements (GFIs) with Pacific Gas and Electric Company (PG&E) to interconnect and
3 operate the Solar Projects and to serve the electrical loads at each facility; and

4 WHEREAS, The GFIs for the Solar Projects are based on a PG&E form agreement
5 approved by the California Public Utilities Commission; and

6 WHEREAS, The term of the GFIs for the solar projects is of an indefinite duration,
7 because the term is commensurate with the useful lives of the Solar Projects, which are
8 expected to exceed ten (10) years; and

9 WHEREAS, The GFIs for the Solar Projects are subject to approval by this Board of
10 Supervisors, pursuant to San Francisco Charter section 9.118, because the agreements are
11 likely to exceed ten (10) years; and

12 WHEREAS, It is to the City's benefit for the GFIs to have terms commensurate with
13 the lives of the Solar Projects, because this ensures that the Solar Projects can remain
14 interconnected to PG&E's distribution system for their useful lives; and

15 WHEREAS, The GFIs for the Solar Projects are subject to termination by the City for
16 any reason upon sixty days notice; and

17 WHEREAS, The City Attorney has approved the limitation of liability language set forth
18 in section 7 of the GFIs for the Solar Projects; and

19 WHEREAS, The City's Risk Manager has approved the insurance language set forth in
20 section 8 of the GFIs for the Solar Projects; and

21 WHEREAS, A copy of the GFIA for each of the Solar Projects is on file with the Clerk of
22 the Board of Supervisors in File No. 111023, which are hereby declared to be a part of this
23 resolution as if set forth fully herein; now, therefore, be it

24 RESOLVED, That the Board of Supervisors supports and encourages the use and
25 development of renewable energy on City properties; and, be it

1 **FURTHER RESOLVED**, That the Board of Supervisors, pursuant to San Francisco
2 Charter section 9.118, authorizes the San Francisco Public Utilities Commission General
3 Manager to enter into **Generating Facilities Interconnection Agreements** for renewable energy
4 generating facilities located at the Chinatown Public Health Center and the MUNI Woods
5 Motor Coach Facility.

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City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 111023

Date Passed: October 18, 2011

Resolution authorizing the San Francisco Public Utilities Commission General Manager to enter into two long term interconnection agreements for renewable energy generating facilities, pursuant to San Francisco Charter Section 9.118.

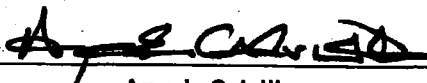
October 12, 2011 Budget and Finance Committee - RECOMMENDED


October 18, 2011 Board of Supervisors - ADOPTED

Ayes: 11 - Avalos, Campos, Chiu, Chu, Cohen, Eisbernd, Farrell, Kim, Mar, Mirkarimi and Wiener

File No. 111023

I hereby certify that the foregoing
Resolution was ADOPTED on 10/18/2011 by
the Board of Supervisors of the City and
County of San Francisco.


Angela Calvillo
Clerk of the Board


Mayor Edwin Lee


Date Approved

1 [Agreement with Pacific Gas and Electric Company to Connect a Solar Power Project]

2
3 **Resolution pursuant to San Francisco Charter Section 9.118(b) authorizing the San**
4 **Francisco Public Utilities Commission General Manager to enter into a long term**
5 **interconnection agreement with Pacific Gas and Electric Company for a solar power**
6 **project at the Alvarado Elementary School.**

7
8 WHEREAS, The San Francisco Public Utilities Commission (SFPUC) is responsible for
9 implementing renewable energy generating facilities for the City and County of San Francisco
10 (City); and,

11 WHEREAS, In Resolution No. 124-12, the Board of Supervisors approved a Master
12 License Agreement between the SFPUC and the San Francisco Unified School District
13 (SFUSD) authorizing the SFPUC to install and maintain solar power projects on certain
14 SFUSD buildings that the SFPUC and SFUSD mutually agree are suitable for such use; and

15 WHEREAS, The SFPUC and SFUSD have agreed that the first solar power project
16 under the Master License Agreement would be developed and installed at the Alvarado
17 Elementary School (the Project); and

18 WHEREAS, Funding for the Project was included in the SFPUC's capital plan for small
19 renewable energy projects; and

20 WHEREAS, The SFPUC has nearly completed the construction and installation of the
21 Project, and expects that it may begin generating electricity in September 2012; and

22 WHEREAS, In a determination dated June 12, 2012, the City and County of San
23 Francisco Planning Department found that the Project was categorically exempt from
24 environmental review under the California Environmental Quality Act; and

1 WHEREAS, The SFPUC must enter into a Generating Facility Interconnection
2 Agreement (Agreement) with Pacific Gas and Electric Company (PG&E) to interconnect the
3 Project to the electrical grid; and

4 WHEREAS, The Agreement is based on a PG&E form agreement approved by the
5 California Public Utilities Commission that is not subject to negotiation; and

6 WHEREAS, The term of the Agreement is commensurate with the useful life of the
7 Project in order to ensure that the Project can remain interconnected to PG&E's electrical
8 system for its useful life, which is expected to exceed ten (10) years; and

9 WHEREAS, The Agreement is subject to approval by the Board of Supervisors,
10 pursuant to San Francisco Charter section 9.118(b), because the term of the Agreement is
11 likely to exceed ten (10) years; and

12 WHEREAS, The Agreement is subject to termination by the City for any reason upon
13 sixty (60) days notice; and

14 WHEREAS, The City Attorney has approved the limitation of liability language set forth
15 in section 7 of the Agreement; and

16 WHEREAS, The City's Risk Manager has approved the insurance language set forth in
17 section 8 of the Agreement; and

18 WHEREAS, The terms and conditions of the Agreement do not require the payment of
19 any fees or costs to PG&E from the SFPUC; and

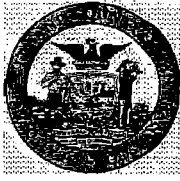
20 WHEREAS, A copy of the Agreement is on file with the Clerk of the Board of
21 Supervisors in File No. 120938, which is hereby declared to be a part of this resolution as if
22 set forth fully herein; and

23 WHEREAS, The Board of Supervisors recommends that, in connection with the
24 Project, the SFPUC work with the SFUSD to develop educational materials to instruct the
25

1 students of Alvarado Elementary School about renewable energy and the solar power facility
2 located at their school, now, therefore, be it

3 RESOLVED, That the Board of Supervisors supports and encourages the use and
4 development of renewable energy within the City and County of San Francisco, including by
5 installing solar power projects on buildings owned by the San Francisco Unified School
6 District and instructing students at those schools about the benefits of renewable energy; and,
7 be it

8 FURTHER RESOLVED, That the Board of Supervisors, pursuant to San Francisco
9 Charter section 9.118(b), authorizes the San Francisco Public Utilities Commission General
10 Manager to enter into a Generating Facility Interconnection Agreement with Pacific Gas and
11 Electric Company for the solar power project installed at the Alvarado Elementary School.



City and County of San Francisco

**Tails
Resolution**

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 120938

Date Passed: October 16, 2012

Resolution authorizing the San Francisco Public Utilities Commission General Manager to enter into a long term interconnection agreement with Pacific Gas and Electric Company for a solar power project at the Alvarado Elementary School pursuant to San Francisco Charter Section 9.118(b).

October 03, 2012 Budget and Finance Committee - RECOMMENDED

October 16, 2012 Board of Supervisors - ADOPTED

Ayes: 11 - Avalos, Campos, Chiu, Chu, Cohen, Elsbernd, Farrell, Kim, Mar, Olague and Wiener

File No. 120938

**I hereby certify that the foregoing
Resolution was ADOPTED on 10/16/2012 by
the Board of Supervisors of the City and
County of San Francisco.**

Angela Calvillo
Clerk of the Board

Mayor
Date Approved

1 [Interconnection Agreement - Pacific Gas and Electric Company - Solar Power Project - 700
2 Pennsylvania Avenue]

3 **Resolution authorizing the Public Utilities Commission's General Manager to enter into**
4 **a long term interconnection agreement with Pacific Gas and Electric Company, to**
5 **commence following Board approval, for a Solar Power Project at the Municipal**
6 **Transportation Agency building located 700 Pennsylvania Avenue, pursuant to Charter,**
7 **Section 9.118(b).**

8
9 WHEREAS, The San Francisco Public Utilities Commission (PUC) is responsible for
10 development of renewable energy generating facilities for the City and County of San
11 Francisco (City); and

12 WHEREAS, On March 30, 2009, the PUC and the San Francisco Municipal
13 Transportation Agency (MTA) entered into a Memorandum of Understanding providing for
14 installation and operation of an on-site solar photovoltaic system to be owned by the PUC at
15 the MTA facility at 700 Pennsylvania Avenue, San Francisco, California (the Project); and

16 WHEREAS, On June 18, 2013, the PUC and the San Francisco Department of Public
17 Works (DPW) entered a letter agreement providing for DPW to act as general contractor for
18 the construction of the Project; and

19 WHEREAS, Funding for the Project was included in the PUC's capital budget for
20 renewable energy projects; and

21 WHEREAS, DPW has completed the construction of the Project, and expects that it
22 may begin generating electricity in mid-October, upon execution of an interconnection
23 agreement with Pacific Gas and Electric Company (PG&E); and

1 WHEREAS, In a determination dated July 15, 2008, the City of County of San
2 Francisco Planning Department found that the Project was categorically exempt from
3 environmental review under the California Environmental Quality Act; and

4 WHEREAS, The City must enter into a Generating Facility Interconnection Agreement
5 (Agreement) with PG&E to interconnect the Project to the electrical grid; and

6 WHEREAS, In Resolutions 554-07, 441-11, and 374-12, the Board of Supervisors
7 approved similar interconnection agreements for other City on-site solar photovoltaic systems;
8 and

9 WHEREAS, The term of the Agreement is of an indefinite duration in order to ensure
10 that the Project can remain interconnected to PG&E's electrical system for its useful life,
11 which is expected to exceed ten (10) years; and

12 WHEREAS, The Agreement is subject to termination by the City for any reason upon
13 sixty (60) days notice; and

14 WHEREAS, The City Attorney has approved the limitation of liability language set forth
15 in section 7 of the Agreement; and

16 WHEREAS, The City's Risk Manager has approved the insurance language set forth in
17 section 8 of the Agreement and has provided to PG&E a letter certifying that the City is self-
18 insured and describing the terms of the City's self insurance program; and

19 WHEREAS, The terms and conditions of the Agreement do not require the payment of
20 any fees or costs by the City to PG&E; and

21 WHEREAS, A copy of the Agreement is on file with the Clerk of the Board of
22 Supervisors in File No. 130856, which is hereby declared to be a part of this motion as if set
23 forth fully herein; now, therefore, be it

24 RESOLVED, That the Board of Supervisors authorizes the San Francisco Public
25 Utilities Commission General Manager to enter into the Agreement with Pacific Gas and

1 Electric Company for interconnection of the Project at the San Francisco Municipal
2 Transportation Agency building at 700 Pennsylvania Avenue , pursuant to San Francisco
3 Charter section 9.118(b), and, be it

4 FURTHER RESOLVED, That within thirty (30) days of the agreement being fully
5 executed by all parties, the General Manager of the San Francisco Public Utilities
6 Commission shall provide the final agreement to the Clerk of the Board for inclusion into the
7 official file.

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City and County of San Francisco
Tails
Resolution

City Hall
1 Dr. Carlton B. Goodlett Place
San Francisco, CA 94102-4689

File Number: 130856

Date Passed: October 22, 2013

Resolution authorizing the Public Utilities Commission's General Manager to enter into a long term interconnection agreement with Pacific Gas and Electric Company, to commence following Board approval, for a Solar Power Project at the Municipal Transportation Agency building located 700 Pennsylvania Avenue, pursuant to Charter, Section 9.118(b).

October 09, 2013 Budget and Finance Committee - RECOMMENDED

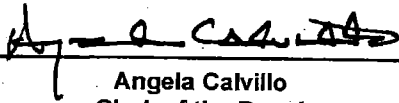
October 22, 2013 Board of Supervisors - ADOPTED


Ayes: 9 - Avalos, Breed, Campos, Chiu, Cohen, Farrell, Mar, Tang and Yee

Excused: 2 - Kim and Wiener

File No. 130856

I hereby certify that the foregoing
Resolution was ADOPTED on 10/22/2013 by
the Board of Supervisors of the City and
County of San Francisco.


Angela Calvillo
Clerk of the Board


Mayor


Date Approved

Wong, Linda (BOS)

From: Hagan, Erin [EHagan@sfgwater.org]
Sent: Thursday, December 19, 2013 3:38 PM
To: Wong, Linda (BOS)
Cc: Young, Victor; Kowalczyk, Forrest (Ben)
Subject: RE: Request for documents - BOS File No. 131172 - Solar Power Project (201 Van Ness)
Attachments: Fw: insurance; consequential damages

Hi Linda,

Please see the two attached emails from our city attorney addressing the additional documentation you requested. Please confirm that this communication sufficiently addresses your requests.

Thanks,
Erin

Erin Hagan
Policy and Government Affairs Manager
San Francisco Public Utilities Commission
Office: 415-554-0706
Cell: 415-535-3542

From: Wong, Linda (BOS) [mailto:linda.wong@sfgov.org]
Sent: Wednesday, December 18, 2013 4:04 PM
To: Hagan, Erin
Cc: Young, Victor
Subject: FW: Request for documents - BOS File No. 131172 - Solar Power Project (201 Van Ness)

Hi Erin,

I have confirmed with Victor Young in our office that we do need the Risk Manager's approval on the issuance language set forth in section 8 of the Agreement.

Please provide confirmation from the Risk Manager (via email or memo) stating they have approved section 8 of the Agreement or amend the legislation to remove the reference.

~~"WHEREAS, San Francisco's Risk Manager has approved the insurance language set forth in section 8 of the Agreement and has provided to PG&E a letter certifying that San Francisco is self-insured and described the terms of the City's self insurance program; and"~~

Please feel free to contact me if you have any questions.

Sincerely,
Linda Wong

From: Wong, Linda (BOS)
Sent: Wednesday, December 18, 2013 10:34 AM
To: Hagan, Erin
Cc: Young, Victor
Subject: Request for documents - BOS File No. 131172 - Solar Power Project (201 Van Ness)

Hi Erin,

On page 2 of the proposed Resolution regarding the subject matter referenced above states that the City Attorney approved the limitation of liability language in section 7 of the Agreement and the Risk Manager approved the insurance language in section 8 of the Agreement.

Please provide a copy these documents referenced in the Resolution.

Thank you in advance.

Sincerely,

Linda Wong
Board of Supervisors/ SF LAFCo
1 Dr. Carlton B. Goodlett Place, City Hall, Room 244
San Francisco, CA 94102-4689
Phone: 415.554.7719 | Fax: (415) 554-5163
Linda.Wong@sfgov.org | www.sfbos.org

Please complete a Board of Supervisors Customer Service Satisfaction form by clicking [here](#).

The [Legislative Research Center](#) provides 24-hour access to Board of Supervisors legislation, and archived matters since August 1998.

Wong, Linda (BOS)

From: Jeanne Sole [Jeanne.Sole@sfgov.org]
Sent: Thursday, December 19, 2013 12:46 PM
To: Hagan, Erin
Subject: Fw: insurance

Erin, the email from the risk manager.

Jeanne M. Solé
Deputy City Attorney
City and County of San Francisco
Office of the City Attorney
City Hall, Room 234
1 Dr. Carlton B. Goodlet Place
San Francisco, CA 94102-4682
(415) 554-4619

----- Forwarded by Jeanne Sole/CTYATT on 12/19/2013 12:44 PM -----

From: "Hua, Benson" <BHua@swater.org>
To: "Sole, Jeanne" <Jeanne.Sole@sfgov.org>,
Cc: "Seidel, Jamie" <JSeidel@swater.org>
Date: 11/15/2013 01:02 PM
Subject: RE: insurance

Hi,

Thank you for providing the details. The requirements should be sufficient unless there were materials changes in risks and exposures after our work in Aug/Sept.

Benson

Benson Hua, ARM
Sr. Risk Analyst
San Francisco Public Utilities Commission
Assurance and Internal Controls | Enterprise Risk Management
525 Golden Gate Avenue, 4th Floor
San Francisco, CA 94102
tel: (415) 551-4571 / email: bhua@swater.org

From: Jeanne Sole [<mailto:Jeanne.Sole@sfgov.org>]
Sent: Wednesday, November 13, 2013 2:37 PM
To: Hua, Benson
Cc: Seidel, Jamie; alex.martin9430@gmail.com
Subject: insurance

Hi Benson:

The SFPUC is seeking to enter into another interconnection agreement with PG&E for a solar project at Davis Symphony Hall. Like the agreement you reviewed on 9/5, the insurance requirements of the agreement are as follows (the agreement is attached FYI). Please let us know if these insurance provisions are acceptable. Thank you.

8. INSURANCE

8.1 In connection with Producer's performance of its duties and obligations under this Agreement, Producer shall maintain, during the term of this Agreement, general liability insurance with a combined single limit of not less than:

- (a) Two million dollars (\$2,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than one hundred (100) kW;
- (b) One million dollars (\$1,000,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is greater than twenty (20) kW and less than or equal to one hundred (100) kW; and
- (c) Five hundred thousand dollars (\$500,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is twenty (20) kW or less.
- (d) Two hundred thousand dollars (\$200,000) for each occurrence if the Gross Nameplate Rating of Producer's Generating Facility is ten (10) kW or less and Producer's Generating Facility is connected to an account receiving residential service from PG&E.

Such general liability insurance shall include coverage for "Premises-Operations, Owners and Contractors Protective, Products/Completed Operations Hazard, Explosion, Collapse, Underground, Contractual Liability, and Broad Form Property Damage including Completed Operations."

8.2 The general liability insurance required in Section 8.1 shall, by endorsement to the policy or policies, (a) include PG&E as an additional insured; (b) contain a severability of interest clause or cross-liability clause; (c) provide that PG&E shall not by reason of its inclusion as an additional insured incur liability to the insurance carrier for payment of premium for such insurance; and (d) provide for thirty (30) calendar days' written notice to PG&E prior to cancellation, termination, alteration, or material change of such insurance.

8.3 If Producer's Generating Facility is connected to an account receiving residential service from PG&E and the requirement of Section 8.2(a) prevents Producer from obtaining the insurance required in Section 8.1, then upon Producer's written Notice to PG&E in accordance with Section 9.1, the requirements of Section 8.2(a) shall be waived.

8.4 Evidence of the insurance required in Section 8.2 shall state that coverage provided is primary and is not in excess to or contributing with any insurance or selfinsurance maintained by PG&E.

8.5 Producer agrees to furnish the required certificates and endorsements to PG&E prior to Initial Operation. PG&E shall have the right to inspect or obtain a copy of the original policy or policies of insurance.

8.6 If Producer is self-insured with an established record of self-insurance, Producer may comply with the following in lieu of Sections 8.1 through 8.4:

- (a) Producer shall provide to, PG&E, at least thirty (30) calendar days prior to the date of Initial Operation, evidence of an acceptable plan to self-insure to a level of coverage equivalent to that required under Section 8.1.
- (b) If Producer ceases to self-insure to the level required hereunder, or if Producer are unable to provide continuing evidence of Producer's ability to self-insure, Producer agrees to immediately obtain the coverage required under Section 8.1.

8.7 All insurance certificates, statements of self-insurance, endorsements, cancellations, terminations, alterations, and material changes of such insurance shall be issued and submitted via email or fax to the following:

Pacific Gas and Electric Company
c/o EXIGIS LLC
support@exigis.com
Fax: 646-755-3327

Jeanne M. Solé
Deputy City Attorney
City and County of San Francisco
Office of the City Attorney
City Hall, Room 234
1 Dr. Carlton B. Goodlet Place

San Francisco, CA 94102-4682
(415) 554-4619

Wong, Linda (BOS)

From: Jeanne Sole [Jeanne.Sole@sfgov.org]
Sent: Thursday, December 19, 2013 12:52 PM
To: Hagan, Erin
Cc: Mueller, Theresa
Subject: consequential damages
Attachments: Waiver Conseq Damages -- 2013.11.06.pdf

Erin, here is the memo from the SFPUC on consequential damages. The Municipal Code does not require the City Attorney to sign these memos, and it is not office policy to do so. In any event, the second email from Linda references a need for evidence of the Risk Manager approval only.

Jeanne M. Solé
Deputy City Attorney
City and County of San Francisco
Office of the City Attorney
City Hall, Room 234
1 Dr. Carlton B. Goodlet Place
San Francisco, CA 94102-4682
(415) 554-4619



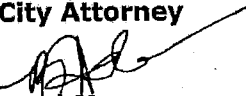
San Francisco
Water Power Sewer
 Services of the San Francisco Public Utilities Commission

525 Golden Gate Avenue, 13th Floor
 San Francisco, CA 94102
 T 415.554.2483

November 6, 2013

MEMORANDUM

TO: Dennis Herrera
Office of the City Attorney

FROM: Barbara Hale 
Assistant General Manager
Power Enterprise – San Francisco PUC

SUBJECT: Davies Symphony Hall – Solar Electric Project
PG&E Interconnection Agreement
(Waiver of Consequential Damages)

San Francisco PUC – Power Enterprise would like to enter into an Interconnection Agreement with Pacific Gas & Electric for a solar electric project located at Davies Symphony Hall, 201 Van Ness Avenue. Form 79-973 Generating Facility Interconnection Agreement (GFIA) is a standard agreement signed between PG&E and any solar photovoltaic generating facility that is interconnecting with PG&E’s distribution system.

Section 7 addresses limitation of liability as follows:

Each Party’s liability to the other Party for any loss, cost, claim, injury, liability, or expense, including reasonable attorney’s fees, relating to or arising from any act or omission in its performance of this agreement, shall be limited to the amount of direct damage actually incurred. In no event shall either Party be liable to the other Party for any indirect, special, consequential, or punitive damages of any kind whatsoever.

Power Enterprise recommends that the City accept these terms in the GFIA since the Davies Symphony Hall Solar Electric Project will help in achieving the City’s solar electric development goals and continue to reduce San Francisco’s greenhouse gas emissions. Additionally, the waiver will not create undue risk of damages to the City as the solar projects utilize safe and reliable inverter based photovoltaic technology.

APPROVED:

Dennis Herrera
 City Attorney

By: _____

[Name of Deputy]
 Deputy City Attorney

Edwin M. Lee
 Mayor

Vince Courtney
 President

Ann Moller Caen
 Vice President

Francesca Vietor
 Commissioner

Anson Moran
 Commissioner

Art Torres
 Commissioner

Harlan L. Kelly, Jr.
 General Manager





San Francisco
Water Power Sewer

Services of the San Francisco Public Utilities Commission

525 Golden Gate Avenue, 13th Floor
San Francisco, CA 94102
T 415.554.3155
F 415.554.3161
TTY 415.554.3488

RECEIVED
BOARD OF SUPERVISORS
SAN FRANCISCO

2013 NOV 25 AM 10:07

TO: Angela Calvillo, Clerk of the Board *JHB*
FROM: Erin Hagan, Policy and Government Affairs Manager
DATE: November 22, 2013
SUBJECT: Agreement with Pacific Gas and Electric Company to
Connect a Solar Power Project

Attached please find an original and two copies of a proposed resolution authorizing the San Francisco Public Utilities Commission General Manager to enter into a long term interconnection agreement with Pacific Gas and Electric Company for a solar power project at Davies Symphony Hall, 201 Van Ness Avenue.

The following is a list of accompanying documents (3 sets):

1. Board of Supervisors Resolution
2. Memorandum of Understanding Between SFPUC and the San Francisco War Memorial and Performing Arts Center
3. Letter of Agreement Between SFPUC and DPW/BBR
4. CEQA Exemption Determination
5. Generating Facility Interconnection Agreement with PG&E
6. Board of Supervisors Resolution No. 554-07
7. Board of Supervisors Resolution No. 441-11
8. Board of Supervisors Resolution No. 374-12
9. Board of Supervisors Resolution No. 371-13
10. Self-Insurance Letter to PG&E

Please contact Erin Hagan at 554-0706 if you need any additional information on these items.

Edwin M. Lee
Mayor

Vince Courtney
President

Ann Moller Caen
Vice President

Francesca Vietor
Commissioner

Anson Moran
Commissioner

Art Torres
Commissioner

Harlan L. Kelly, Jr.
General Manager

