

City of San Diego

CONTRACTORS NAME: Borrego Solar Systems, Inc.

ADDRESS: 5005 Texas Street, Suite 400, San Diego, CA 92108

TELEPHONE: 619-961-4523 **FAX NO.:** 888-843-6778

CITY CONTACT: Rosa Isela Riego, Contract Specialist, Email: rriego@sandiego.gov

Phone No.: (619) 533-3426 **Fax No.:** 619-533-3633

MRamirez/HMcLintock/egz

PROPOSAL DOCUMENTS



FOR

ORIGINAL

MOC COMPLEX AND BAYVIEW RESERVOIR SOLAR PROJECT DESIGN-BUILD CONTRACT

RFQ NO.:	<u>6137</u>
TASK NUMBER:	<u>CSD-SP-001</u>
RFP NO.:	<u>K-17-1328-DBA-3-A</u>
SAP NO. (WBS/IO/CC):	<u>S-14021 / S-14022</u>
CLIENT DEPARTMENT:	<u>2000</u>
COUNCIL DISTRICT:	<u>1 / 6</u>
PROJECT TYPE:	<u>BR / BK</u>

THIS CONTRACT IS SUBJECT TO THE FOLLOWING:

- THE CITY'S SUBCONTRACTING PARTICIPATION REQUIREMENTS FOR SLBE PROGRAM.
- PREVAILING WAGE RATES: STATE FEDERAL
- APPRENTICESHIP

PROPOSALS DUE:

**12:00 NOON
OCTOBER 5, 2016
CITY OF SAN DIEGO
PUBLIC WORKS CONTRACTS
1010 SECOND AVENUE, 14th FLOOR, MS 614C
SAN DIEGO, CA 92101
ATTN: CONTRACT SPECIALIST**

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REQUEST FOR PROPOSAL

1. INTRODUCTION AND PROJECT OVERVIEW

1.1. SOLICITATION

1.1.1. This is the City of San Diego's (City) second step in the two-step solicitation process to acquire Design-Build services for the **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract** project.

1.1.2. Failure to submit all requested information in accordance with the requirements of the RFP may be cause for disqualification.

1.2. **SUMMARY OF WORK:** This is the City solicitation process to acquire Design-Build services for the design and installation of approximately 500 KW total solar photovoltaic system at Metro Operation Center (MOC) complex parking lots and building rooftops to provide energy to the MOC complex buildings. Design and installation of 300 KW total solar photovoltaic system at Bayview Water Reservoir & Pump Station. For additional information refer to Attachment A.

1.3. **COMPETITION:** This RFP is being issued only to the shortlisted contractors pursuant to RFQ **6137**.

1.3.1. This RFP is being issued to the selected firms for this selection process exclusively. These firms are:

1. Borrego Solar System, Inc.
2. Solar City Corporation
3. Sun Power System Corporation
4. Synergy Electric Company Inc.

1.4 **PROPOSAL DUE DATE AND TIME ARE: OCTOBER 5, 2016, at 12:00 PM.**

1.5. **ESTIMATED PROJECT COST:** The City's estimated cost for this project is **\$3,345,000**.

1.6. **LICENSE REQUIREMENT:** The City has determined that the following licensing classification(s) are required for this contract: Class C-10 or Class C-46.

1.7. **CONTRACT PERIOD:** Project shall be completed within including the Plant Establishment Period **250 Working Days** from the Notice to Proceed (NTP).

1.8. **PREVAILING WAGE RATES APPLY TO THIS CONTRACT:** Refer to Attachment D.

1.9. **CONTRACTOR LICENSE AND PREQUALIFICATION STATUS:**

1.9.1. The Design-Builder must possess a "Class C-10" or "Class C-46" California State Contractor's license.

1.9.2. The Design-Builder must, at the time of submission of the proposal, be prequalified at an amount equal to or greater than the total amount proposed, including any alternates or options.

1.9.3. The Design-Builder's California State License and City of San Diego prequalification status as specified herein must be valid at time of submission.

1.10. PRE-PROPOSAL MEETING AND SITE VISIT:

1.10.1. Those wishing to submit a Bid are **encouraged** to attend the Pre-Bid Meeting. The purpose of the meeting is to discuss the scope of the Project, submittal requirements, the pre-qualification process and any Equal Opportunity Contracting Program requirements and reporting procedures. To request a sign language or oral interpreter for this visit, call the Public Works Contracts Division at (619) 533-3450 at least 5 Working Days prior to the meeting to ensure availability. The Pre-Bid meeting is scheduled as follows:

Date: SEPTEMBER 13, 2016
Time: 10:00 AM
Location: 1010 Second Avenue Suite 1400 (Large Conference Room), San Diego, CA 92101

1.10.2. Attendance at the Pre-Submittal Meeting will be evidenced by the Bidder's representative's signature on the attendance roster. It is the responsibility of the Bidder's representative to complete and sign the attendance roster.

2. SUBCONTRACTING PARTICIPATION PERCENTAGES: Subcontracting participation percentages apply to this contract.

2.1.1. City has incorporated **mandatory** SLBE-ELBE subcontractor participation percentages to enhance competition and maximize subcontracting opportunities. For the purpose of achieving the mandatory subcontractor participation percentages, a recommended breakdown of the SLBE and ELBE subcontractor participation percentages based upon certified SLBE and ELBE firms has also been provided to achieve the mandatory subcontractor participation percentages:

1.	SLBE participation	2.2%
2.	ELBE participation	3.5%
3.	Total mandatory participation	5.7%

2.1.2. The Bid may be declared non-responsive if the Bidder fails to meet the following requirements:

2.1.2.1. Include SLBE-ELBE certified subcontractors at the overall mandatory participation percentage identified in this document;
OR

2.1.2.2. Submit Good Faith Effort documentation, saved in searchable Portable Document Format (PDF) and stored on Compact Disc (CD) or Digital Video Disc (DVD), demonstrating the Bidder made a good faith effort to outreach to and include SLBE-ELBE Subcontractors required in this document within **3 Working Days** of the Bid opening if the overall mandatory participation percentage is not met

3. SELECTION AND AWARD SCHEDULE:

3.1. The City anticipates that the process for selecting a Design-Builder and awarding the contract will be according to the following tentative schedule. Dates are subject to change.

3.2. Pre-Proposal Meeting **SEPTEMBER 13, 2016**

3.3. Proposal Due Date **OCTOBER 5, 2016**

3.4. Selection and Notification **OCTOBER 20, 2016**

3.5. Limited Notice to Proceed **NOVEMBER 17, 2016**

INSTRUCTIONS TO PROPOSERS AND GENERAL CONDITIONS

1. PREQUALIFICATION OF CONTRACTORS:

- 1.1. Contractors submitting proposals must be pre-qualified for the total amount proposed, inclusive of all alternate items or specified Task Order limits prior to the date of submittal. Proposals from contractors who have not been pre-qualified as applicable and Proposals that exceed the maximum dollar amount at which contractors are pre-qualified may be deemed **non-responsive** and ineligible for award. Complete information and links to the on-line prequalification application are available at:

<http://www.sandiego.gov/cip/bidopps/prequalification.shtml>

- 1.2. The completed application must be submitted online no later than 2 weeks prior to the Proposal due date. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.
- 1.3. Due to the City's fiduciary requirement to safeguard vendor data, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on [PlanetBids™](#).

2. ELECTRONIC FORMAT RECEIPT AND OPENING OF PROPOSALS: Proposals will be received in **electronic format (eBids) EXCLUSIVELY** at the City of San Diego's electronic bidding (eBidding) site, at:

<http://www.sandiego.gov/cip/bidopps/index.shtml> and are due by the date, and time shown on the cover of this solicitation.

- 2.1. **PROPOSERS MUST BE PRE-REGISTERED** with the City's bidding system and possess a system-assigned Digital ID in order to submit and electronic proposal.
- 2.2. The City's bidding system will automatically track information submitted to the site including IP addresses, browsers being used and the URLs from which information was submitted. In addition, the City's bidding system will keep a history of every login instance including the time of login, and other information about the user's computer configuration such as the operating system, browser type, version, and more. Because of these security features, Contractors who disable their browsers' cookies will not be able to log in and use the City's bidding system.

- 2.3. Upon entry of their proposal, the system will ensure that all required fields are entered. **The system will not accept a proposal for which any required information is missing.** This includes all necessary pricing, subcontractor listing(s) and any other essential documentation and supporting materials and forms requested or contained in these solicitation documents.
- 2.4. **PROPOSALS REMAIN SEALED UNTIL DUE DATE AND TIME.** eBids and eProposals are transmitted into the City's bidding system via hypertext transfer protocol secure (https) mechanism using SSL 128-256 bit security certificates issued from Verisign/Thawte which encrypts data being transferred from client to server. Proposals submitted prior to the Due Date and Time are not available for review by anyone other than the submitter, who will have until the Due Date and Time to change, rescind or retrieve its proposal should they desire to do so.
- 2.5. **PROPOSALS MUST BE SUBMITTED BY DUE DATE AND TIME.** Once the deadline is reached, no further submissions are accepted into the system. Once the Due Date and Time has passed, bidders, proposers, the general public, and City staff are able to immediately see the results on line. City staff may then begin reviewing the submissions for responsiveness, Equal Opportunity Contracting Program (EOCP) compliance and other issues.
- 2.6. **TECHNICAL PROPOSAL AND PRICE PROPOSAL ARE TO BE SEPARATE.** The proposer is to submit two separate proposal PDFs by the due date and time.
 - 2.6.1. The Technical proposal, which should contain the items detailed below and in Attachment G. There is to be **NO PRICING** information within this proposal. If a Technical proposal contains pricing information, the submission may be deemed non-responsive and ineligible for further consideration, and
 - 2.6.2. The Price proposal, which should detail the cost structure and include any forms as required herein.
- 2.7. **RECAPITULATION OF THE WORK.** Proposals shall not contain any recapitulation of the Work. Conditional proposals may be rejected as being **non-responsive**. Alternative proposals will not be considered unless called for.
- 2.8. **PROPOSALS MAY BE WITHDRAWN** by the Proposer prior to, but not after, the time set as Due Date and Time.
 - 2.8.1. **Important Note:** Submission of the electronic proposal into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the proposer's submission to upload and be received by the City's eBidding system. It is the proposer's sole responsibility to ensure their proposals are received on time by the City's eBidding system. The City of San Diego is not responsible for proposals that do not arrive by the required date and time.

2.9. **ACCESSIBILITY AND AMERICANS WITH DISABILITIES ACT (ADA) COMPLIANCE:** To request a copy of this solicitation in an alternative format, contact the Public Works Contract Specialist listed in the cover of this solicitation at least five (5) working days prior to the Proposal due date to ensure availability.

3. ELECTRONIC SUBMISSIONS CARRY FULL FORCE AND EFFECT

3.1. The proposer, by submitting its electronic proposal, acknowledges that doing so carries the same force and full legal effect as a paper submission with a longhand (wet) signature.

3.2. By submitting an electronic proposal, the proposer certifies that the proposer has thoroughly examined and understands the entire Contract Documents (which consist of the plans and specifications, drawings, forms, affidavits and the solicitation documents), and that by submitting the eBid as its proposal, the proposer acknowledges, agrees to and is bound by the entire Contract Documents, including any addenda issued thereto, and incorporated by reference in the Contract Documents.

3.3. The Proposer, by submitting their electronic proposal, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certification, forms and affidavits submitted as part of this proposal are true and correct.

4. **PROPOSALS ARE PUBLIC RECORDS:** Upon receipt by the City, proposals shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the proposal's General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.

5. CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM:

5.1. **Prior** to the Award of the Contract or Task Order, you and your Subcontractors and Suppliers must register with the City's web-based vendor registration and bid management system. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>.

5.2. The City may not award the contract until registration of all subcontractors and suppliers is complete. In the event this requirement is not met within the time frame specified in the Notice of Intent to Award letter, the City reserves the right to rescind the Notice of Award / Intent to Award and to make the award to the next responsive and responsible bidder / proposer.

6. **JOINT VENTURE CONTRACTORS:** Provide a copy of the Joint Venture agreement and the Joint Venture license to the City within 10 Working Days after receiving the Contract forms. See 2-1.1.2, "Joint Venture Contractors" in The WHITEBOOK for
- 6.1. Each properly signed Proposal shall constitute a firm offer that may be accepted by the City within the time frame specified herein.
 - 6.2. This RFP will not commit the City to award a contract, to defray any costs incurred in the preparation of a Proposal pursuant to this RFP, or to procure or contract for the Work.
 - 6.3. Upon receipt by the City, Proposals shall become public records subject to public disclosure. It is the responsibility of the respondent to clearly identify any confidential, proprietary, trade secret or otherwise legally privileged information contained within the Proposal. General references to sections of the California Public Records Act (PRA) will not suffice. If the Contractor does not provide applicable case law that clearly establishes that the requested information is exempt from the disclosure requirements of the PRA, the City shall be free to release the information when required in accordance with the PRA, pursuant to any other applicable law, or by order of any court or government agency, and the Contractor will hold the City harmless for release of this information.
 - 6.4. Selection announcements, contract awards, and all data provided by the City shall be protected by the Design-BUILDER from public disclosure. The Design-BUILDERS desiring to release information to the public shall receive prior written approval from the City.
 - 6.5. Design-BUILDERS who submit a response to this RFP agree to provide the required services in accordance with the terms and conditions noted in this RFP and its attachments upon award by the City. The agreement and other terms and conditions are included in the Design-Build Contract, The GREENBOOK, The WHITEBOOK, and the Supplementary Special Provisions (SSP).
 - 6.6. Any architectural firms, engineering firms, specialty consultants, or individuals retained by the City to assist in drafting the RFPs or the Project's preliminary design may not be eligible to participate in the competition with any Design-Build Entity without the prior written consent of City. Any architectural firms, engineering firms, specialty consultants, or individuals retained by the City to assist in drafting any Reference Documents, such as the Water Department's Master Plan and any other document that was not prepared specifically for this contract, are considered to be eligible to participate.

7. EQUAL OPPORTUNITY CONTRACTING

7.1. As set forth in this RFP, the City is dedicated to the principles of equal opportunity in the workplace and in subcontracting. It is the City's expectation that firms doing business with the City have, and are able to demonstrate, the same level of commitment.

7.2. The Design-Builders are encouraged to take positive steps to diversify and expand their subcontractor solicitation base and to offer contracting opportunities to all eligible certified Subcontractors in accordance with the City's EOCP requirements included in the Contract Documents.

7.3. Design-Builder's Work Force

7.3.1. The Design-Builders shall submit with its Proposal a Work Force Report (EOC Form BB05) and prior to award of contract, the successful Design-Builder shall submit to the City's EOCP office an updated Work Force Report or an Equal Employment Opportunity (EEO) Plan.

7.3.2. If under representations are noted in the Work Force Report when compared to County Labor Force Availability data, the Design-Builder shall submit an Equal Opportunity Plan. Any Equal Employment Opportunity Plan submitted shall include the elements as outlined in the EOCP Requirements included in The WHITEBOOK.

7.3.3. The specified Equal Opportunity Contracting Program (EOCP) forms are available for download from the City's web site at:

<http://www.sandiego.gov/eoc/forms/index.shtml>

7.4. Nondiscrimination Ordinance (Municipal Code §§ 22.2701-22.2708)

7.4.1. The Design-Builder shall not discriminate on the basis of race, gender, religion, national origin, ethnicity, sexual orientation, age or disability in the solicitation, selection, hiring or treatment of the Subcontractors and Suppliers. The Design-Builder shall provide equal opportunity for Subcontractors to participate in subcontracting opportunities. The Design-Builder understands and agrees that violation of this clause shall be considered a material breach of the contract and may result in contract termination, debarment or other sanctions.

7.4.2. This language shall be in contracts between the Design-Builder and any Subcontractors and Suppliers.

7.4.3. As part of its Proposal, the Design-Builder shall provide to the City a list of all instances within the last 10 years where a complaint was filed or pending against Design-Builder in a legal or administrative proceeding alleging that Design-Builder discriminated against its employees, the Subcontractors, or

Suppliers, and a description of the status or resolution of that complaint, including any remedial action taken. If there have not been any complaints filed or pending against Design-Builder, a written statement from the Design-Builder to confirm shall be included in the Proposal.

7.5. Contractor Registration and Electronic Reporting System

7.5.1. Prior to the award of the Contract, the Design-Builder, Subcontractors, and Suppliers must register with the City's web-based vendor registration and bid management system, BidsOnline™ hosted by PlanetBids System. For additional information go to:

<http://www.sandiego.gov/purchasing/bids-contracts/vendorreg.shtml>.

7.5.2. Following the award of the Contract, the Design-Builder will be required to use the City's web-based contract compliance application for EOCP reporting purposes e.g., Weekly Certified Payroll, Monthly Employment Utilization, and Monthly Payments. Online tutorials are available at:

<http://stage.prismcompliance.com/etc/vendortutorials.htm>

7.5.3. The City may retain progress payments if:

7.5.3.1. The non-registered Design-Builder, Subcontractors, or Suppliers fail to register,

7.5.3.2. EOCP reporting is delinquent or inadequate, or

8. CONTRACTOR'S LICENSE CLASSIFICATION AND PRE-QUALIFICATION STATUS

8.1. The Design-Builder's California State License and City of San Diego prequalification status as specified herein must be valid at time of submission. Failure to comply with these requirements may result in the proposal being deemed non responsive and ineligible for further consideration.

8.2. Design-Builders interested in submitting a proposal for this Project shall be pre-qualified through the City's Prequalification program:

8.2.1. The Design-Builders must submit a complete prequalification application online to the Public Works Contracts, Prequalification Program no later than 2 weeks prior to **the Proposal due date and time**. Complete information and links to the online prequalification application are available at:

<http://www.sandiego.gov/cip/bidopps/prequalification.shtml>

8.2.2. For additional information or the answer to questions about the prequalification program, contact David Stucky at 619-533-3474 or dstucky@sandiego.gov.

8.2.3. Due to the City's fiduciary requirement to safeguard vendor data, City staff will not be able to provide information regarding contractors' prequalification status over the telephone. Contractors may access real-time information about their prequalification status via their vendor profile on PlanetBids™.

9. PRE-PROPOSAL ACTIVITIES

9.1. Submission of Questions

9.1.1. The Director (or designee) of the Public Works Department is the officer responsible for opening, examining, and evaluating the competitive Proposals submitted to the City for the acquisition, construction, and completion of any public improvement except when otherwise set forth in these documents. All questions related to this solicitation shall be submitted to:

Public Works Contracts
1010 Second Avenue, 14th Floor
San Diego, California, 92101
Attention: Contract Specialist listed on the front cover of this RFP.

OR:

To the Email address of the Contract Specialist listed on the front cover of this RFP.

9.1.2. Questions received less than 14 Days prior to the Proposal due date may not be considered.

9.1.3. Questions or clarifications deemed by the City to be material shall be answered via issuance of an addendum and posted to the City's online bidding service.

9.1.4. Only questions answered by formal written addenda shall be binding. Oral and other interpretations or clarifications shall be without legal effect. It is the Design-Builder's responsibility to be informed of any Addenda that have been issued and to adjust its Proposal accordingly.

9.2. Revisions to the RFP

The City, at its option, may respond to any or all questions submitted in writing via the City's eBidding web site in the form of an addendum. No other responses to questions, oral or written, shall be of any force or effect with respect to this solicitation.

Any changes to the Contract Documents through addendum are made effective as though originally issued with the Proposal. The Design-Builders shall acknowledge the receipt of Addenda at the time of Proposal submission.

10. EXAMINATION OF PLANS, SPECIFICATIONS, AND SITE OF WORK

10.1. Contract Documents may be obtained by visiting the City's website: <http://www.sandiego.gov/cip/> Plans and Specifications for this contract are also available for review in the office of Public Works Contracts.

10.2. The Design-Builders shall carefully examine the Project Site, the Plans and Specifications, and other materials as described in or referenced by this RFP. The submission of a Proposal shall be conclusive evidence that the Design-Builder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work, the quantities of materials to be furnished, local conditions, and as to the requirements of the Contract Documents.

11. CHANGES TO THE SCOPE OF WORK: Once a proposal has been accepted by the City and the award has been made, the Design-Builder shall immediately notify the City in writing of any proposed or anticipated change in the scope, contract amount, or contract time; and shall obtain the City's written consent to the change(s) prior to affecting them. In no event shall the City's consent be construed to relieve the Design-Builder from its duty to render all work and services in accordance with applicable laws and accepted industry standards

12. DESIGN SUBMITTALS: The City's review of the Design-Builder's Design Submittals shall not relieve the Design-Builder from its responsibilities under the Contract, or be deemed to be an acceptance or waiver by City of any deviation from, or of the Design-Builder's failure to comply with, any provision or requirement of the Contract Documents, unless such deviation or failure has been identified as such in writing in the document submitted for acceptance by the Design-Builder and accepted by City. Where approval or acceptance by City is required, it is understood to be general approval only, and does not relieve the Design-Builder of responsibility for complying with all applicable laws and good professional practices as the Design-Builder shall be the Engineer of Record.

13. BONDS AND INSURANCE: Prior to the award of the Contract (or Task Order), the Design-Builders shall submit evidence of separate bonds and insurance as specified in Sections 2-4, "CONTRACT BONDS," 7-3, "LIABILITY INSURANCE," and 7-4, "WORKERS' COMPENSATION INSURANCE" of the City's standard specifications for public works constructions unless specified otherwise in the Contract Documents.

14. SUBMITTAL REQUIREMENTS: PROPOSALS MUST BE RECEIVED NO LATER THAN THE DUE DATE AND TIME. Proposals may be withdrawn by the Design-Builder only up to the proposal due date and time.

IMPORTANT NOTE: Submission of the electronic proposals into the system may not be instantaneous. Due to the speed and capabilities of the user's internet service provider (ISP), bandwidth, computer hardware and other variables, it may take time for the bidder's submission to upload and be received by the City's eBidding system. It is the bidder's sole responsibility to ensure that their bids are received on time by the City's eBidding system. The City of San Diego is not responsible for bids that do not arrive by the required date and time.

14.1. TECHNICAL PROPOSAL REQUIREMENTS: Technical Proposals submitted in response to this RFP shall be in the following order and shall include:

- Legal name of company.
- Legal form of entity (partnership, corporation, joint venture, or other). If joint venture, identify the members of the joint venture, and provide all information required under this section for each member.
- Year of establishment of entity.
- If company is subsidiary of a parent company, identify the parent company.
- Address of main office.
- Address of San Diego satellite office if applicable.
- Contact information for firm, including name, title, email address and telephone number.
- Number of employees in San Diego County.
- Applicable License(s):
- City of San Diego Business License Number, including expiration date.
- State Contractor's License Number including expiration date, and all classifications. Professional Engineering/Architect License Number, including expiration date.
- Failure to provide all required information may result in the Proposal being considered non-responsive and ineligible for further consideration.

14.1.1. The Technical Proposal shall be concise, well organized, and demonstrate the Design-Builder's qualifications and experience applicable to the Project. The Technical Proposal shall be limited to 50 one-sided pages (8^{1/2}" x 11"), exclusive of resumes, graphics, forms, pictures, photographs, dividers, front and back cover, etc., that address the Technical Proposal contents; and of Equal Opportunity Contracting documentation. Font Type shall be Times New Roman in a minimum 12 Point font size, with a minimum 1" margin for text pages. A cover letter may be submitted but shall not contain any information that is a required element of the Technical Proposal. Any Technical Proposal that does not comply with these formatting standards may not be considered.

14.1.2. The Technical Proposals submitted in response to this RFP shall be in accordance with the requirements listed in ATTACHMENT G. The contents of the Technical Proposal shall be organized consistent with the format in Attachment G.

14.1.3. Design elements which deviate from the Scope of Work, City's design guidelines, or material substitutions which differ from the Approved Material List shall be highlighted in accordance with Attachment G.

14.1.4. Failure to comply with this section may render the Design-Builder's submittal non-responsive and ineligible for further consideration.

14.2. PRICE PROPOSAL REQUIREMENTS

14.2.1. A clearly marked, signed PDF of the Price Proposal is to be submitted in a separate PDF. This **is not** to be included with the Technical proposal. Refer to Attachment H of this RFP for any Price Proposal forms required to be used.

14.2.2. The Price Proposal shall be signed by an individual or individuals authorized to execute legal documents on behalf of the Design-Builder.

14.2.3. The lowest proposed price is not the determining factor for award of this contract. See Attachment G for the criteria by which the proposals will be evaluated.

14.2.4. In the event of any discrepancies, written numbers will govern over numerical. Also, the sum of all lump sum line items, unit price line items, allowance line items and any other priced items will govern over the "Total Design-Build Proposal" line item.

14.2.5. The required EOCIP information such as Subcontractor and Supplier listings shall be submitted as part of the Price Proposal.

15. SELECTION CRITERIA AND SCORING

15.1. An evaluation Panel comprised of representatives from the City will be established for this Project. The Panel may also include other interested parties such as additional participating agencies, representative from the community and other appropriate agencies such as the State Water Resource Control Board.

15.2. Proposals will be ranked according to the selection criteria set forth in Attachment G.

15.3. The Panel will review all proposals received. Interviews or presentations will be conducted as needed in accordance with Attachment G.

15.4. Based upon this technical review, the Panel will rank the Design-Builders' proposals in accordance with the selection criteria set forth in Attachment G of this RFP.

- 15.5. Once the Technical Proposals have been ranked by the Panel, the Design-Builders' price proposals will be made available to the panel and forwarded to EOCP for review and scoring of subcontractor participation. The EOCP score will then be added to the Design-Builders' cumulative scores.

16. AWARD

- 16.1. After the Technical Proposals have been evaluated, scored and ranked; the Price proposals will be factored in according to the criteria set forth in Attachment G. A Design-Builder selection will then be made.
- 16.2. The City will announce in writing to all the RFP participants the selected Design-Builder. The announcement will show the results of the evaluation. This notification to the Design-Builders shall constitute the public announcement of the selected Design-Builder. In the event that the selected Design-Builder is subsequently deemed non-responsive or non-responsible, a new public announcement will be provided to all proposers with the name of the newly designated selected Design-Builder.
- 16.3. To obtain the price Proposal results, view the results on the City's web site, or request the results by U.S. mail and provide a self-addressed, stamped envelope. If requesting by mail, be sure to reference the Proposal name and number. The Proposal tabulations will be mailed to you upon their completion. The results will not be given over the telephone.

17. ADDITIONAL POLICIES, PROCEDURES, TERMS AND CONDITIONS

- 17.1. The Program's Selection Process is based on the policies, procedures and guidelines set forth in the City Municipal Code Chapter 2, Article 2, Division 33.
- 17.2. **Protests.** A Design-Builder may protest the award of the Contract to another Design-Builder in accordance with San Diego Municipal Code.
- 17.3. **Changes to Key Personnel and Substitution of Subcontractors.** The Design-Builder shall not change or substitute any individual that is identified in its proposal as "key personnel" without the written consent of the City. The Design-Builder shall not change or substitute any material, supplier, or subcontractor identified in its Proposal without written consent of the City. The City's consent will not be unreasonably withheld.
- 17.4. **Project Team.** The Design-Builder shall maintain all representations, team members, and proposed tasks and work elements as valid, except for the schedule which may be adjusted as mutually agreed upon by the City and the Design-Builder.
- 17.5. **Submittal of "Or Equal" Items.** See 4-1.6, "Trade Names or Equals" in the SSP and as modified by the Scope of Work ATTACHMENT A.

- 17.6. Subcontract Limitations.** The Design-Builder's attention is directed to Standard Specification for Public Works Construction, Section 2-3, "SUBCONTRACTS" which requires the Design-Builder to perform not less than the specified amount under this RFP. Failure to comply shall render the Proposal non-responsive.
- 17.7. San Diego Business Tax Certificate.** All Contractors, including Subcontractors, not already having a City of San Diego Business Tax Certificate for the work contemplated shall secure the appropriate certificate from the City Treasurer, Civic Center Plaza, first floor, before the Contract can be executed.
- 17.8. City Standard Provisions.** The work resulting from this RFP is subject to the following standard provisions. See The WHITEBOOK for details.
- 17.8.1.** The City of San Diego Resolution No. R-277952 adopted on May 20, 1991 for a Drug-Free Workplace.
- 17.8.2.** The City of San Diego Resolution No. R-282153 adopted on June 14, 1993 related to the Americans with Disabilities Act.
- 17.8.3.** The City of San Diego Municipal Code §22.3004 for Pledge of Compliance.
- 17.8.4.** The City of San Diego's Labor Compliance Program and the State of California Labor Code §§1771.5(b) and 1776.
- 17.8.5.** Sections 1777.5, 1777.6, and 1777.7 of the State of California Labor Code concerning the employment of apprentices by contractors and subcontractors performing public works contracts.
- 17.8.6.** The City's Equal Benefits Ordinance (EBO), Chapter 2, Article 2, Division 43 of The San Diego Municipal Code (SDMC).
- 17.8.7.** The City's Information Security Policy (ISP) as defined in the City's Administrative Regulation 90.63.
- 17.9. Prevailing Wage Rates Apply:** Refer to Attachment D.

17.11. Reference Standards:

17.11.1. Except as otherwise noted or specified, the Work shall be completed in accordance with the following standards:

Title	Edition	Document Number
Standard Specifications for Public Works Construction ("The GREENBOOK")	2015	PWPI070116-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")*	2015	PWPI070116-02
City of San Diego Standard Drawings*	2016	PWPI070116-03
Caltrans Standard Specifications	2010	PITS070112-04
Caltrans Standard Plans	2010	PITS070112-05
California MUTCD	2012	PITS070112-06
City Standard Drawings - Updates Approved For Use (when specified)*	Varies	Varies
Standard Federal Equal Employment Opportunity Construction Contract Specifications and the Equal Opportunity Clause Dated 09-11-84	1984	769023
NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml		

ATTACHMENTS

ATTACHMENT A

**PROJECT DESCRIPTION, SCOPE OF WORK, TECHNICAL SPECIFICATIONS,
AND/OR BRIDGING DOCUMENTS**

ATTACHMENT A

PROJECT DESCRIPTION, SCOPE OF WORK, TECHNICAL SPECIFICATIONS, AND/OR BRIDGING DOCUMENTS

PUBLIC UTILITIES DEPARTMENT

1. Project Description:

- 1.1.** The Design-Builder is to design and construct approximately 500 kW AC solar photovoltaic (PV) system at the Metro Operation Center (MOC) Complex and approximately 300 kW AC solar photovoltaic system at the Bayview Reservoir (Bayview).
- 1.2.** The design of the on-site solar PV system will be the responsibility of the Design-Builder. This document establishes the minimum technical and installation specifications required by the City for solar PV projects. It is the intent of these specifications to insure that the PV systems installed are consistent with and adhere to any and all California Building Codes and standards, the California Solar Initiative program, applicable utility rules and tariffs, and any and all CEC technical and installation specifications and guidelines developed and established. Design-Builders are advised to be familiar with these rules, requirements and specifications as they pertain to the installation of solar PV systems on City facilities.

2. Scope of Work:

- 2.1.** The City of San Diego requires the Design-Builder to provide and install a complete solar photovoltaic system for the MOC Complex. The solar photovoltaic system will provide energy to the MOC Complex buildings. The Design-Builder shall provide all design, obtain permits, materials for construction/installation, and commissioning of approximately 500 kW of solar power systems total. The system will include rack/canopy mounted systems (parking lots).
- 2.2.** The Design-Builder shall also provide and install a complete solar photovoltaic system for the Bayview Reservoir. The solar photovoltaic system will provide energy to the reservoir and pump station. The Design-Builder shall provide all design, obtain permits, material for construction/installation, and commissioning of approximately 300 kW of solar power system total. The system will be installed on a concrete roof mounted system on the reservoir.
- 2.3.** Each site must be designed to obtain the highest kilowatt-hour (kWh) output at the lowest cost and be installed as necessary to accommodate the individual aesthetics and requirements based on building characteristics, location, and ease of access. All solar power generating equipment, inverters, and metering must meet the manufacturer's equipment installation and warranty requirements. The Design-Builder shall assist in the preparation and submittal of NEM Interconnection Application and Agreement for the solar photovoltaic systems, in accordance with Rule 21 from local electric utility service company.

2.4. Facility Descriptions.

2.4.1. MOC Complex is comprised of the following:

2.4.1.1. Two parking areas MOCs 2 & 6 with a combined area of approximately 62,000 square feet for rack/canopy solar PV installation, as defined in Appendix E- Location Map.

2.4.1.2. A preliminary Hazardous Materials Report indicates the presence of hazardous materials. Refer to Attachment E for location of report.

2.4.2. Bayview Reservoir is comprised of the following:

2.4.2.1. Bayview includes a structural concrete roofed reservoir with approximately 57,500 square feet total roof space available for solar PV.

2.4.2.2. Bayview has a functioning potable water pump station with three pumps on site.

2.4.2.3. An exclusive community liaison will be required for this location.

2.5. Solar PV System Design Specifications.

2.5.1. Design Requirements. All System design documents and engineering calculations will be submitted to and approved by a licensed professional engineer (or engineers) who is certified to practice in the State of California and is a professional engineer in good standing. System design documents and engineering calculations that are submitted for review without the appropriate professional engineering stamp will not be reviewed and will be returned as incomplete.

2.5.2. System design documents will include, but not be limited to the following:

2.5.2.1. System layout.

2.5.2.2. Photo Simulations based on the architectural design for the following sites may be required.

2.5.2.3. System schematics.

2.5.2.4. System capacity calculations.

2.5.2.5. Single line electrical diagram.

2.5.2.6. Point of Interconnection schematics.

- 2.5.2.7. Point of Interconnection single line electrical diagram.
- 2.5.2.8. Construction plans (structural, civil, mechanical, electrical, etc.).
- 2.5.2.9. Structural calculations and structural and mounting details.
- 2.5.2.10. Wind loading and seismic calculations.
- 2.5.2.11. List of Equipment and Materials Schedule and specifications.
- 2.5.2.12. Construction schedule.

2.5.3. PV Systems General.

- 2.5.3.1. Provide and install complete PV power systems, including all support structures necessary to mount the systems on rooftops, parking structures or ground applications. All equipment and work shall comply with Occupational Health and Safety Administration (OSHA) directives.
 - 2.5.3.2. Unless otherwise specified or dictated by site condition, all PV arrays should be oriented to achieve maximum kWh production.
 - 2.5.3.3. Systems should require minimal maintenance.
 - 2.5.3.4. Tracking systems may be considered if cost effective and require minimal maintenance.
 - 2.5.3.5. PV array and auxiliary equipment must meet all seismic requirements.
 - 2.5.3.6. Array/inverter design must meet CEC 690.7 and 690.8 correction factors for voltage and current.
 - 2.5.3.7. Unless otherwise specified all conduits shall be rigid conduit type at MOC Complex; all exposed conduits shall be PVC coated rigid PVC coated conduit at Bayview Water Reservoir & Pump Station.
- 2.5.4. Each system shall include an inverter (power conditioning unit) with AC output rated at least to the maximum output of the array under highest insulation and lowest temperature expected. However, the City will consider an array to inverter ratio that exceeds 100% if the solar provider can provide data showing that there will be no clipping of the generated solar power within the first 5 years of system operation. For the temperature and insulation characteristics of the City of San Diego, the generally accepted maximum array to inverter ratio is 120%. The inverter shall be capable of automatic and continuous operation.

- 2.5.4.1.** All inverters provided must utilize Maximum Power Point Tracking (MPPT). The inverter must be properly matched with the array operating characteristics to maximize its MPPT capabilities.
- 2.5.4.2.** The inverter(s) selected must be able to operate reliably under the expected AC voltage range.
- 2.5.4.3.** Inverters must have integrated ground fault detection and interruption.
- 2.5.4.4.** Inverter must have a built-in night time disconnect to minimize tare losses.
- 2.5.4.5.** If used outside, the inverter must be rated for outdoor use with safety enclosure. A cover must be provided to shade the inverter and provide protection from the elements.
- 2.5.4.6.** All materials including fasteners are to be corrosion and UV resistant.
- 2.5.4.7.** DC disconnects are required at the array/combiner box location to facilitate quick shut off in the event of a fault. Disconnect enclosure must be NEMA 3R for MOC Complex, and NEMA 4X for Bayview Water Reservoir and Pump Station.
- 2.5.4.8.** All system components must be clearly labeled as to the type, manufacturer, and model number for replacement and service as required, and documented in the System Operation and Maintenance Manual. Sources for this equipment should also be identified. It is required that the supplier/installer either maintain or have a ready source for replacement components as needed for required warranties or service.
- 2.5.4.9.** A complete set of replacement fuses of the same type and rating for all fuses in the system must be supplied with each system. Fuses, any keys required to access any equipment (panel box, inverter, disconnects), a laminated 11" X 17" one line diagram and copy of the operation and maintenance manual shall be stored in a box (furnished by the Design-Builder) located near the solar equipment (location to be agreed upon by installer, host customer, and utility). If located outside the box is to be water tight and corrosion resistant.
- 2.5.4.10.** All electrical materials and equipment used on this project must meet the following general requirements:

1. Products must be American made. If non-domestic products are submitted, notice is hereby given that extensive testing shall be required to insure quality and conformance to the Specifications. Testing shall be done by a recognized testing agency, acceptable to the City.
2. The cost of domestic components must exceed 50 percent of the cost of all the components.
3. All systems, including but not limited to PV modules, inverters and mounting systems, must be designed and installed using Underwriters Laboratories (UL) listed components. All materials and equipment shall bear a UL certification label. Other agency's certifications are not acceptable unless there are no other products or materials available that have the requisite UL rating.

2.5.5. Modules.

- 2.5.5.1.** PV modules must be listed on the California Energy Commission's PTC list and must qualify for eligibility under the California Solar Initiative (CSI) Program.
- 2.5.5.2.** System must comply with IEEE 1262 "Recommended Practice for Qualifications of Photovoltaic Modules".
- 2.5.5.3.** Modules must be UL listed and certified to UL 1703 - "Flat-Plate Photovoltaic Modules and Panels".
- 2.5.5.4.** Modules must have performance data reported IAW IEC 61215 "Crystalline Silicon Terrestrial Photovoltaic (PV) Modules - Design Qualification and Type Approval or IEC 61646 "Thin-film terrestrial photovoltaic (PV) modules Design qualification and type approval (as appropriate).
- 2.5.5.5.** PV module interconnect wiring must be sunlight-resistant and must be attached to module junction boxes using weather-tight strain relief. The module wiring interconnections shall use a connector device that allows quick assembly and disassembly of the arrays under no load conditions. These connectors must be listed by a NRTL, and be weather-sealed, guarded and polarity protected. Once this wiring leaves the array it must be enclosed in conduit.

2.5.6. Electric Power Requirements:

- 2.5.6.1.** The City's standard specifications should be reviewed in detail for applicability to this project.
- 2.5.6.2.** Power provided must be compatible with the onsite distribution system.
- 2.5.6.3.** Power capacity should be measured at the inverter AC output using the PVUSA Test Conditions (PTC), i.e. 1,000 Watts/m, 20 °C ambient temperature and wind speed of 1 m/s.
- 2.5.6.4.** The System must include all the hardware needed for the solar PV.
- 2.5.6.5.** All systems must be installed in accordance with all applicable requirements of the City design guidelines, master specifications, California Solar Initiative, and the California Electrical Code (CEC), including but not limited to Article 690, "Solar Photovoltaic Systems" and California Electrical Code Article 705 - "Interconnected Electrical Power Production Sources".
- 2.5.6.6.** Systems must be designed and installed using UL listed components.
- 2.5.6.7.** Inverters must comply with the following requirements:
 - 1. IEEE 1547 - "Standard for Interconnecting Distributed Energy Resources with Electric Power Systems."
 - 2. UL 1741 - "Standard for Static Inverters and Charge Controllers for use in Photovoltaic Systems."
 - 3. IEEE 929, and FCC Part 15 Class A and Class B for radiated approvals.
 - 4. Listed on the CEC list of eligible inverters.
- 2.5.6.8.** Other technical codes that will apply include:
 - 1. NFPA 853 (solar PVs near buildings).
 - 2. NFPA 70 (electrical components).
 - 3. National Electrical Safety Code - ANSI C2.
 - 4. Calif. Dept. of Forestry & Fire Protection "Solar Photovoltaic Installation Guideline."
 - 5. All applicable State Building Codes and requirements.

- 2.5.6.9.** All Balance of Systems (wiring, component, wiring, conduits, and connections) must be suited for conditions for which they are to be installed. All equipment, such as disconnect switches and other devices) located in exterior locations must be installed in general purpose enclosures.
- 2.5.6.10.** It is the preference of the City that when possible, inverters are located inside out of the weather in a minimum NEMA 12 enclosure. If inverters are in exterior locations, they shall be installed in all-weather NEMA 3R enclosures for MOC Complex, and NEMA epoxy coated 3R for Bayview Water Reservoir & Pump Station.
- 2.5.6.11.** An interval data meter must be installed to measure the AC output of the inverter. This meter should be located in a location accessible to City facilities personnel.
- 2.5.6.12.** All circuit breakers, fuses, and disconnects must be listed or recognized for use in DC circuits where applicable. Equipment only rated for use in AC circuits will not be permitted for use in DC circuits.
- 2.5.6.13.** Color coding of DC conductors shall be as follows: Ungrounded conductors = Red or Black, Grounded conductor = White, Ground = Bare or Green, or Green with Yellow stripes.
- 2.5.6.14.** AC side voltage drop to be one percent or less at full capacity.
- 2.5.6.15.** Interconnection must comply with San Diego Gas & Electric's (SDG&E) "Rule 21, Interconnection Standards for non-Utility Generation". The Design-BUILDER will assist the City in preparing and submitting appropriate interconnection agreements with SDG&E. This shall be done at no cost or liability to the City.
- 2.5.6.16.** PV module interconnect wiring must be sunlight-resistant, and must be attached to module junction boxes using weather-tight strain relief. The module wiring interconnections shall use a connector device that allows quick assembly and disassembly of the arrays under no load conditions. These connectors must be listed by a NRTL, and be weather-sealed, guarded and polarity protected. Once this wiring leaves the array it must be enclosed in conduit.
- 2.5.6.17.** All conduits containing DC conductors where routed indoors must have conspicuous labels affixed at intervals of five feet maximum worded "Caution: DC Circuit".

- 2.5.6.18.** Conduits to be terminated in inverter are to utilize manufacturer's provided conduit entry points. In outdoor locations all hubs to be listed UL rainproof or wet location hubs complying with UL 514B for entry into the enclosure. All openings to be sealed.
- 2.5.6.19.** With the exception of the module interconnect wiring, all terminations must use listed box terminal or compression type connections, and must be made with an appropriate junction box or enclosure. Exposed, field splices between conductors will not be permitted. Twist on wire splices, crimped, soldered, or taped connections are not permitted for the required field installed wiring of DC circuits. Proper torque specifications should be provided for all of the required field connections, and all the termination points should be liberally coated with an anti-corrosion spray to preserve the quality of all connections over time.
- 2.5.6.20.** All system conductors must have appropriate means for disconnecting and overcurrent protection, and require the use of switches, fuses or circuit breakers as applicable. All overcurrent devices shall have trip ratings no greater than the derated ampacity of the conductors that it protects. DC disconnects are required at the array location.
- 2.5.6.21.** All series connected strings of modules (source circuits) must include a series fuse as required by UL and CEC Standards to prevent excessive reverse current flow through modules in source circuits under fault conditions, and diodes must be contained in a listed junction/combiner box.
- 2.5.6.22.** An outdoor rated disconnect device must be installed in all systems at the interface between the PV system inverter and the utility metering. This disconnect device shall be a visible break, lockable device, and shall be installed at a convenient location near the service point/point of common coupling and accessible to utility personnel. Where interconnection ties to a transformer serving a customer a fused disconnect or fused pullout must be installed between the metering and the interconnection tap.
- 2.5.6.23.** A standard utility watt-hour meter socket with blank plate shall be provided on the PV system side of this disconnect. If a meter is not required by the utility, provide a blank plate. The meter shall be capable of being electrically isolated for maintenance by visible openings (disconnects/fused pull-outs) on both sides of the meter.

- 2.5.6.24.** All electrical equipment, enclosures, disconnects, and overcurrent devices must be clearly marked and identified. Markings must reference the same designations called out in the one line.
- 2.5.6.25.** Plaques/equipment device labeling must meet required font size, be etched on laminated phenolic resin designed for outdoor use and fastened with adhesive and rivets. Fastening method shall not void UL listing. A one-line diagram of the system must be kept on site for reference. Plaques must be provided per code and utility requirements. A site map must be located at the service entrance denoting location of PV (AC) utility disconnect.
- 2.5.6.26.** Any taps required must be engineered, meet U.L. 891 Standards, and not void the existing UL label.
- 2.5.6.27.** All interruptions of electrical power during installation shall be kept to a minimum.
- 2.5.6.28.** Lock-out-Tag-out shall be enforced by the Design-Builder during construction.
- 2.5.6.29.** Certifications must be current for equipment operation on site (crane, forklift, man lift, etc.).
- 2.5.6.30.** Work outside of normal working hours or on weekends cannot be performed without advanced written authorization from the City's representative. Generally work that does not need to be immediately inspected and hoisting of materials on weekends will be allowed with prior approval as noted.

2.5.7. Meters.

- 2.5.7.1.** Design-Builder will provide revenue grade Interval Data Recording (IDR) meters complete with industry standard telemetry for communication with Ethernet, cellular or other common output capabilities. Metering system must provide all data required to meet the requirements of the CSI program.
- 2.5.7.2.** Meters must connect to a monitoring/data collection recording solar production through Time of Use (TOU) increments applicable to the local utility standards, with a minimum 15 minute intervals, compatible with the Sunny WebBox used at MOC building 3.
- 2.5.7.3.** Design-Builder shall provide a turnkey data acquisition and display system that allows the City to monitor, diagnose, and track the solar energy output of the solar PV system consistent

with City requirements. Minimum requirement is the provision of a web-based monitoring and tracking system that meets CSI requirements and that includes historical database and real time data on time of day use, peak loads in minimum 15-minute intervals. The system should also provide hours of operation, site irradiance, air and cell temperature, wind direction, and wind speed.

- 2.5.7.4.** If multiple inverters or string level monitoring are employed the monitoring system shall provide detailed operating data (power, voltage, amperage, status) at the inverter level/string level. The total production for these inverters/strings shall also roll up for one total view of the site.

2.5.8. Structural Requirements.

- 2.5.8.1.** All structures and structural elements, including array structures, shall be designed in accordance with all applicable California Building Codes and standards pertaining to the erection of such structures.
- 2.5.8.2.** Design-Builder shall provide structural calculations, stamped by a licensed professional structural engineer in good standing with the State of California.
- 2.5.8.3.** All structural components, including array structures, shall be designed in a manner commensurate with attaining a minimum 30 year design life. Particular attention shall be given to the prevention of corrosion at the connections between dissimilar metals.
- 2.5.8.4.** Building roof penetrations should be kept to a minimum. Any roof penetrations must be designed and constructed in collaboration with the roofing professional or manufacturer responsible for the roof and roofing material warranty for the specific site, to ensure that the existing roof warranty is not invalidated by the installation of the PV system.
- 2.5.8.5.** Roof walking pads are recommended for areas around rooftop equipment that requires periodic maintenance. The decision to provide walking pads should be based on the recommendations of the PV Design-Builder in consultation with the roofing contractor.
- 2.5.8.6.** For rooftop installations where there is no parapet or the parapet is less than 42", a 6' safety zone from the roof edge to the PV system must be maintained. A 4' clear path of travel must be maintained to and around all rooftop equipment, skylights and ventilation hatches.

2.5.8.7. Provide adequate walking space between solar panels so that maintenance workers can get around to perform repair and maintenance.

2.5.9. Lighting Requirements.

2.5.9.1. If a lighting design is required for the site it must be in accordance with City design guidelines, City's Outdoor Lighting Policy and City Master Specifications. The Design-Builder will provide a photometric analysis that shows compliance with City requirements.

2.5.9.2. If new lighting is required the Design-Builder must install a lighting system that provides a minimum of 0.5 foot-candles on the pavement under any canopy and all pavement outside any canopy footprint.

2.5.10. Commissioning and Acceptance Test.

2.5.10.1. During the start-up, the City shall observe and verify the PV system's performance. Required commissioning and acceptance test services will include:

1. Verification that installation is complete including that the system is permanently installed, wired completely, that as-built conditions match final plan set and that punch list is completed. Check to confirm that equipment is designed for the elements and that all required labeling is permanently affixed.
2. Verification that installation is safe. Verify project permit signed off, and that working clearances and grounding are adequate. Verify connections and proper torque. Verify proper fuse/breaker type and size. Verify working access to the array and fall protection is adequate.
3. Determination of acceptable productive solar power output as measured in kW (AC) at the building electrical interconnection point.
4. Verification that the PV system must meet the Guaranteed Minimum Output Performance requirements during the testing startup.
5. Determination that the PV system meets the AC Power Delivery Schedule for the first 30 days.
6. Performance measurements and documentation, performed under cloudless skies between 10 AM and 2 PM of the following:

- Voc of each string.
- String fuses continuity.
- Megger test of each home run.
- Inverter startup.
- Imp for each string.
- Solar irradiance and cell temperature.
- System output compared to peak dc rating corrected for temperature and irradiance and system derating factor.
- Status of system communications.

2.5.11. Final contract payment will be tied to successfully completing acceptance testing, and delivery of the complete System Manual. The Design-Builder will also be required to provide a minimum of 2, 3-hour training sessions. Topics to be covered in this training include theory of operation, operating requirements, component descriptions and specifications, maintenance requirements and schedule, safety precautions, and overview of the System Manual and record keeping.

2.5.12. Operation & Maintenance (O&M) Manuals and As-Built Drawings.

2.5.12.1. The Design-Builder shall provide 3 hardcopy sets and 1 electronic (CD) of site-specific operation, maintenance, and parts manuals for each installed solar PV system. These O&M Manuals shall cover all components, options, and accessories supplied. The Manuals shall include maintenance, troubleshooting, and safety precautions specific to the supplied equipment at the site. The Manuals shall also include all equipment manufacturers' specifications and operations manuals, including those for PV modules, inverters, and BOS equipment.

2.5.12.2. The Design-Builder shall also provide 1 set of As-Built drawings as described in City's current CADD Standards. These requirements shall be delivered prior to acceptance of the site-specific solar PV system.

2.5.13. Warranties and Guarantees.

2.5.13.1. The Design-Builder shall provide evidence of the following warranties:

1. 10-year complete solar PV system warranty, except for the warranties listed below.
2. 15-year inverter full replacement warranty.

3. 10-year roof penetration and building penetration warranty.
4. Minimum 10-year warranty on all other equipment

2.5.14. Substantial Completion will require:

- 2.5.14.1.** Solar Provider inspection and testing of system observed by City.
- 2.5.14.2.** SDG&E inspection and approval of system.
- 2.5.14.3.** Commissioning / operation.

2.6. Photovoltaic Equipment.

- 2.6.1.** The Design-Builder shall be responsible for the installation of solar PV systems at MOC Complex and Bayview Reservoir. The PV systems shall be complete and operable in accordance with the Contract Documents.
- 2.6.2.** The Design-Builder shall evaluate each proposed site to determine if PV system is feasible to install.
- 2.6.3.** The Design-Builder shall evaluate each location's energy consumptions and propose PV system size at 80% of the site's energy consumption during June 2015 thru May 2016. If the proposed PV system at a site cannot achieve 80% of the site's energy consumption for the area provided, the Design-Builder shall propose a PV system that maximizes the PV system output for the available area.
- 2.6.4.** The Design-Builder shall include structural calculations and mounting details in their cost proposal.
- 2.6.5.** The Design-Builder shall include wind loading and seismic calculations in their cost proposal.
- 2.6.6.** The Design-Builder shall include list of material and equipment schedule.
- 2.6.7.** The Contractor shall match finish surface to the existing.
- 2.6.8. Reference Specifications, Codes and Standards.** Without limiting the generality of other requirements of these specifications, all work specified herein shall conform to or exceed the applicable requirements of the California Electrical Code (CEC) 2016; local utility rule for interconnection and local permit bulletin of PV system provided, that where a local code or ordinance is in conflict with the CEC, the provisions of said local code or ordinance shall take precedence.

2.6.8.1. Codes:

1. CEC California Electrical Code 2016

2.6.8.2. Commercial Standards:

1. IEEE Institute of Electrical and Electronics Engineers
2. NFPA National Fire Protection Association
3. UL Underwriters' Laboratories, Inc.
4. NEMA National Electrical Manufacturers Association

2.6.9. Related Sections.

2.6.9.1. The work of the following section applies to the work of section 2.6. Other sections, not referenced below, shall also apply to the **extent** required for proper performance of this work.

1. Section 2.7 Low Voltage Electrical Service and Distribution.

2.6.9.2. Operation and Maintenance. The Design-Builder shall submit operation and maintenance information in accordance with section 2-5.3, 'Submittals,' of the Standard Specifications for Public Works Construction (The GREENBOOK) and the City Supplement (The WHITEBOOK). The submittal shall be supplemented by written text and shall include the following:

1. Operating procedures.
2. Maintenance procedures.
3. Manufacturers parts list, illustrations, assemblies, and diagrams.

2.6.9.3. Submittals. The Design-Builder shall submit shop drawings and performance specifications of all equipment in accordance with 2-5.3, 'Submittals,' of The GREENBOOK and The WHITEBOOK.

After review by the CONSTRUCTION MANAGER and City RESIDENT ENGINEER, the shop drawings of the solar PV system shall be submitted to the Resident Engineer and Design-Builder for approval before installation.

2.6.10. Products.

2.6.10.1. Materials: All materials and equipment furnished under this section shall be new; they shall be in accordance with the requirements of the Institute of Electrical and Electronics Engineers, the National Electrical Manufacturers Association, the National Fire Protection Association, and the National Electrical Code. All materials and equipment shall bear the Underwriters' Laboratories label.

2.6.10.2. Equipment: All equipment necessary for this PV system shall be compatible.

2.6.10.3. Enclosure Requirements: All outdoor equipment, fixtures, and wiring devices shall be of approved, weatherproof construction.

2.6.10.4. Standard Products: Materials and equipment submitted for approval shall be the cataloged products of companies regularly engaged in the manufacture of such items, of the latest standard design that conforms to the specification requirements, and shall essentially duplicate material and equipment that has been in satisfactory use for several years.

2.6.10.5. Identical Equipment: All equipment of the same type shall be identical and interchangeable.

2.6.10.6. Equipment Ratings: All equipment shall be rated for the worst case service conditions regardless of rating factors or duty cycles.

2.6.10.7. Inverters: Manufacturer shall meet UL 1741 – Standard for Inverters, Converts, Controllers.

2.6.11. Panels.

2.6.11.1. Type: Solar panels shall be based on the most cost effective panel by the manufacturer and shall be non-reflecting type, Made in America. The article must be manufactured in the United States. The cost of domestic components must exceed 50 percent of the cost of all the components.

2.6.11.2. Output: Panels shall develop a minimum of 90% rated output after 10 years, and 80% rated output after 25 years. Must have a bell-curve output that produce minimum power at sunrise and sunset using the cadmium telluride photovoltaic technology or better.

2.6.11.3. Performance: 25-year linear guarantee, or better without requirement for the City to purchase additional Maintenance Package. In the event that proposal performance guarantee is contingent on a separate maintenance contract, the DB's proposal would be deemed non-compliant to this RFP.

2.6.11.4. Warranty: A 10-year product warranty.

2.6.12. Panel Racking.

- 2.6.12.1. Type:** A ballasted roof mounted racking system that is readily available on the market, compatible with the project panel, and meets the design loads. A carport/shade structure that is compatible with the project panel and meets the design loads.
- 2.6.12.2.** The racking system material must be general purpose unistrut for MOC Complex and high grade stainless steel for Bayview. If stainless steel is not readily available, use galvanized steel with epoxy coating.
- 2.6.12.3.** The racking system must accommodate a tilt angle of 10 degrees for the most cost effective solar panel facing in the south direction.
- 2.6.12.4.** The racking system adjustments shall be capable of compensating the slight roof pitch.
- 2.6.12.5.** Must have integrated grounding and wiring management.
- 2.6.12.6.** UL 1703 Class A system fire classification rating.
- 2.6.12.7. Warranty:** A minimum 15-year warranty.

2.6.13. Inverters.

- 2.6.13.1. Type:** Inverters shall be free standing or wall mounted grid tie inverters. Multiple inverter shall be used for each location. In case one fails others can continue to provide power.
- 2.6.13.2.** Bayview. If stainless steel is not readily available, use galvanized steel with epoxy coating.
- 2.6.13.3.** The racking system must accommodate a tilt angle of 10 degrees for the most cost effective solar panel facing in the south direction.
- 2.6.13.4.** The racking system adjustments shall be capable of compensating the slight roof pitch.
- 2.6.13.5.** Must have integrated grounding and wiring management.
- 2.6.13.6.** UL 1703 Class A system fire classification rating.
- 2.6.13.7. Warranty:** A minimum 15-year warranty.

2.6.14. Inverters.

2.6.14.1. Type: Inverters shall be free standing or wall mounted grid tie inverters. Multiple inverter shall be used for each location. In case one fails others can continue to provide power.

2.6.14.2. Enclosure: Inverter housing shall have a minimum rating of NEMA 3R for MOC Complex and NEMA epoxy-coated 3R for Bayview.

2.6.14.3. Anchoring: Inverter shall be capable of being anchored to a concrete slab. Manufacturer to provide recommended bolt size and bolt layout.

2.6.14.4. Ratings: Inverter rating shall match the ratings on the construction drawings.

1. Output Rating: size depends upon the number of panels per locations at MOC to total 500 kW AC generated power. 300 KW AC at Bayview Water Reservoir & Pump Station, or based on previous 12 months energy consumption at 80%.
2. Output Voltage Per existing service available at each facility.
3. Input Voltage 480VDC (nominal)
4. Minimum Efficiency 96.5%
5. Minimum DC Ratio 1.30

2.6.14.5. Ground Fault Protection: Inverter shall have integrated ground fault protection. Ground fault protection shall trip inverter offline and provide a status contact for customer use.

2.6.14.6. Control Power: Inverter shall require an external control power source.

2.6.14.7. Inverter shall have the ability to communicate via serial or Ethernet and shall report current inverter status, alarms, input and output voltages and current and metering data on the Internet via Sunny Portal with Sunny WebBox.

2.6.14.8. Environmental: Inverters shall be designed to operate at full capacity outdoors at the project site without any external cooling or heating.

2.6.14.9. Warranty: Inverter shall have a minimum warranty of 15 years.

2.6.14.10. Equipment Listed: Inverters shall bear UL 1741 or certified by Independent testing agency, approved by local authority having justification.

2.6.15. Disconnecting Means. Means shall be provided to disconnect all current-carrying conductors from all other conductors in a building or other structures per Article 690 of the NEC.

2.6.16. Installation.

2.6.16.1. General: All electrical equipment shall be installed securely in place. Equipment shall be mounted parallel and perpendicular to the walls, floors, and ceilings. Sufficient walking space be provided to safely gain access to solar panels for maintenance and repair.

2.6.16.2. Anchors: All anchors and fasteners shall be types designed for the intended purpose and shall be capable of adequately, safely, and permanently securing the material in place. Generally, screws shall be used on wood surfaces, masonry anchors in concrete or brick, toggle bolts on hollow walls, machine screws, bolts, or welded studs on steel. Nails shall be used only for temporary attachment or support.

2.6.16.3. Omissions or Conflicts: Omissions or conflicts on the specifications shall be brought to the attention of the CONSTRUCTION MANAGER and City RESIDENT ENGINEER for clarification before proceeding with the work.

2.6.16.4. Preparation: The Design-Builder shall make all necessary provisions throughout the site to receive all equipment as construction progresses and shall furnish and install adequate backing, supports, inserts, and anchor bolts for the hanging and support of all electrical cabinets, enclosures, conduits, panel boards, and switches, and shall furnish and install sleeves through walls, floors, or foundations where electrical lines are required to penetrate.

2.6.16.5. Commissioning: The solar PV system should be delivering energy at full capacity to the meter after the system is fully checked.

2.7. Low Voltage Electrical Service and Distribution.

2.7.1. The Design-Builder shall provide all electrical service sections, control and terminal cabinets, and all appurtenant work, complete and operable, in accordance with the Contract Documents.

2.7.2. Reference Specifications, Codes and Standards.

2.7.2.1. Without limiting the generality of other requirements of these Specifications, all work specified herein shall conform to or exceed the applicable requirements of the California Electrical Code (CEC) 2016 provided, that where a local code or ordinance is in conflict with the CEC, the provisions of said local code or ordinance shall take precedence.

2.7.2.2. Codes:

1. CEC California Electrical Code 2016

2.7.2.3. Commercial Standards:

1. ANSI/NEMA ICS-2 Devices, Controllers, and Assemblies for Industrial Control
2. IEEE Institute of Electrical and Electronics Engineers
3. NFPA National Fire Protection Association
4. UL Underwriters' Laboratories, Inc.
5. NEMA National Electrical Manufacturers Association

2.7.3. Operation and Maintenance.

2.7.3.1. The Design-Builder shall submit operation and maintenance information. The submittal shall be supplemented by written text and shall include the following:

1. Operating procedures.
2. Maintenance procedures.
3. Manufacturers parts list, illustrations, assemblies, and diagrams.

2.7.4. Contract Submittals.

2.7.4.1. The Design-Builder shall submit shop drawings and performance specifications of all equipment in accordance with 2-5.3, 'Submittals,' of The GREENBOOK and The WHITEBOOK.

2.7.4.2. After review by the CONSTRUCTION MANAGER and City RESIDENT ENGINEER, the shop drawings of the service section shall be submitted to the utility company for approval before fabrication.

2.7.5. Products.

2.7.5.1. Materials: All materials and equipment furnished under this Section shall be new; they shall be in accordance with the requirements of the Institute of Electrical and Electronics Engineers, the National Electrical Manufacturers Association, the National Fire Protection Association, and the National Electrical Code. Where available, all materials and equipment shall bear the Underwriters' Laboratories label.

2.7.5.2. Equipment: All equipment for the same purpose shall be of the same make.

2.7.5.3. Enclosure Requirements: All outdoor equipment, fixtures, and wiring devices shall be of approved, weatherproof construction.

2.7.5.4. Standard Products: Materials and equipment submitted for approval shall be the cataloged products of companies regularly engaged in the manufacture of such items, of the latest standard design that conforms to the specification requirements, and shall essentially duplicate material and equipment that has been in satisfactory use for several years.

2.7.6. Installation – General.

2.7.6.1. General: All electrical equipment shall be installed securely in place. Equipment shall be mounted parallel and perpendicular to the walls, floors, and ceilings.

2.7.6.2. Anchors: All anchors and fasteners shall be types designed for the intended purpose and shall be capable of adequately, safely, and permanently securing the material in place. Generally, screws shall be used on wood surfaces, masonry anchors in concrete or brick, toggle bolts on hollow walls, machine screws, bolts, or welded studs on steel. Nails shall be used only for temporary attachment or support.

2.7.6.3. Omissions or Conflicts: Omissions or conflicts on the Drawings or between Drawings and Specifications shall be brought to the attention of the CONSTRUCTION MANAGER and City RESIDENT ENGINEER for clarification before proceeding with the work.

2.7.6.4. Preparation: The Design-Builder shall make all necessary provisions throughout the site to receive all equipment as construction progresses and shall furnish and install adequate backing, supports, inserts, and anchor bolts for the hanging and support of all electrical cabinets, enclosures, conduits, and switches,

and shall furnish and install sleeves through walls, floors, or foundations where electrical lines are required to penetrate.

2.7.6.5. Leveling: Floor-standing equipment shall be leveled with shims as required to maintain horizontal surfaces within 1/32 inch per horizontal foot; after leveling, equipment shall be anchored, and then grouted so that no space exists between concrete and equipment support beams.

2.8. Design Deliverables

2.8.1. Design deliverables during the design process shall include 30%, 90% and 100% phases. Plans, Specifications shall be delivered for review at each phase.

2.8.2. Design-builder shall provide five (5) full size (24"x36"), five (5) one-half size (11"x17"), and one (1) CD of design drawings, and five (5) sets of specifications for each phase of design submittals. Design-Builder shall provide final as-built drawings in Mylar.

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ATTACHMENT D
PREVAILING WAGES

PREVAILING WAGES

1. **PREVAILING WAGE RATES:** Pursuant to San Diego Municipal Code section 22.3019, construction, alteration, demolition, repair and maintenance work performed under this Contract is subject to State prevailing wage laws. For construction work performed under this Contract cumulatively exceeding \$25,000 and for alteration, demolition, repair and maintenance work performed under this Contract cumulatively exceeding \$15,000, the Contractor and its subcontractors shall comply with State prevailing wage laws including, but not limited to, the requirements listed below.
 - 1.1. **Compliance with Prevailing Wage Requirements.** Pursuant to sections 1720 through 1861 of the California Labor Code, the Contractor and its subcontractors shall ensure that all workers who perform work under this Contract are paid not less than the prevailing rate of per diem wages as determined by the Director of the California Department of Industrial Relations (DIR). This includes work performed during the design and preconstruction phases of construction including, but not limited to, inspection and land surveying work.
 - 1.1.1. Copies of such prevailing rate of per diem wages are on file at the City and are available for inspection to any interested party on request. Copies of the prevailing rate of per diem wages also may be found at <http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm>. Contractor and its subcontractors shall post a copy of the prevailing rate of per diem wages determination at each job site and shall make them available to any interested party upon request.
 - 1.1.2. The wage rates determined by the DIR refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, then the published rate of wage shall be in effect for the life of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the DIR, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.
 - 1.2. **Penalties for Violations.** Contractor and its subcontractors shall comply with California Labor Code section 1775 in the event a worker is paid less than the prevailing wage rate for the work or craft in which the worker is employed.

- 1.3. Payroll Records.** Contractor and its subcontractors shall comply with California Labor Code section 1776, which generally requires keeping accurate payroll records, verifying and certifying payroll records, and making them available for inspection. Contractor shall require its subcontractors to also comply with section 1776. Contractor and its subcontractors shall submit weekly certified payroll records online via the City's web-based Labor Compliance Program. Contractor is responsible for ensuring its subcontractors submit certified payroll records to the City.
- 1.3.1.** For contracts entered into on or after April 1, 2015, Contractor and their subcontractors shall furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.
- 1.4. Apprentices.** Contractor and its subcontractors shall comply with California Labor Code sections 1777.5, 1777.6 and 1777.7 concerning the employment and wages of apprentices. Contractor is held responsible for the compliance of their subcontractors with sections 1777.5, 1777.6 and 1777.7.
- 1.5. Working Hours.** Contractor and their subcontractors shall comply with California Labor Code sections 1810 through 1815, including but not limited to: (i) restrict working hours on public works contracts to eight hours a day and forty hours a week, unless all hours worked in excess of 8 hours per day are compensated at not less than 1½ times the basic rate of pay; and (ii) specify penalties to be imposed on design professionals and subcontractors of \$25 per worker per day for each day the worker works more than 8 hours per day and 40 hours per week in violation of California Labor Code sections 1810 through 1815.
- 1.6. Required Provisions for Subcontracts.** Contractor shall include at a minimum a copy of the following provisions in any contract they enter into with a subcontractor: California Labor Code sections 1771, 1771.1, 1775, 1776, 1777.5, 1810, 1813, 1815, 1860 and 1861.
- 1.7. Labor Code Section 1861 Certification.** Contractor in accordance with California Labor Code section 3700 is required to secure the payment of compensation of its employees and by signing this Contract, Contractor certifies that "I am aware of the provisions of Section 3700 of the California Labor Code which require every employer to be insured against liability for workers' compensation or to undertake self-insurance in accordance with the provisions of that code, and I will comply with such provisions before commencing the performance of the work of this Contract."
- 1.8. Labor Compliance Program.** The City has its own Labor Compliance Program authorized in August 2011 by the DIR. The City will withhold contract payments when payroll records are delinquent or deemed inadequate by the City or other governmental entity, or it has been established after an investigation by the City or other governmental entity that underpayment(s) have occurred. For questions or assistance, please contact the City of San Diego's Equal Opportunity Contracting Department at 619-236-6000.

1.9. Contractor and Subcontractor Registration Requirements. This project is subject to compliance monitoring and enforcement by the DIR. As of March 1, 2015, no contractor or subcontractor may be listed on a bid or proposal for a public works project unless registered with the DIR pursuant to Labor Code section 1725.5. As of April 1, 2015, a contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, or enter into any contract for public work, unless currently registered and qualified to perform public work pursuant to Labor Code section 1725.5. By submitting a bid or proposal to the City, Contractor is certifying that he or she has verified that all subcontractors used on this public work project are registered with the DIR in compliance with Labor Code sections 1771.1 and 1725.5, and Contractor shall provide proof of registration to the City upon request.

1.9.1. A Contractor's inadvertent error in listing a subcontractor who is not registered pursuant to Labor Code section 1725.5 in response to a solicitation shall not be grounds for filing a bid protest or grounds for considering the bid non-responsive provided that any of the following apply: (1) the subcontractor is registered prior to bid opening; (2) within twenty-four hours after the bid opening, the subcontractor is registered and has paid the penalty registration fee specified in Labor Code section 1725.5; or (3) the subcontractor is replaced by another registered subcontractor pursuant to Public Contract Code section 4107.

ATTACHMENT E
SUPPLEMENTARY SPECIAL PROVISIONS

SUPPLEMENTARY SPECIAL PROVISIONS

The following Supplementary Special Provisions (SSP) modifies the following documents:

- 1) The **2015 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK") currently in effect.
- 2) The **2015 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK").

SECTION 2 - SCOPE AND CONTROL OF WORK

2-3.2 Self Performance. DELETE in its entirety and SUBSTITUTE with the following:

1. You shall perform, with your own organization, Contract Work amounting to at least 30% of the base Bid alone or base Bid and any additive or deductive alternates that, when added or deducted together, form the basis of award.

2-7 SUBSURFACE DATA. ADD the following:

4. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations and tests of subsurface conditions at the Work Site:
 - a) Limited Geotechnical Investigation – MOC Complex Solar Project dated December 4, 2015 by Geocon Inc.
5. The reports listed above are available for review by contacting the Contract Specialist or visiting:

<ftp://ftp.sannet.gov/OUT/ECP/2-7%20SUBSURFACE%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

2-9.2 Survey Service. DELETE in its entirety and SUBSTITUTE with the following:

1. Prior to the start of construction, you shall submit a letter to the Engineer identifying the Licensed Land Surveyor or the Registered Civil Engineer authorized to practice land surveying within the State of California that will be performing the survey services for the Project.
2. You are responsible for performing and meeting the accuracy of surveying standards adequate for construction through a Licensed Land Surveyor or a Registered Civil Engineer authorized to practice land surveying within the State of California.

3. Survey stakes shall be set and stationing by you for curbs, headers, water mains, sewers, storm drains, structures, rough grade, and any other structures and appurtenances that are needed for the Project. A corresponding cut or fill to finished grade (or flow line) shall be indicated on a grade sheet.
4. Surveys performed shall list the basis of bearings as tied to Record of Survey 14492 or equivalent, based on the California Coordinate System of 1983, Zone 6, U.S. Survey foot, epoch 1991.35, along with a completed calibration sheet (blank form will be supplied by City Surveys). The vertical datum used shall be NGVD 29 in accordance with the City of San Diego Vertical Bench Book.
5. You shall preserve construction survey stakes, control points, and other survey related marks for the duration of the Project. If any construction survey stakes are lost or disturbed and need to be replaced, such replacement shall be performed by the Engineer at your expense.

2-9.2.1 Survey Files.

1. All Computer Aided Drafting (CAD) Work shall be done in accordance with the City of San Diego's Citywide Computer Aided Design and Drafting (CADD) Standards and shall be in City seed files (.job, .txt, .dgn, .alg, .raw, .fwd, .dtm, .pdf, .docx, .xlsx, .tif, and .jpg).
2. All survey files shall be completed in accordance with the City of San Diego's Citywide CADD Standards and shall adhere to the City's Microstation level and attribute structure.
3. The survey file deliverable will be either one Master .dgn file containing all xref's in geospatially referenced (and attached) models or one Master dgn with all xref's geospatially referenced (and attached) as dgn files. Resource files may be sent to you if requested.
4. Survey files shall include, but shall not be limited to, the following items:
 - a. Street center line and (record width) right-of-way lines.
 - b. Project geometry (.alg) files (this will be generated for use in InRoads).
 - c. 3D surface model (.dtm, break line and spot elevation) file.
 - d. Spot elevations of the new utility main at each intersection, midblocks, and for any change in grade.
 - e. Monuments.
 - f. Curb lines (top curb and gutter).
 - g. All other appurtenances including but not limited to water valves, meters, vaults, manholes, fire hydrants, utility boxes, cleanouts, and poles.
5. You shall use the survey information to produce red-lines drawings as described in Section 2-5.4 "Red-lines and Record Documents."

2-9.2.2 Submittal.

1. Survey files shall be submitted in accordance with 2-5.3, "Submittals" and 2-5.4, "Red-Lines and Record Documents". You shall provide the Survey Files, proposed Drawings, and/or Red-line Drawings on a CD/DVD to the Engineer and shall post the Survey Files, proposed Drawings, and/or Red-line Drawings to the following website:

<ftp://ftp.sannet.gov/IN/SURVEYS/>

2. After the documents have been posted to the website, you shall send a confirmation email, which includes the hyperlink to the website, to the Engineer and to SurveyReview@sandiego.gov.
3. All survey Work and submittals which reveal non-compliance with the requirements of the Construction Documents shall be corrected as deemed necessary by the Engineer and the cost of the corrections to your survey submittals shall be at your expense.

2-9.2.3 Payment.

1. The payment for survey services Work shall be included in the Contract Price.

2-14.3 Coordination. To the City Supplement, ADD the following:

2. Other adjacent City projects are scheduled for construction for the same time period in the vicinity of MOC Complex. See Appendix "F" for the approximate location. Coordinate the Work with the adjacent projects as listed below:
 - a) MOC-5 Materials Bin Design, Yousif Benyamin, Project Manager, (858) 614-4082

2-15 TECHNICAL STUDIES AND DATA. To the City Supplement, ADD the following:

3. In preparation of the Contract Documents, the designer has relied upon the following reports of explorations, tests, and as-builts at the Work Site:
 - a) Public Utilities Department, Solar Working Group Proposal for Photovoltaic Systems on Public Utilities Department Assets, dated June 2014 by PUD.
 - b) 1328_MOC Complex and Bayview Reservoir SDGE Data JAN 2015 to MAY 2016
 - c) Hazardous Materials Report for MOC Complex
4. The reports listed above are available for review by contacting the Contract Specialist or visiting:

<ftp://ftp.sannet.gov/OUT/ECP/2-15%20TECHNICAL%20STUDIES%20AND%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

- 2-16** **CONTRACTOR REGISTRATION AND ELECTRONIC REPORTING SYSTEM.** To the City Supplement, item 1, DELETE in its entirety.

SECTION 4 - CONTROL OF MATERIALS

- 4-1.3.6** **Preapproved Materials.** To the City Supplement, ADD the following:
3. You shall submit in writing a list of all products to be incorporated in the Work that are on the AML.

- 4-1.6** **Trade Names or Equals.** To the City Supplement, ADD the following:
- You must submit your list of proposed substitutions for "an equal" ("or equal") item(s) **no less than 15 Working Days after determination of the apparent winner** and on the City's Product Submittal Form available at:
- <http://www.sandiego.gov/publicworks/edocref/index.shtml>

SECTION 5 - UTILITIES

- 5-2** **PROTECTION.** To the City Supplement, item 2, ADD the following:
- g) Refer to Appendix "H" for more information on the protection of AMI devices.

- 5-6** **COOPERATION.** ADD the following:
1. Notify SDG&E at least 10 Working Days prior to excavating within 10 feet of SDG&E Underground High Voltage Transmission Power Lines (69 KV and higher).

SECTION 6 - PROSECUTION, PROGRESS AND ACCEPTANCE OF WORK

ADD:

- 6-3.2.1.1** **Environmental Document.**
1. The City of San Diego Development Services Department has prepared a Notice of Exemption for Bayview Water Pump Station and Reservoir & Metropolitan Operations Center Solar Installation, as referenced in the Contract Appendix. You shall comply with all requirements of the Notice of Exemption as set forth in Appendix A.
2. Compliance with the City's environmental document shall be included in the Contract Price.

SECTION 7 - RESPONSIBILITIES OF THE CONTRACTOR

7-3 **LIABILITY INSURANCE.** DELETE in its entirety and SUBSTITUTE with the following:

7-3 **INSURANCE.**

2. The insurance provisions herein shall not be construed to limit your indemnity obligations contained in the Contract.

7-3.1 **Policies and Procedures.**

1. You shall procure the insurance described below, at its sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.
2. Insurance coverage for property damage resulting from your operations is on a replacement cost valuation. The market value will not be accepted.
3. You shall maintain this insurance for the duration of this Contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this Contract. Your liabilities under the Contract, e.g., your indemnity obligations, is not deemed limited to the insurance coverage required by this Contract.
4. The payment for insurance shall be included in the Contract Price as bid by you. Except as specifically agreed to by the City in writing, you are not entitled to any additional payment. Do not begin any Work under this Contract until you have provided and the City has approved all required insurance.
5. Policies of insurance shall provide that the City is entitled to 30 Days (10 Days for cancellation due to non-payment of premium) prior written notice of cancellation or non-renewal of the policy. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage or to provide evidence of renewal during the term of the Contract may be treated by the City as a material breach of the Contract.

7-3.2 **Types of Insurance.**

7-3.2.1 **Commercial General Liability Insurance.**

1. Commercial General Liability Insurance shall be written on the current version of the ISO Occurrence form CG 00 01 07 98 or an equivalent form providing coverage at least as broad.

2. The policy shall cover liability arising from premises and operations, XCU (explosions, underground, and collapse), independent contractors, products/completed operations, personal injury and advertising injury, bodily injury, property damage, and liability assumed under an insured's contract (including the tort liability of another assumed in a business contract).
3. There shall be no endorsement or modification limiting the scope of coverage for either "insured vs. insured" claims or contractual liability. You shall maintain the same or equivalent insurance for at least 10 years following completion of the Work.
4. All costs of defense shall be outside the policy limits. Policy coverage shall be in liability limits of not less than the following:

<u>General Annual Aggregate Limit</u>	<u>Limits of Liability</u>
Other than Products/Completed Operations	\$2,000,000
Products/Completed Operations Aggregate Limit	\$2,000,000
Personal Injury Limit	\$1,000,000
Each Occurrence	\$1,000,000

7-3.2.2 Commercial Automobile Liability Insurance.

1. You shall provide a policy or policies of Commercial Automobile Liability Insurance written on the current version of the ISO form CA 00 01 12 90 or later version or equivalent form providing coverage at least as broad in the amount of \$1,000,000 combined single limit per accident, covering bodily injury and property damage for owned, non-owned, and hired automobiles ("Any Auto").
2. All costs of defense shall be outside the limits of the policy.

7-3.2.5 Contractors Builders Risk Property Insurance.

1. You shall provide at your expense, and maintain until Final Acceptance of the Work, a Special Form Builders Risk Policy or Policies. This insurance shall be in an amount equal to the replacement cost of the completed Work (without deduction for depreciation) including the cost of excavations, grading, and filling. The policy or policies limits shall be 100% of this Contract value of the Work plus 15% to cover administrative costs, design costs, and the costs of inspections and construction management.
2. Insured property shall include material or portions of the Work located away from the Site but intended for use at the Site and shall cover material or portions of the Work in transit. The policy or policies shall include as insured property scaffolding, falsework, and temporary buildings located at the Site. The policy or policies shall cover the cost of removing debris, including demolition.
3. The policy or policies shall provide that all proceeds thereunder shall be payable to the City as Trustee for the insured, and shall name the City, the Contractor, Subcontractors, and Suppliers of all tiers as named insured. The City, as Trustee, will collect, adjust, and receive all monies which may become

due and payable under the policy or policies, may compromise any and all claims thereunder, and will apply the proceeds of such insurance to the repair, reconstruction, or replacement of the Work.

4. Any deductible applicable to the insurance shall be identified in the policy or policies documents and responsibility for paying the part of any loss not covered because of the application of such deductibles shall be apportioned among the parties except for the City as follows: if there is more than one claimant for a single occurrence, then each claimant shall pay a pro-rata share of the per occurrence deductible based upon the percentage of their paid claim to the total paid for insured. The City shall be entitled to 100% of its loss. You shall pay the City any portion of that loss not covered because of a deductible at the same time the proceeds of the insurance are paid to the City as trustee.
5. Any insured, other than the City, making claim to which a deductible applies shall be responsible for 100% of the loss not insured because of the deductible. Except as provided for under California law, the policy or policies shall provide that the City is entitled to 30 Days prior written notice (10 Days for cancellation due to non-payment of premium) of cancellation or non-renewal of the policy or policies.

7-3.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this Contract as described herein shall be carried only by responsible insurance companies with a rating of, or equivalent to, at least "A-, VI" by A.M. Best Company, that are authorized by the California Insurance Commissioner to do business in the State, and that have been approved by the City.

7-3.3.1 Non-Admitted Carriers. The City will accept insurance provided by non-admitted, "surplus lines" carriers only if the carrier is authorized to do business in the State and is included on the List of Approved Surplus Lines Insurers (LASLI list).

All policies of insurance carried by non-admitted carriers shall be subject to all of the requirements for policies of insurance provided by admitted carriers described herein.

7-3.4 Evidence of Insurance. Furnish to the City documents e.g., certificates of insurance and endorsements evidencing the insurance required herein, and furnish renewal documentation prior to expiration of this insurance. Each required document shall be signed by the insurer or a person authorized by the insurer to bind coverage on its behalf. We reserve the right to require complete, certified copies of all insurance policies required herein.

7-3.5 Policy Endorsements.

7-3.5.1 Commercial General Liability Insurance.

7-3.5.1.1 Additional Insured.

1. You shall provide at your expense policy endorsement written on the current version of the ISO Occurrence form CG 20 10 11 85 or an equivalent form providing coverage at least as broad.
2. To the fullest extent allowed by law e.g., California Insurance Code §11580.04, the policy shall be endorsed to include the City and its

respective elected officials, officers, employees, agents, and representatives as additional insured.

3. The additional insured coverage for projects for which the Engineer's Estimate is \$1,000,000 or more shall include liability arising out of:
 - a) Ongoing operations performed by you or on your behalf,
 - b) your products,
 - c) your Work, e.g., your completed operations performed by you or on your behalf, or
 - d) premises owned, leased, controlled, or used by you.
4. The additional insured coverage for projects for which the Engineer's Estimate is less than \$1,000,000 shall include liability arising out of:
 - a) Ongoing operations performed by you or on your behalf,
 - b) your products, or
 - c) premises owned, leased, controlled, or used by you.

7-3.5.1.2 Primary and Non-Contributory Coverage. The policy shall be endorsed to provide that the coverage with respect to operations, including the completed operations, if appropriate, of the Named Insured is primary to any insurance or self-insurance of the City and its elected officials, officers, employees, agents and representatives. Further, it shall provide that any insurance maintained by the City and its elected officials, officers, employees, agents and representatives shall be in excess of your insurance and shall not contribute to it.

7-3.5.1.3 Project General Aggregate Limit. The policy or policies shall be endorsed to provide a Designated Construction Project General Aggregate Limit that will apply only to the Work. Only claims payments which arise from the Work shall reduce the Designated Construction Project General Aggregate Limit. The Designated Construction Project General Aggregate Limit shall be in addition to the aggregate limit provided for the products-completed operations hazard.

7-3.5.2 Commercial Automobile Liability Insurance.

7-3.5.2.1 Additional Insured. Unless the policy or policies of Commercial Auto Liability Insurance are written on an ISO form CA 00 01 12 90 or a later version of this form or equivalent form providing coverage at least as broad, the policy shall be endorsed to include the City and its respective elected officials, officers, employees, agents, and representatives as additional insured, with respect to liability arising out of automobiles owned, leased, hired or borrowed by you or on your behalf. This endorsement is limited to the obligations permitted by California Insurance Code §11580.04.

7-3.5.5 Builders Risk Endorsements.

7-3.5.5.1 Waiver of Subrogation. The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City, and its respective elected officials, officers, employees, agents, and representatives for losses paid

under the terms of the policy or policies and which arise from Work performed by the Named Insured for the City.

- 7-3.5.5.2 Builders Risk – Partial Utilization.** If the City desires to occupy or use a portion or portions of the Work prior to Acceptance in accordance with this Contract, the City will notify you and you shall immediately notify your Builder's Risk insurer and obtain an endorsement that the policy or policies shall not be cancelled or lapse on account of any such partial use or occupancy. You shall obtain the endorsement prior to the City's occupation and use.
- 7-3.6 Deductibles and Self-Insured Retentions.** You shall pay for all deductibles and self-insured retentions. You shall disclose deductibles and self-insured retentions to the City at the time the evidence of insurance is provided.
- 7-3.7 Reservation of Rights.** The City reserves the right, from time to time, to review your insurance coverage, limits, deductibles and self-insured retentions to determine if they are acceptable to the City. The City will reimburse you, without overhead, profit, or any other markup, for the cost of additional premium for any coverage requested by the Engineer but not required by this Contract.
- 7-3.8 Notice of Changes to Insurance.** You shall notify the City 30 Days prior to any material change to the policies of insurance provided under this Contract.
- 7-3.9 Excess Insurance.** Policies providing excess coverage shall follow the form of the primary policy or policies e.g., all endorsements.
- 7-3.10 Architects and Engineers Professional Insurance (Errors and Omissions Insurance).**
1. For Contracts with required engineering services (e.g., Design-Build, preparation of engineered Traffic Control Plans (TCP), and etc) by you, you shall keep or require all of your employees or Subcontractors, who provide professional engineering services under this contract, Professional Liability coverage with a limit of **\$1,000,000** per claim and **\$2,000,000** annual aggregate in full force and effect.
 2. You shall ensure the following:
 - a) The policy retroactive date is on or before the date of commencement of the Project.
 - b) The policy will be maintained in force for a period of 3 years after completion of the Project or termination of this Contract, whichever occurs last. You agree that for the time period specified above, there will be no changes or endorsements to the policy that affect the specified coverage.
 3. If professional engineering services are to be provided solely by the Subcontractor, you shall:
 - a) Certify this to the City in writing and
 - b) Agree in writing to require the Subcontractor to procure Professional Liability coverage in accordance with the requirements set forth above.

7-4 NOT USED. DELETE in its entirety and SUBSTITUTE with the following:

7-4 WORKERS' COMPENSATION INSURANCE AND EMPLOYERS LIABILITY INSURANCE.

1. In accordance with the provisions of §3700 of the California Labor Code, you shall provide at your expense Workers' Compensation Insurance and Employers Liability Insurance to protect you against all claims under applicable state workers compensation laws. The City, its elected officials, and employees will not be responsible for any claims in law or equity occasioned by your failure to comply with the requirements of this section.

2. Limits for this insurance shall be not less than the following:

<u>Workers' Compensation</u>	<u>Statutory Employers Liability</u>
Bodily Injury by Accident	\$1,000,000 each accident
Bodily Injury by Disease	\$1,000,000 each employee
Bodily Injury by Disease	\$1,000,000 policy limit

3. By signing and returning the Contract you certify that you are aware of the provisions of §3700 of the Labor Code which requires every employer to be insured against liability for worker's compensation or to undertake self-insurance in accordance with the provisions of that code and you shall comply with such provisions before commencing the Work as required by §1861 of the California Labor Code.

7-4.1 Waiver of Subrogation. The policy or policies shall be endorsed to provide that the insurer will waive all rights of subrogation against the City and its respective elected officials, officers, employees, agents, and representatives for losses paid under the terms of the policy or policies and which arise from Work performed by the Named Insured for the City.

7-8.6 Water Pollution Control. ADD the following:

11. Based on a preliminary assessment by the City, this Contract is subject to WPCP.

ADD:

7-16.1.3 Weekly Updates Recipients.

1. Submit a weekly correspondence with updates, traffic control issues and locations, lane closures, and any other pertinent information (with additional contact names given during award process) to the following recipients:

Nicki Lewis, Senior Engineer, NLewis@sandiego.gov

Michael Ramirez, Project Engineer, RamirezM@sandiego.gov

Resident Engineer, TBA, XXX@sandiego.gov

7-16.3 Exclusive Community Liaison Services. To the City Supplement, ADD the following:

2. You shall retain an Exclusive Community Liaison for the Project that shall implement Work in accordance with the specifications described in 7-16.2 "Community Outreach Services" and 7-16.3 "Exclusive Community Liaison Services".

7-20 ELECTRONIC COMMUNICATION. ADD the following:

2. Virtual Project Manager shall be used on this Contract.

7-21 General. To the City Supplement, item 3, DELETE in its entirety and SUBSTITUTE with the following:

3. During the construction phase of projects, the minimum waste management reduction goal is 90% of the inert material (a material not subject to decomposition such as concrete, asphalt, brick, rock, block, dirt, metal, glass, and etc.) and 65% of the remaining project waste. You shall provide appropriate documentation, including a Waste Management Form attached as an appendix, and evidence of recycling and reuse of materials to meet the waste reduction goals specified.

SECTION 9 - MEASUREMENT AND PAYMENT

9-3.2 Partial and Final Payment. DELETE Paragraph (3) in its entirety and SUBSTITUTE with the following:

Upon commencement of the Work, an escrow account shall be established in a financial institution chosen by you and approved by the City. As progress payments are made to you, the retention portion is deposited by the City into the Escrow account. Documentation for an Escrow payment must have an Escrow agreement signed by you, the City and the Escrow Agent. Upon completion of the contract the City notifies the Escrow agent in writing to release the funds to you. Only the designated representative of the City shall sign the request for the release of Escrow funds.

9-3.7 Compensation Adjustments for Price Index Fluctuations. To the City Supplement, ADD the following:

5. This Contract is not subject to the provisions of The "WHITEBOOK" for Compensation Adjustments for Price Index Fluctuations for

EQUAL OPPORTUNITY CONTRACTING PROGRAM (EOCP) SECTION A – GENERAL REQUIREMENTS

4.1 Nondiscrimination in Contracting Ordinance. To the City Supplement, subsection 4.1.1, paragraph (2), sentence (1), DELETE in its entirety and SUBSTITUTE with the following:

You shall not discriminate on the basis of race, gender, gender expression, gender identity, religion, national origin, ethnicity, sexual orientation, age, or disability in the solicitation, selection, hiring, or treatment of subcontractors, vendors, or suppliers.

END OF SUPPLEMENTARY SPECIAL PROVISIONS (SSP)

SUPPLEMENTARY SPECIAL PROVISIONS

APPENDICES

APPENDIX A
NOTICE OF EXEMPTION

NOTICE OF EXEMPTION

(Check one or both)

TO: X RECORDER/COUNTY CLERK
P.O. BOX 1750, MS A-33
1600 PACIFIC HWY, ROOM 260
SAN DIEGO, CA 92101-2422

FROM: CITY OF SAN DIEGO
DEVELOPMENT SERVICES DEPARTMENT
1222 FIRST AVENUE, MS 501
SAN DIEGO, CA 92101

OFFICE OF PLANNING AND RESEARCH
1400 TENTH STREET, ROOM 121
SACRAMENTO, CA 95814

PROJECT NO.: N/A

PROJECT TITLE: BAYVIEW WATER PUMP STATION AND RESERVOIR & METROPOLITAN OPERATIONS CENTER SOLAR INSTALLATION

PROJECT LOCATION-SPECIFIC: These solar photovoltaic installations are located at the Bayview Water Pump Station and Reservoir, 1975 Parkview Terrace, within the La Jolla Community Planning Area, Council District 1, San Diego, California (Thomas Bros. Guide Page 1248 A3; Water Field Book Page C12S) and the Metropolitan Operations Center (MOC), 9191 Topaz Way, within the Kearny Mesa Planning Area, Council District 6, San Diego California (Thomas Bros. Guide Page 1229 D7; Water Field Book Page H11S. The installation activities are not located within the MHPA or Environmental Sensitive Lands or within the Coastal Zone.

PROJECT LOCATION-CITY/COUNTY: City of San Diego/San Diego

DESCRIPTION OF NATURE AND PURPOSE OF THE PROJECT: The project will consist of the installation and maintenance of solar photovoltaic systems. The maintenance will primarily include the cleaning and replacement of photovoltaic panels and inverters. The installation at the Bayview Water Pump Station and Reservoir site will cover approximately 40,000 square feet (70 percent) of the reservoir concrete roof-top that is 57,600 square feet in total. The solar panels will be elevated off the roof-top anywhere from 10 to 22 degrees and face south. The installation at the Metropolitan Operations Center (MOC) site will cover approximately 55,000 square feet (23 percent) of roof tops and parking lots that are 214,625 square feet in total. The solar panels will be elevated off the roof-top anywhere from 10 to 22 degrees and face south. For the parking lots, a structural support system will be installed with the panels placed on top and face south. The electrical power from the photovoltaic systems will be designed to run the facilities; no electricity is anticipated to be sold back to the grid.

NAME OF PUBLIC AGENCY APPROVING PROJECT: City of San Diego

NAME OF PERSON OR AGENCY CARRYING OUT PROJECT: Dirk Smith, Public Utilities Department, Engineering and Program Management, 9192 Topaz Way, San Diego, CA 92123, (858) 614-5722.

EXEMPT STATUS: (CHECK ONE)

- () MINISTERIAL (SEC. 21080(b)(1); 15268);
() DECLARED EMERGENCY (SEC. 21080(b)(3); 15269(a));
() EMERGENCY PROJECT (SEC. 21080(b)(4))
(X) CATEGORICAL EXEMPTION: (SEC. 15301 EXISTING FACILITIES)
() STATUTORY EXEMPTIONS:

REASONS WHY PROJECT IS EXEMPT: The City of San Diego conducted an environmental review which determined that the project is located on and/or within existing City-owned facilities, none of which are located within sensitive areas. The existing roof-tops and parking lots are well suited for the installation of the solar photovoltaic systems. The proposed installations will involve negligible or no expansion of an existing use of an existing facility and will not result in significant impacts to sensitive biological or archaeological resources, and therefore meets the criteria set forth in CEQA Section 15301 (b) which allows for existing facilities of publicly owned utilities used to provide electric power; and where the exception listed in CEQA Section 15300.2 would not apply.

LEAD AGENCY CONTACT PERSON: Myra Herrmann, Senior Planner, DSD TELEPHONE: (619) 446-5372

IF FILED BY APPLICANT:

- 1. ATTACH CERTIFIED DOCUMENT OF EXEMPTION FINDING.
2. HAS A NOTICE OF EXEMPTION BEEN FILED BY THE PUBLIC AGENCY APPROVING THE PROJECT?
() YES () NO

IT IS HEREBY CERTIFIED THAT THE CITY OF SAN DIEGO HAS DETERMINED THE ABOVE ACTIVITY TO BE EXEMPT FROM CEQA

Myra Herrmann

SENIOR PLANNER

June 24, 2014

SIGNATURE/TITLE

DATE

CHECK ONE:

- (X) SIGNED BY LEAD AGENCY
() SIGNED BY APPLICANT

DATE RECEIVED FOR FILING WITH COUNTY CLERK OR OPR:

APPENDIX B
FIRE HYDRANT METER PROGRAM

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER DI 55.27	DEPARTMENT Water Department
SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 1 OF 10	EFFECTIVE DATE October 15, 2002
	SUPERSEDES DI 55.27	DATED April 21, 2000

1. **PURPOSE**

1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

2. **AUTHORITY**

2.1 All authorities and references shall be current versions and revisions.

2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15

2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986

2.4 California Code of Regulations, Titles 17 and 22

2.5 California State Penal Code, Section 498B.0

2.6 State of California Water Code, Section 110, 500-6, and 520-23

2.7 Water Department Director

Reference

2.8 State of California Guidance Manual for Cross Connection Programs

2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention

2.10 American Water Works Association Standards for Water Meters

2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

3. **DEFINITIONS**

3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

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SUBJECT FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)	PAGE 2 OF 10	EFFECTIVE DATE October 15, 2002
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3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.

3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. **POLICY**

4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.

4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.

4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:

a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.

b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:

1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

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2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.
3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).
4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).
5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).
6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.
7. All private fire hydrant meters shall have backflow devices attached when installed.
8. The customer must maintain and repair their own private meters and private backflows.
9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.
10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

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11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.
 12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.
 13. The outlet shall have a 2 ½ “National Standards Tested (NST) fire hydrant male coupling.
 14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).
- 4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.
- 4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.
- 4.6 **Conditions and Processes for Issuance of a Fire Hydrant Meter**
- Process for Issuance
- a. Fire hydrant meters shall only be used for the following purposes:
 1. Temporary irrigation purposes not to exceed one year.

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2. Construction and maintenance related activities (see Tab 2).
 - b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.
 - c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.
 - d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.
 - e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.
 - f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.
 - g. After the fees have been paid and an account has been created, the

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meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

4.7 Relocation of Existing Fire Hydrant Meters

- a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as "Hotline"), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter's relocation.
- b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.
- c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

4.8 Disconnection of Fire Hydrant Meter

- a. After ten (10) months a "Notice of Discontinuation of Service" (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.
- b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

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for removal of the meter.

- c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.
- d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.
- e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. **EXCEPTIONS**

- 5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. **MOBILE METER**

- 6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:

- a) **Vehicle Mounted Meters:** Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

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inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

- b) **Floating Meters:** Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

- 1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.
- 2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

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7. FEE AND DEPOSIT SCHEDULES

7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. These deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. UNAUTHORIZED USE OF WATER FROM A HYDRANT

- 8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.
- 8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.
- 8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.
- 8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

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- 8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

**Larry Gardner
Water Department Director**

- Tabs: 1. Fire Hydrant Meter Application
2. Construction & Maintenance Related Activities With No Return To Sewer
3. Notice of Discontinuation of Service

APPENDIX

Administering Division: Customer Support Division

Subject Index: Construction Meters
Fire Hydrant
Fire Hydrant Meter Program
Meters, Floating or Vehicle Mounted
Mobile Meter
Program, Fire Hydrant Meter

Distribution: DI Manual Holders



Application for Fire Hydrant Meter (EXHIBIT A)

(For Office Use Only)

METER SHOP (619) 527-7449

NS REQ	FAC#
DATE	BY

Meter Information

Application Date	Requested Install Date:
------------------	-------------------------

Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) Zip:	I.B.	G.B. (CITY USE)
Specific Use of Water:		
Any Return to Sewer or Storm Drain, if so, explain:		
Estimated Duration of Meter Use:		Check Box If Reclaimed Water

Company Information

Company Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ()
*Business license#		*Contractor license#	
A Copy of the Contractor's license OR Business License is required at the time of meter issuance.			
Name and Title of Billing Agent: <small>(PERSON IN ACCOUNTS PAYABLE)</small>		Phone: ()	
Site Contact Name and Title:		Phone: ()	
Responsible Party Name:		Title:	
Cal ID#		Phone: ()	
Signature:		Date:	
Guarantees Payment of all Charges Resulting from the use of this Meter. Insures that employees of this Organization understand the proper use of Fire Hydrant Meter			

Fire Hydrant Meter Removal Request	Requested Removal Date:
Provide Current Meter Location if Different from Above:	
Signature:	Title: Date:
Phone: ()	Pager: ()

<input type="checkbox"/>	City Meter	<input type="checkbox"/>	Private Meter
Contract Acct #:		Deposit Amount: \$ 936.00	Fees Amount: \$ 62.00
Meter Serial #		Meter Size: 05	Meter Make and Style: 6-7
Backflow #		Backflow Size:	Backflow Make and Style:
Name: MOC Complex and Bayview Reservoir Solar Project Design-Build Contract Appendix B - Fire Hydrant Meter Program (Rev. July 2016)		Signature:	Date: 74 Page

WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER

Auto Detailing
Backfilling
Combination Cleaners (Vactors)
Compaction
Concrete Cutters
Construction Trailers
Cross Connection Testing
Dust Control
Flushing Water Mains
Hydro Blasting
Hydro Seeing
Irrigation (for establishing irrigation only; not continuing irrigation)
Mixing Concrete
Mobile Car Washing
Special Events
Street Sweeping
Water Tanks
Water Trucks
Window Washing

Note:

1. If there is any return to sewer or storm drain, then sewer and/or storm drain fees will be charges.

Date

Name of Responsible Party
Company Name and Address
Account Number: _____

Subject: Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

The authorization for use of Fire Hydrant Meter # _____, located at *(Meter Location Address)* ends in 60 days and will be removed on or after *(Date Authorization Expires)*. Extension requests for an additional 90 days must be submitted in writing for consideration 30 days prior to the discontinuation date. If you require an extension, please contact the Water Department, or mail your request for an extension to:

City of San Diego
Water Department
Attention: Meter Services
2797 Caminito Chollas
San Diego, CA 92105-5097

Should you have any questions regarding this matter, please call the Fire Hydrant Hotline at (619) _____ - _____.

Sincerely,

Water Department

APPENDIX C

MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

Materials Typically Accepted by Certificate of Compliance

1. Soil amendment
2. Fiber mulch
3. PVC or PE pipe up to 16 inch diameter
4. Stabilizing emulsion
5. Lime
6. Preformed elastomeric joint seal
7. Plain and fabric reinforced elastomeric bearing pads
8. Steel reinforced elastomeric bearing pads
9. Waterstops (Special Condition)
10. Epoxy coated bar reinforcement
11. Plain and reinforcing steel
12. Structural steel
13. Structural timber and lumber
14. Treated timber and lumber
15. Lumber and timber
16. Aluminum pipe and aluminum pipe arch
17. Corrugated steel pipe and corrugated steel pipe arch
18. Structural metal plate pipe arches and pipe arches
19. Perforated steel pipe
20. Aluminum underdrain pipe
21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
22. Metal target plates
23. Paint (traffic striping)
24. Conductors
25. Painting of electrical equipment
26. Electrical components
27. Engineering fabric
28. Portland Cement
29. PCC admixtures
30. Minor concrete, asphalt
31. Asphalt (oil)
32. Liquid asphalt emulsion
33. Epoxy

APPENDIX D
SAMPLE CITY INVOICE

City of San Diego, Field Engineering Div., 9485 Aero Drive, SD CA 92123		Contractor's Name:	
Project Name:		Contractor's Address:	
Work Order No or Job Order No.			
City Purchase Order No.		Contractor's Phone #:	Invoice No.
Resident Engineer (RE):		Contractor's fax #:	Invoice Date:
RE Phone#:	Fax#:	Contact Name:	Billing Period: (to

Item #	Item Description	Contract Authorization				Previous Totals To Date		This Estimate		Totals to Date	
		Unit	Price	Qty	Extension	%/QTY	Amount	% / QTY	Amount	% / QTY	Amount
1					\$ -		\$ -		\$ -	0.00%	\$ -
2					\$ -		\$ -		\$ -	0.00%	\$ -
3					\$ -		\$ -		\$ -	0.00%	\$ -
4					\$ -		\$ -		\$ -	0.00%	\$ -
5					\$ -		\$ -		\$ -	0.00%	\$ -
6					\$ -		\$ -		\$ -	0.00%	\$ -
7					\$ -		\$ -		\$ -	0.00%	\$ -
8					\$ -		\$ -		\$ -	0.00%	\$ -
9					\$ -		\$ -		\$ -	0.00%	\$ -
10					\$ -		\$ -		\$ -	0.00%	\$ -
11					\$ -		\$ -		\$ -	0.00%	\$ -
12					\$ -		\$ -		\$ -	0.00%	\$ -
13					\$ -		\$ -		\$ -	0.00%	\$ -
14					\$ -		\$ -		\$ -	0.00%	\$ -
15					\$ -		\$ -		\$ -	0.00%	\$ -
16					\$ -		\$ -		\$ -	0.00%	\$ -
17	Field Orders				\$ -		\$ -		\$ -	0.00%	\$ -
18					\$ -		\$ -		\$ -	0.00%	\$ -
CHANGE ORDER No.					\$ -		\$ -		\$ -	0.00%	\$ -
Total Authorized Amount (including approved Change Order)					\$ -		\$ -		\$ -	Total Billed	\$ -

SUMMARY

A. Original Contract Amount	\$ -
B. Approved Change Order #00 Thru #00	\$ -
C. Total Authorized Amount (A+B)	\$ -
D. Total Billed to Date	\$ -
E. Less Total Retention (5% of D)	\$ -
F. Less Total Previous Payments	\$ -
G. Payment Due Less Retention	\$0.00
H. Remaining Authorized Amount	\$0.00

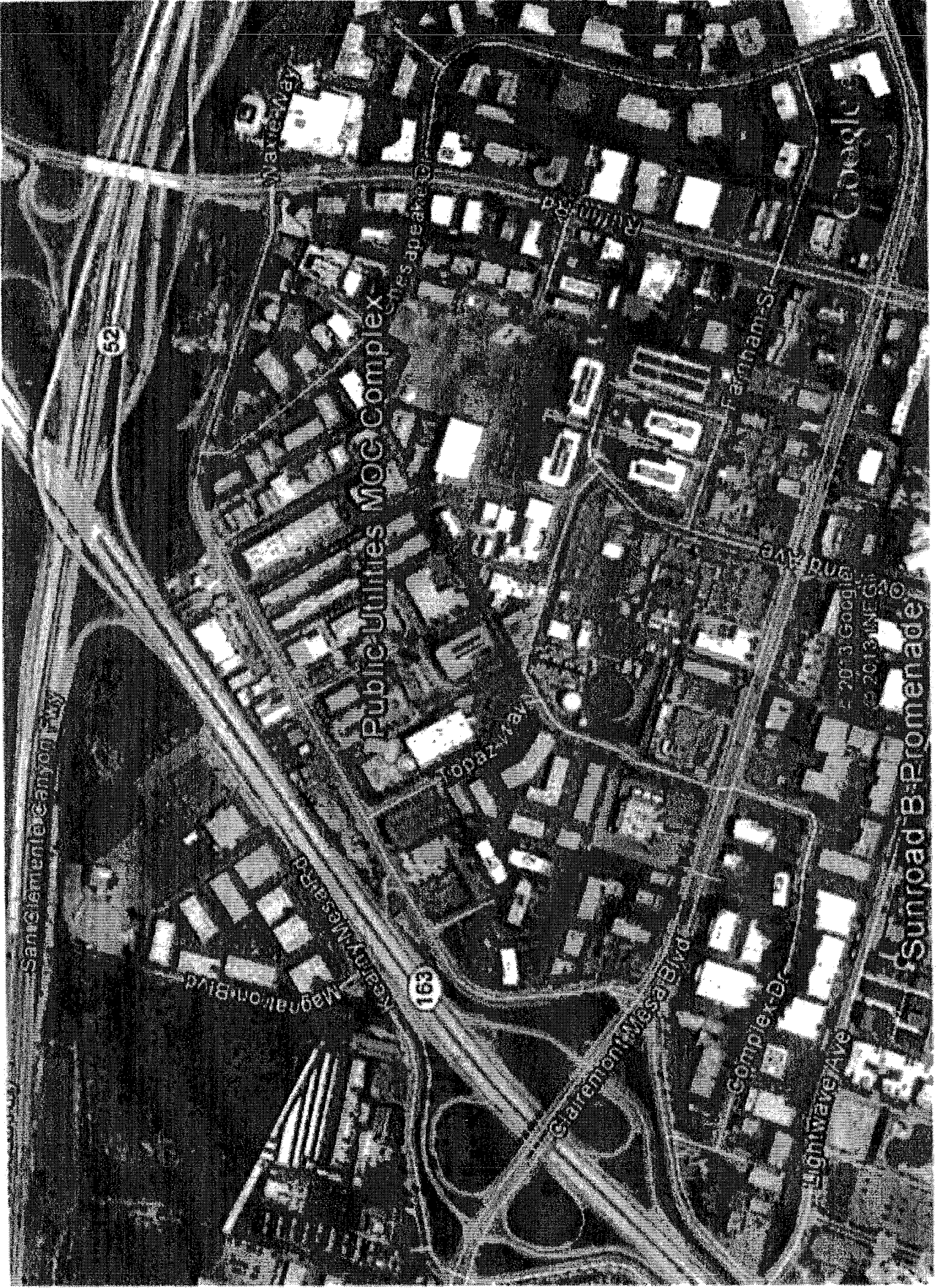
<p>I certify that the materials have been received by me in the quality and quantity specified</p> <p>_____ Resident Engineer</p> <p>_____ Construction Engineer</p>

Retention and/or Escrow Payment Schedule

Total Retention Required as of this billing (Item E)	\$0.00
Previous Retention Withheld in PO or in Escrow	\$0.00
Add'l Amt to Withhold in PO/Transfer in Escrow:	\$0.00
Amt to Release to Contractor from PO/Escrow:	

Contractor Signature and Date: _____

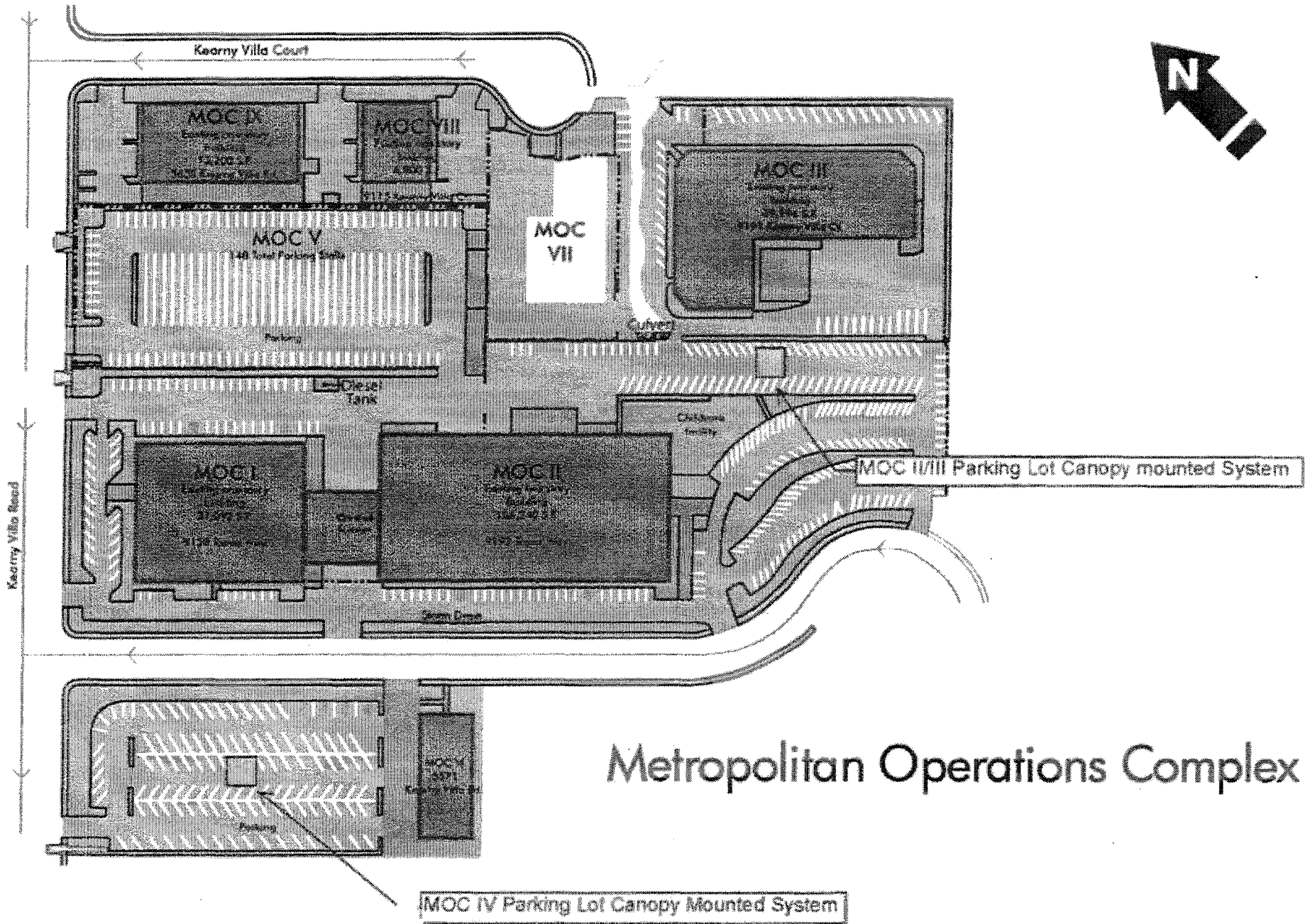
APPENDIX E
LOCATION MAPS

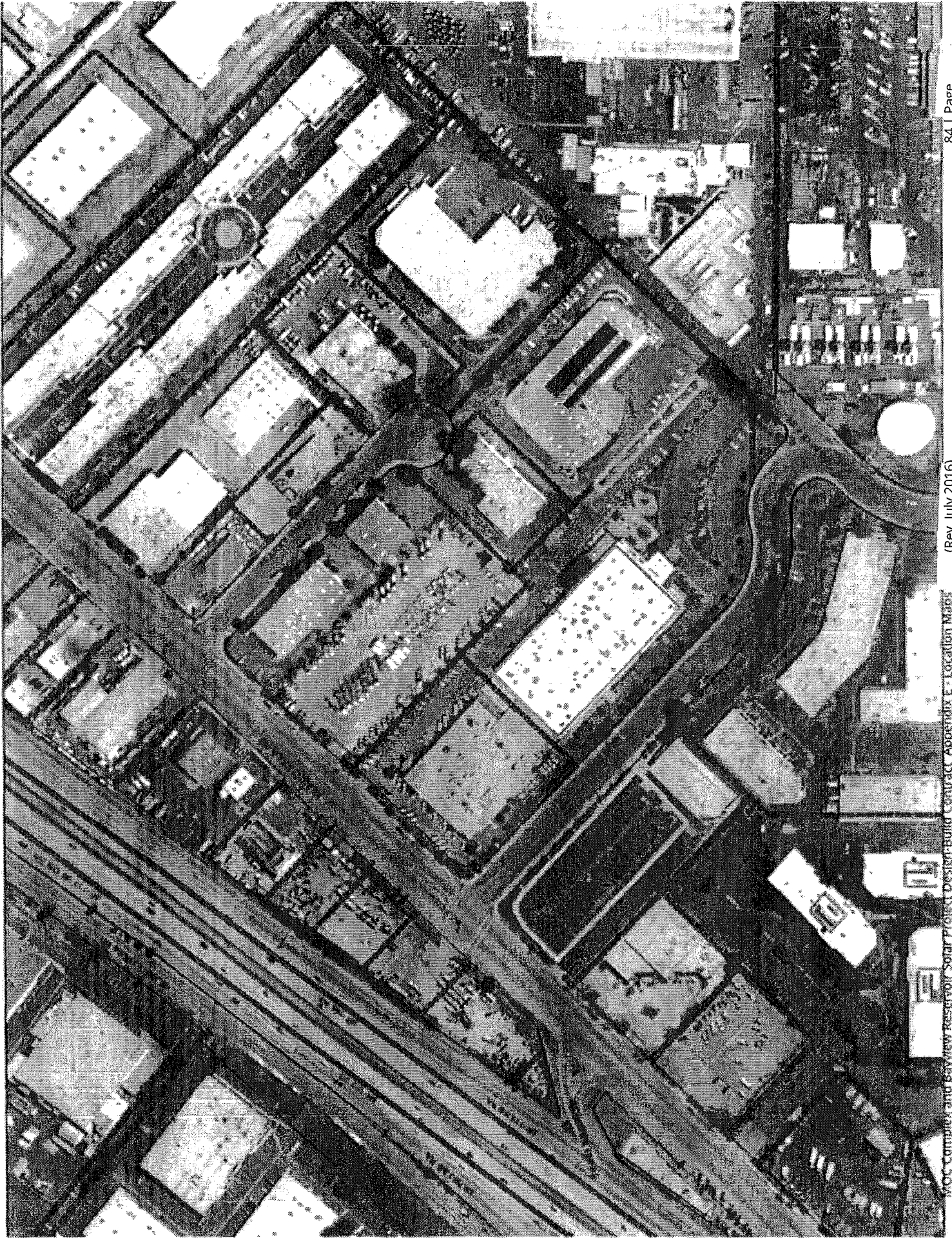


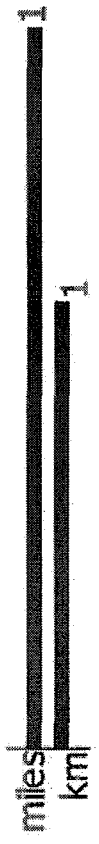
Google earth

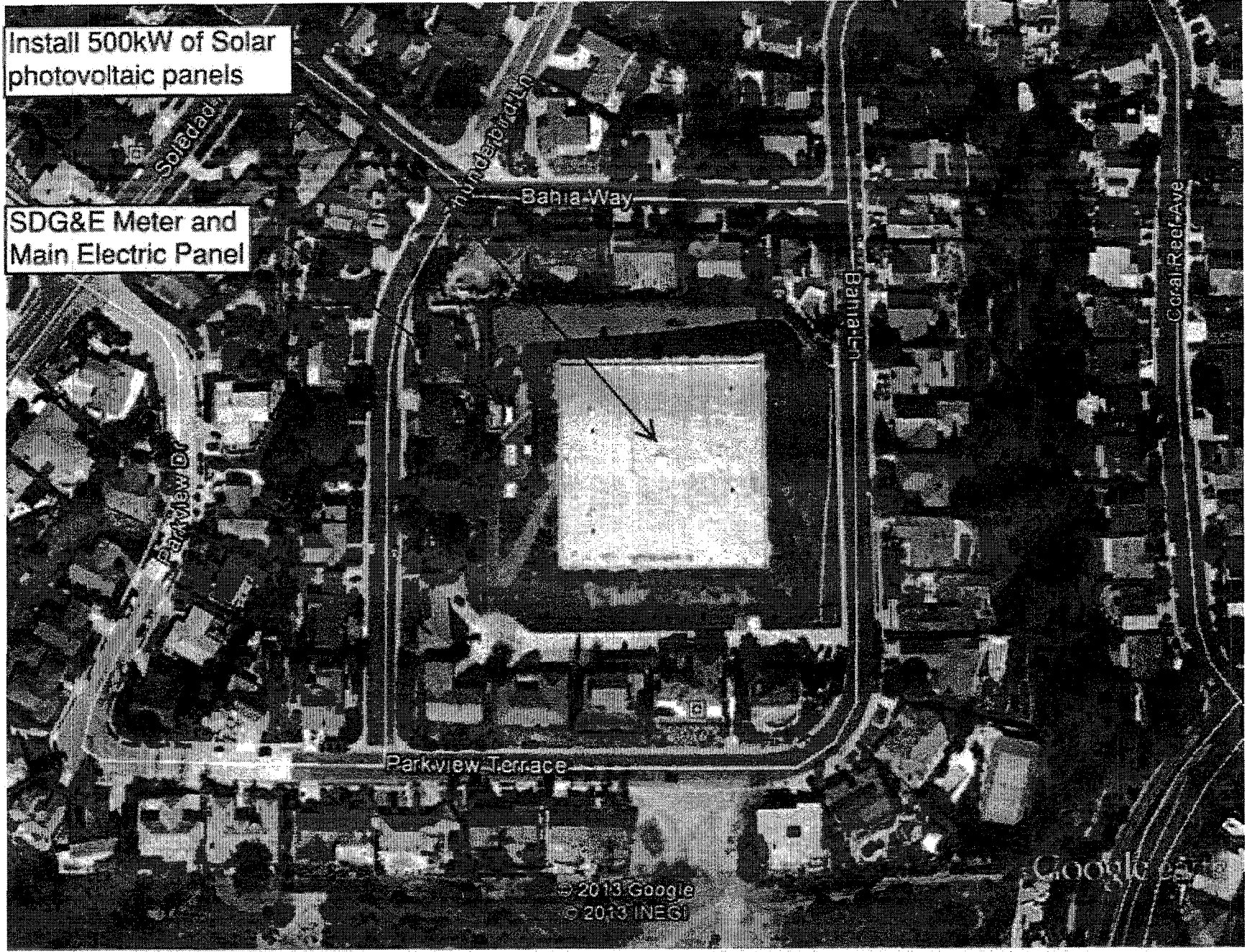
feet
meters

3000
900





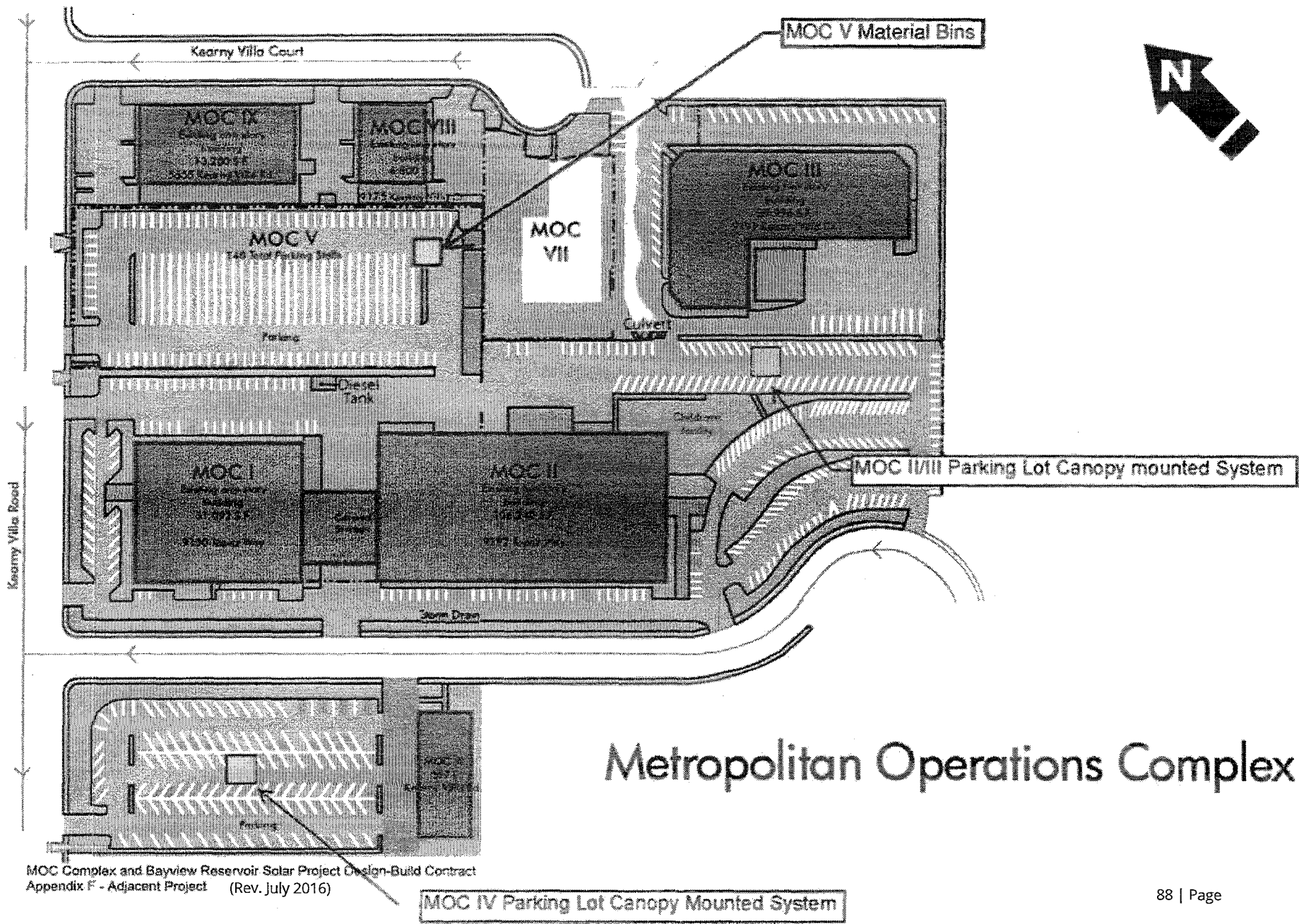




Google earth



APPENDIX F
ADJACENT PROJECT

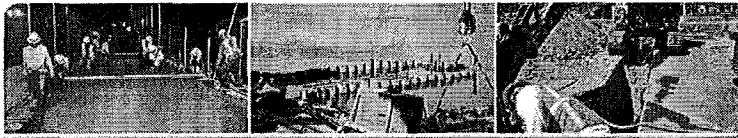


Metropolitan Operations Complex

MOC Complex and Bayview Reservoir Solar Project Design-Build Contract
 Appendix F - Adjacent Project (Rev. July 2016)

MOC IV Parking Lot Canopy Mounted System

APPENDIX G
SAMPLE OF PUBLIC NOTICES



CONSTRUCTION NOTICE

PROJECT NAME

The work will consist of:

- *Edit this information:* The construction work will include pot holing in the northbound curb lane of Torrey Pines Road between Coast Walk and Princess Street.

How your neighborhood may be impacted:

- *Edit this information:* Traffic delays due to lane closure.
- Two-way traffic will be maintained at all times.

Anticipated Construction Schedule

- *Edit this information:* The project upgrades for the entire neighborhood have been ongoing and now are scheduled to start on your street.
- The entire neighborhood project started in ____ and is anticipated to be complete in ____.

Hours and Days of Operation

- *Edit this information:* Monday to Friday (7:30 a.m. to 4 p.m.)

For questions related to this work

Call: (619) 533-4207

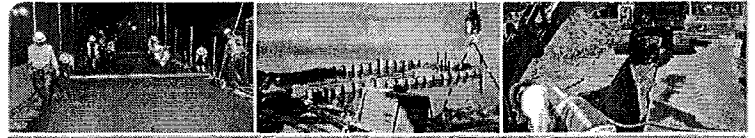
Email: engineering@sandiego.gov

Visit: sandiego.gov/CIP

MOC Complex and Bayview Reservoir Solar Project Design - Build Contract
Appendix G - Sample of Public Notices (Rev. July 2016)



This information is available in alternative formats upon request.



CONSTRUCTION NOTICE

PROJECT NAME

The work will consist of:

- *Edit this information:* The construction work will include pot holing in the northbound curb lane of Torrey Pines Road between Coast Walk and Princess Street.

How your neighborhood may be impacted:

- *Edit this information:* Traffic delays due to lane closure.
- Two-way traffic will be maintained at all times.

Anticipated Construction Schedule

- *Edit this information:* The project upgrades for the entire neighborhood have been ongoing and now are scheduled to start on your street.
- The entire neighborhood project started in ____ and is anticipated to be complete in ____.

Hours and Days of Operation

- *Edit this information:* Monday to Friday (7:30 a.m. to 4 p.m.)

For questions related to this work

Call: (619) 533-4207

Email: engineering@sandiego.gov

Visit: sandiego.gov/CIP

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This information is available in alternative formats upon request.

APPENDIX H

ADVANCED METERING INFRASTRUCTURE (AMI) DEVICE PROTECTION

Protecting AMI Devices in Meter Boxes and on Street Lights

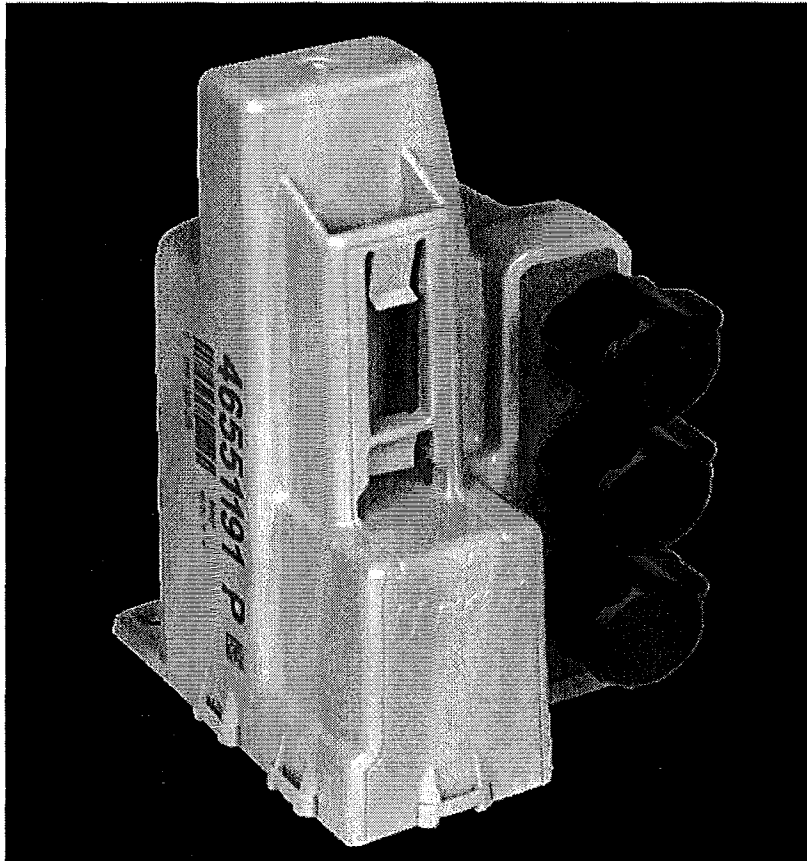
The Public Utilities Department (PUD) has begun the installation of the Advanced Metering Infrastructure (AMI) technology as a new tool to enhance water meter reading accuracy and efficiency, customer service and billing, and to be used by individual accounts to better manage the efficient use of water. **All AMI devices shall be protected per Section 5-2, "Protection", of the 2015 Whitebook.**

AMI technology allows water meters to be read electronically rather than through direct visual inspection by PUD field staff. This will assist PUD staff and customers in managing unusual consumption patterns which could indicate leaks or meter tampering on a customer's property.

Three of the main components of an AMI system are the:

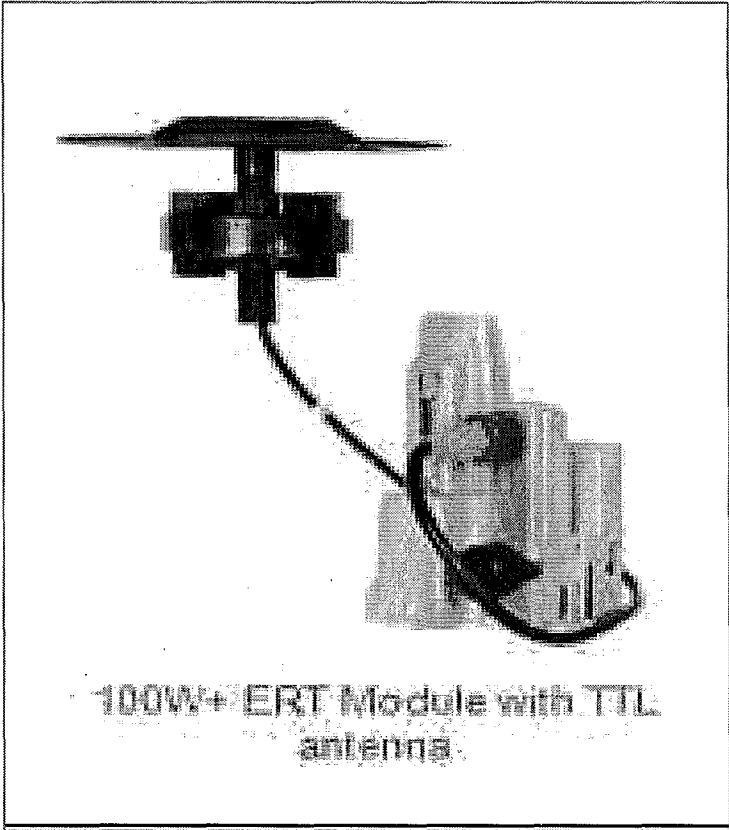
- A. Endpoints, see Photo 1:

Photo 1



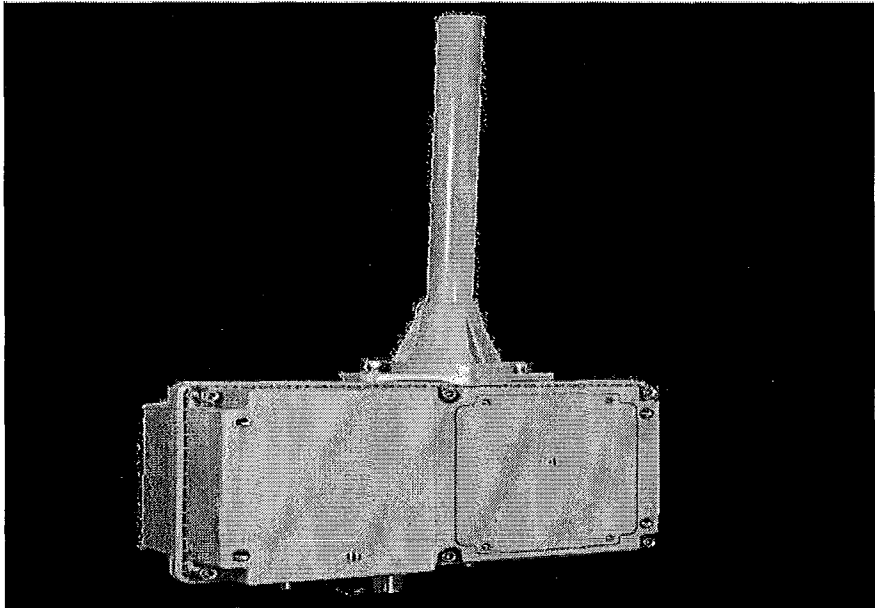
B. AMI Antenna attached to Endpoint (antenna not always required), see Photo 2:

Photo 2



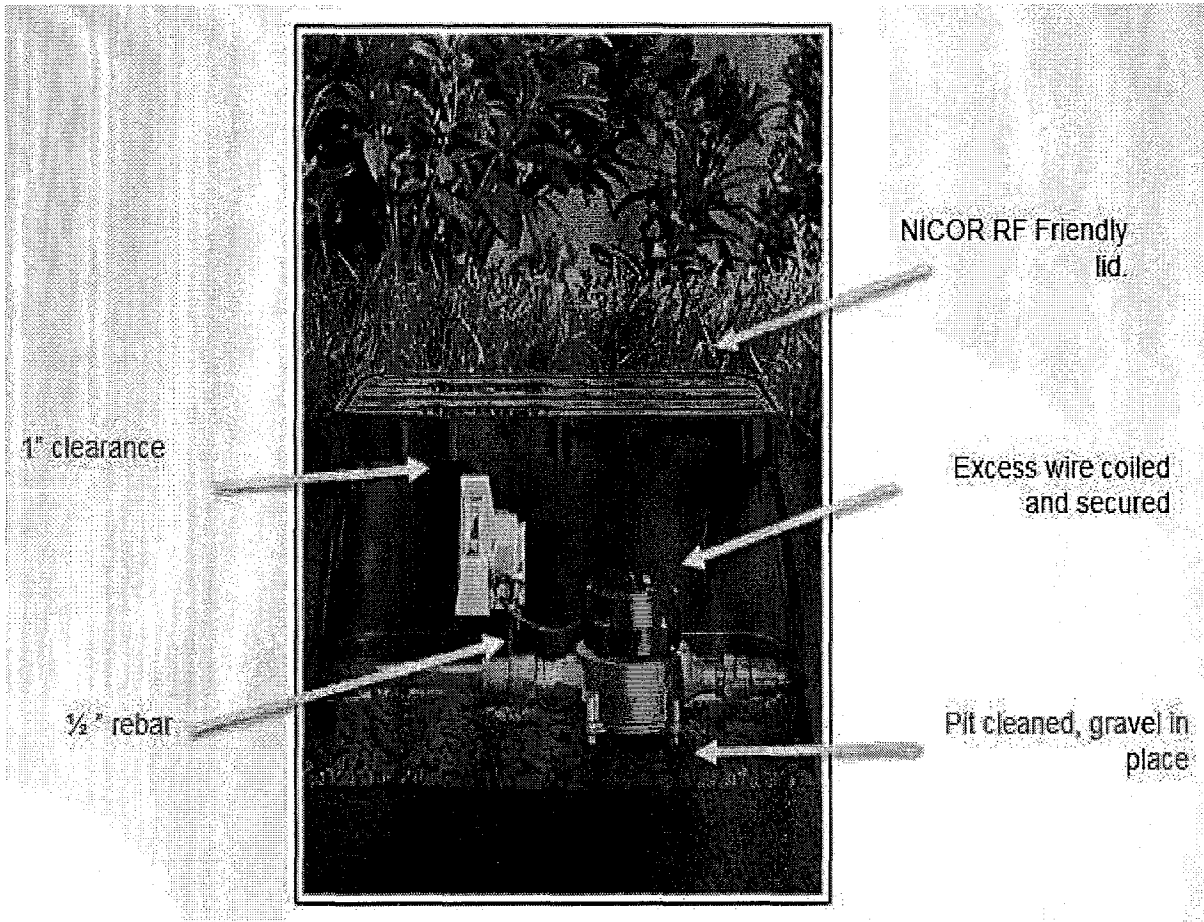
Network Devices, see Photo 3:

Photo 3



AMI endpoints transmit meter information to the AMI system and will soon be on the vast majority of meters in San Diego. These AMI devices provide interval consumption data to the PUD's Customer Support Division. If these devices are damaged or communication is interrupted, this Division will be alerted of the situation. The endpoints are installed in water meter boxes, coffins, and vaults adjacent to the meter. A separate flat round antenna may also be installed through the meter box lid. This antenna is connected to the endpoint via cable. The following proper installation shall be implemented when removing the lid to avoid damaging the antenna, cable, and/or endpoint. Photo 4 below demonstrates a diagram of the connection:

Photo 4



The AMI device ERT/Endpoint/Transmitter shall be positioned and installed as discussed in this Appendix. If the ERT/Endpoint/Transmitter is disturbed, it shall be re-installed and returned to its original installation with the end points pointed upwards as shown below in Photo 5.

The PUD's code compliance staff will issue citations and invoices to you for any damaged AMI devices that are not re-installed as discussed in the Contract Document

Photo 5 below shows a typical installation of an AMI endpoint on a water meter.

Photo 5

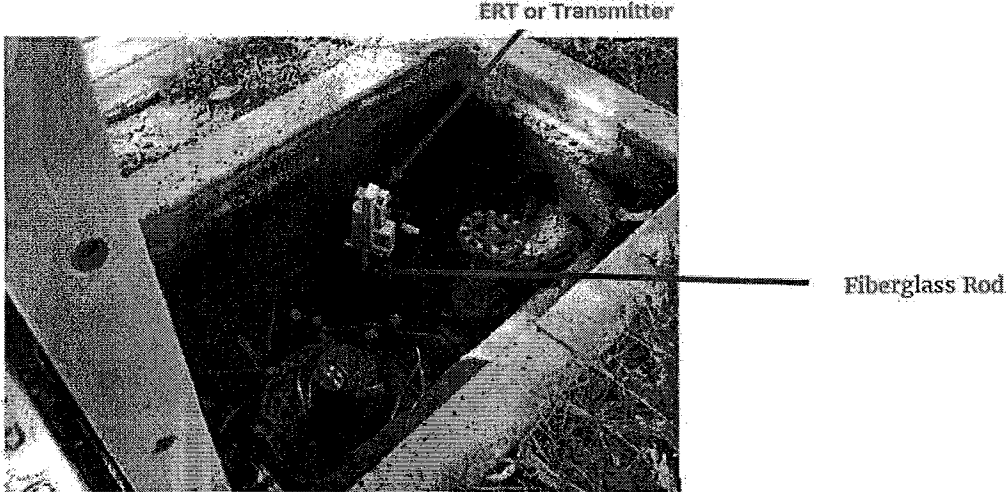
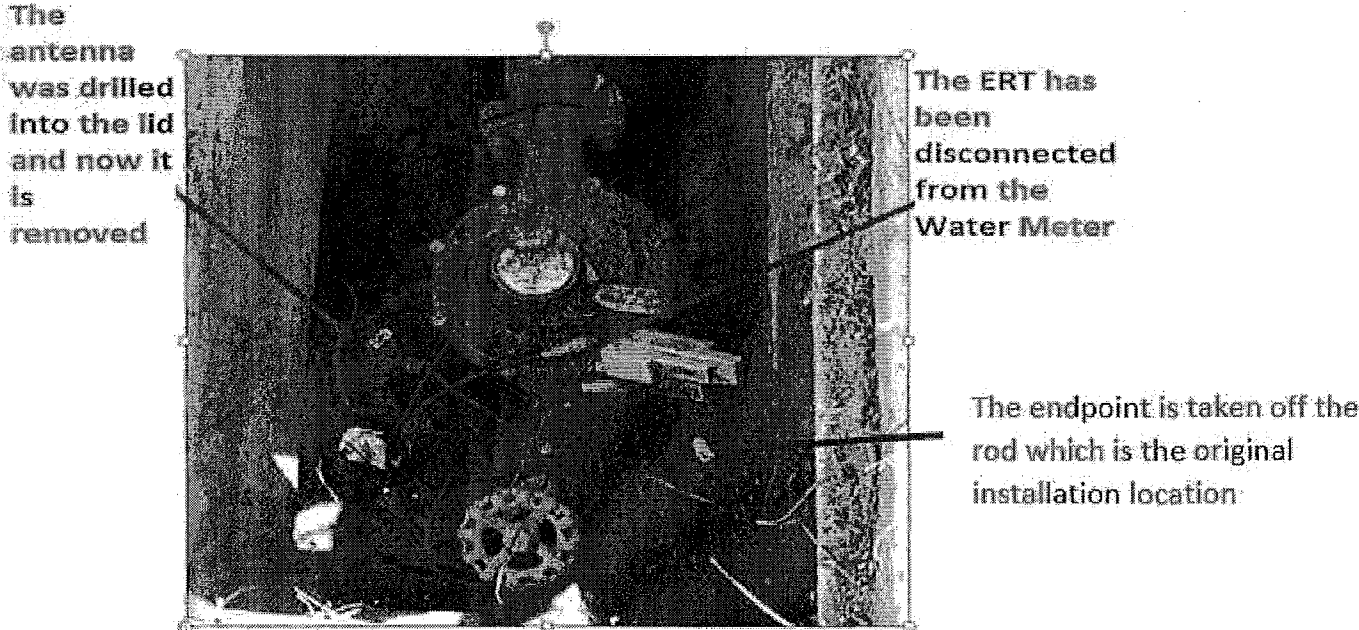


Photo 6 below is an example of disturbance that shall be avoided:

Photo 6



You are responsible when working in and around meter boxes. If you encounter these endpoints, use proper care and do not disconnect them from the registers on top of the water meter. If the lid has an antenna drilled through, do not change or tamper with the lid and inform the Resident Engineer immediately about the location of that lid. Refer to Photo 7 below:

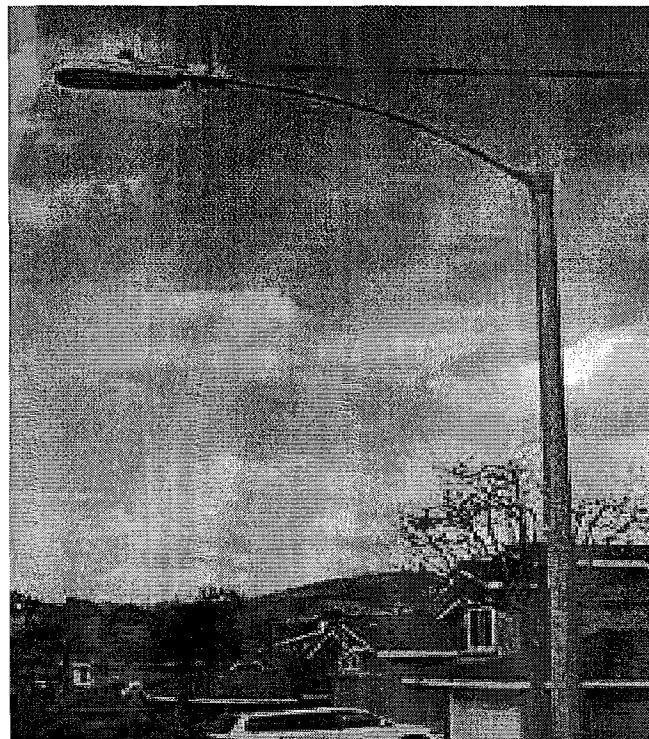
Photo 7



Another component of the AMI system are the Network Devices. The Network Devices are strategically placed units (mainly on street light poles) that collect interval meter reading data from multiple meters for transmission to the Department Control Computer. **If you come across any of these devices on street lights that will be removed or replaced (refer to Photos 8 and 9 below), notify AMI Project Manager Arwa Sayed at (619) 362-0121 immediately.**

Photo 8 shows an installed network device on a street light. On the back of each Network Device is a sticker with contact information. See Photo 9. **Call PUD Water Emergency Repairs at 619-515-3525 if your work will impact these street lights.** These are assets that belong to the City of San Diego and you shall be responsible for any costs of disruption of this network.

Photo 8



Network Device

Photo 9



If you encounter any bad installations, disconnected/broken/buried endpoints, or inadvertently damage any AMI devices or cables, notify the Resident Engineer immediately. The Resident Engineer will then immediately contact the AMI Project Manager, Arwa Sayed, at (619) 362-0121.

ATTACHMENT F
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ATTACHMENT G
EVALUATION AND SELECTION

ATTACHMENT G
EVALUATION AND SELECTION
PUBLIC UTILITIES DEPARTMENT

Proposals will be ranked according to the criteria described below:

1. Addenda to this RFP - Pass / Fail

- 1.1.** The Proposer is to acknowledge each addendum issued in connection with this RFP, by listing all issued addenda on the Addenda Acknowledgement sheet to be submitted with the Proposal. Failure to acknowledge all issued addenda may result in the Proposal being considered **non-responsive** and ineligible for further consideration.
- 1.2.** Including copies of addenda with the Proposal shall not constitute acknowledgement of issued addenda.

2. Proposer Exceptions to this RFP - Pass / Fail

- 2.1.** If the Proposer takes exception to any portion of the RFP, the Proposer must identify and explain to the City in writing the basis for the exception. The Proposer must submit any claimed exception a minimum of 10 calendar days prior to the due date for submission of Technical Proposals. Exceptions taken after the submission period for this RFP shall be cause for rejection of the Proposal as being **non-responsive**.

3. Summary of Proposal (5 Points Max)

- 3.1.** Each Proposer must submit a one to two page summary of its Proposal.

4. Project Team (5 Points Max)

- 4.1.** Describe the proposed management plan for this Project. Describe the qualifications of key proposed construction and technical personnel, and subcontractors, from applicable fields including the following, but not limited to:

- 5.1.1** Civil
- 5.1.2** Structural
- 5.1.3** Mechanical
- 5.1.4** Electrical

5. Technical Approach and Design Concept (55 Points Max)

- 5.1.** Describe in detail the proposed design concept for this Project. Include detailed descriptions, conceptual design drawings, schematics, a list of major

equipment, and any other information deemed necessary to allow the City to make an informed evaluation of the Proposer's technical approach. The completeness and technical merit of the design concept will be evaluated.

5.2. The following elements shall be included in this Technical Proposal:

5.2.1. The City will select a Proposer that will offer the best value for the design and construction of this contract. The Work and Services required of the Proposer include those during design, construction, and startup of the Project. The Proposer shall provide all management, supervision, labor, services, temporary services, equipment, tools, supplies, and any other item of every kind and description required for the complete design and construction of the Project.

5.2.2. The Project Manager will assemble a team which will evaluate the proposals and utilize the point system described below to rank the Proposer. The Proposers will be notified in writing of the City's final decision. Selection of the Proposer will be based on the following criteria:

5.2.3. Performance (35 points):

- A. First Year guaranteed minimum output (ac KWh/yr)
- B. 5-year guaranteed minimum annual system performance (ac KWh/yr).
- C. System Size(dc KW)
- D. PV Module Degradation Factor (%)
- E. System efficiency (%)
- F. Unsubsidized cost per kilowatt(dc) installed and cost per kilowatt-hour(ac)
- G. Schedule Optimization

5.2.4. Schematic Design Submittal (20 points):

- A. PV modules or array materials quality.
- B. Proposed Inverter characteristics (brand, rating, efficiency, etc.)
- C. PV system configuration and aesthetics.
- D. Integration of PV into electrical system.
- E. Meets functional requirement.
- F. Proposed methods of coordination with Owner's work force and Proposed Operator Training Program
- G. Schedule Optimization.

- H. Design Innovation(s).
- I. Schematic Design submittal

6. Construction Plan (10 Points Max)

- 6.1. Describe the proposed construction plan for this Project, including the following, at a minimum:
 - 6.1.1. Construction approach and methods
 - 6.1.2. Plan for operation of facility during construction
 - 6.1.3. Plan for phasing of construction activities
 - 6.1.4. General plan for functional testing and start-up.
 - 6.1.5. Proposed safety program
 - 6.1.6. Proposed emergency response plan
 - 6.1.7. Proposed construction schedule
 - 6.1.8. Traffic Control Management
 - 6.1.9. Community Impact

7. Equal Employment and Contracting Opportunity (25 Points Max)

- 7.1. Failure to submit the required EOCP information will result in Proposal being determined as **non-responsive**.
- 7.2. Subcontractor Documentation
 - 7.2.1. The Proposer shall, at a minimum, provide with its Price Proposal a listing of at least 3 of the largest Subcontractors (constructors only) for the Project and all other Subcontractors (design professionals, etc.) that are known at the time it submits its Proposal using form AA05 and AA25. **Note:** Subcontractors include design professionals, as well.
 - 7.2.2. Work which requires Subcontractors that are not listed by Proposer at time of Award shall be let by Proposer in accordance with a competitive bidding process performed solely at Proposer's expense. Proposer shall provide public notice of the availability of the Work to be subcontracted, obtain competitive bids, and provide a fixed date and time on which the subcontracted Work will be awarded. Subcontractors bidding on subcontracts pursuant to this provision shall be afforded the protection of all applicable laws, including Public Contract Code sections 4100 through 4114, inclusive.
 - 7.2.3. The Proposer may select Subcontractors and Suppliers in one of 3 competitive ways i.e., lowest responsible bidder, best value for price and qualifications, or highest qualifications. Prior to construction NTP, the Proposer shall do the following:

7.2.3.1. Submit the selection method used to the City in accordance with 2-5.3, "Submittals."

7.2.3.2. Pre-qualify Subcontractors and Suppliers, in a manner at least as stringent as the City's pre-qualification standards.

7.2.3.3. Review the Subcontractors and Suppliers ultimately chosen to verify that that they have not been debarred and are in good standing as a licensed contractor in California.

7.2.4. Open all Subcontract bids and provide to the City one copy without reservation or redaction. All records relevant to the award and performance of Subcontractors and Suppliers shall be public and provided to the City upon request and without redaction. The City may administer bidding itself for Subcontractors and Suppliers, or to direct the bidding procedures to be used by the Proposer.

7.2.5. The Proposer may use its corporate-generated subcontractor agreement to retain Subcontractors or Suppliers, provided the subcontractor agreement contains the terms required to be included in Subcontracts by this Contract.

7.2.6. The points will be awarded according to the chart below, based upon actual subcontract award amounts, as set forth in the price proposals.

OUTCOME		MAXIMUM POSSIBLE POINTS
1	5% - 9% participation SLBE, ELBE or DVBE	5
2	10%-14% participation SLBE, ELBE or DVBE	10
3	15%-19% participation SLBE, ELBE or DVBE	15
4	20%-24% participation SLBE, ELBE or DVBE	20
5	25% participation SLBE, ELBE or DVBE	25
In no case the points shall exceed 25.		

TOTAL POINTS: 100

8. Review of Technical Proposal

8.1. Following the receipt of the Technical Proposal, the City anticipates allotting 2 weeks for review of the Technical Proposals.

9. Final Selection Based On Adjusted Low Proposal

- 9.1.** The ranking of each Design-Builder during the Technical Proposal review and the interviews will serve as the divisor of the Price Proposal and determine the weighted price.
- 9.2.** Following review of the Technical Proposals and the presentations/interviews, the resulting qualitative evaluation scores will be totaled, averaged and converted to a decimal. The Proposal price will then be divided by the scores from the Technical Proposals. This becomes the Adjusted Low Proposal. The lowest adjusted proposal will be recommended for contract award. The adjustment to the Price Proposal is for selection purposes only. The Price Proposal as submitted is the actual Contract Price.
- 9.3.** The following example illustrates the process:

Design-Builder	Qualitative Score (100 Maximum)	Price Proposal	Adjusted Price *
A	0.85	\$1,000,000.00	\$1,176,471
B	0.95	\$1,300,000.00	\$1,368,421
C	0.65	\$900,000.00	\$1,384,615

* The adjustment to the Proposal is for selection only. Firm "A" has Adjusted Lowest Proposal. The Price Proposal is the actual Contract amount.

ATTACHMENT H

PRICE FORMS

PRICE FORMS

The Design-Builder agrees to the design and construction of **MOC Complex and Bayview Reservoir Solar Project Design -Build Contract**, for the City of San Diego, in accordance with these contract documents for the lump sum price listed below. The Design-Builder guarantees the proposed prices for a period of 120 Days (90 Days for federally funded contracts and contracts valued at \$500,000 or less) from the date Proposals are due until the award of the **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract, Task Order CSD-SP-001**. The duration of the price guarantee shall be extended by the number of Days required for the City to obtain all items necessary to fulfill all conditions precedent e.g., bond and insurance.

Item No.	NAICS CODE	Description	Quantity	D*	Unit	Unit Price	Extension
BASE PROPOSAL (MOC)							
1	524126	Bonds (Payment and Performance)	1		LS	 	\$ 16,780
2	541330	Engineering and Design Services	1	D	LS	 	\$ 69,765
3	238210	Field Construction	1		LS	 	\$ 1,391,282
4	238990	Traffic Control	1		LS	 	\$ 4,500
5	238210	Mobilization	1		LS	 	\$ 58,000
6	541330	Water Pollution Control Plan Development and Implementation	1		LS	 	\$ 4,000
7		City Contingency - Type II	1		AL	 	\$100,000.00
8	541330	All Permits - Type II	1		AL	 	\$250,000.00
TOTAL FOR BASE PROPOSAL (MOC) (ITEMS NO. 1 THROUGH 8):							\$ 1,894,327
BASE PROPOSAL (BAYVIEW)							
9	524126	Bonds (Payment and Performance)	1		LS	 	\$ 5,250
10	541330	Engineering and Design Services	1	D	LS	 	\$ 66,550
11	238210	Field Construction	1		LS	 	\$ 475,593
12	238990	Traffic Control	1		LS	 	\$ 1,500
13	238210	Mobilization	1		LS	 	\$ 35,000
14	541330	Water Pollution Control Plan Development and Implementation	1		LS	 	\$ 4,000
15		City Contingency - Type II	1		AL	 	\$75,000.00
16	541330	All Permits - Type II	1		AL	 	\$50,000.00
TOTAL FOR BASE PROPOSAL (BAYVIEW) (ITEMS NO. 9 THROUGH 16):							\$ 712,893
TOTAL FOR BASE PROPOSAL (MOC) and (BAYVIEW)							\$ 2,607,220

* Design Element (For City Use)

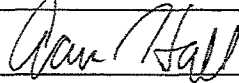
PRICE FORMS

Total Contract Price for Design-Build Proposal, (Base Proposal (MOC) Items 1 through 8) Plus (Base Proposal (BAYVIEW) Items 9 through 16), amount written in words:

Two million, six-hundred seven thousand, two-hundred twenty dollars and zero cents

Design-Builder: Borrego Solar Systems, Inc.

Title: Aaron Hall, President

Signature: 

The names of all persons interested in the foregoing proposal as principals are as follows:

President: Mike Hall

Treasurer: n/a - Borrego Solar Systems Inc. is currently appointing a new treasurer

Secretary & Vice President of the Board: Aaron Hall

IMPORTANT NOTICE: If Design-Builder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Design-Builder or other interested person is an individual, state first and last names in full.

PRICE FORMS

NOTES:

- A. The Contract Price to be used in the selection process as described in Attachment G of the RFP will be determined by the base proposal alone.
- B. After the selected Design-Builder has been determined, the City may, at its sole discretion, award the contract for the Base Proposal alone or for the Base Proposal plus one or more alternates.
- C. Prices and notations shall be in ink or typewritten. All corrections (which have been initiated by the Design-Builder using erasures, strike out, line out, or "white-out") shall be typed or written in with ink adjacent thereto, and shall be initialed in ink by the person signing the Proposal.
- D. Failure to initial all corrections made in the proposal documents may cause the Proposal to be rejected as **non-responsive** and ineligible for award.
- E. Blank spaces must be filled in. The Design-Builder's failure to submit a price may render the Proposal **non-responsive** and ineligible for award.
- F. Unit prices shall be entered for all unit price items. Unit prices shall not exceed two (2) decimal places. If the Unit prices entered exceed two (2) decimal places, the City will only use the first two digits after the decimal points without rounding up or down.
- G. All extensions of the unit prices will be subject to verification by the City. In the case of inconsistency or conflict between the product of the Quantity x Unit Price and the Extension, the product shall govern.
- H. In the case of inconsistency or conflict, between the sums of the extensions with the total proposal price, the sum of the extensions shall govern.
- I. Proposals shall not contain any recapitulation of the Work. Conditional Proposals may be rejected as being **non-responsive**.
- J. Alternate proposals will not be considered unless called for.
- K. Subcontractors' License Numbers must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

PRICE FORMS

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder's total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: <u>HMT Electric Solar, Inc.</u> Address: <u>2430 Meyers Ave</u> City: <u>Escondido</u> State: <u>CA</u> Zip: <u>92029</u> Phone: <u>(858) 458-9771</u> Email: <u>carlp@hmtelectric.com</u>	Constructor	973317	Electrical	\$400,892			
Name: <u>M BAR C Construction</u> Address: <u>674 Rancheros Drive</u> City: <u>San Marcos</u> State: <u>CA</u> Zip: <u>92069</u> Phone: <u>(760) 744-4131</u> Email: <u>Erik@mbaronline.com</u>	Constructor	869960	Steel Erection, Structural Design	\$415,525			

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

PRICE FORMS

DESIGN-BUILD LIST OF SUBCONTRACTORS TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the Public Contract Code (PCC), The Design-Builder is to list below the name and address of each Subcontractor who will perform work, labor, render services or specially fabricates and installs a portion [type] of the work or improvement, in an amount in excess of 0.5% of the Design-Builder's total Bid. The Design-Builder is to list below the portion of the work which will be done by each Subcontractor. The Design-Builder is to list only one Subcontractor for each portion of the Work. The **DOLLAR VALUE** of the total Bid to be performed by the Subcontractor is to be stated for all Subcontractors listed. Failure to comply with the listing of the Subcontractors as specified may result in the Bid being rejected as non-responsive and ineligible for award. The Design-Builder is to list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, WoSB, SDB, HUBZone, and SDVOSB Subcontractors that Design-Builder are seeking recognition towards achieving any subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED	CHECK IF JOINT VENTURE PARTNERSHIP
Name: Valor Constructors Inc. Address: 270-F N. El Camino Real #385 City: Encinitas State: CA Zip: 92024 Phone: (866) 496-1959 Email: bbrown@valorconstructors.com	Constructor	991120	Civil & Construction Management	\$126,775	SLBE	City of San Diego	
Name: Acculine Survey, Inc. Address: 1919 Grand Ave. Suite 1G City: San Diego State: CA Zip: 92109 Phone: (858) 483-6665 Email: acculinesurvey@sbcglobal.net	Designer	SURVEYOR: 5717	Survey	\$47,750	ELBE	City of San Diego	

① As appropriate, Design-Builder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE -	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Design-Builder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

PRICE FORMS

DESIGN-BUILD NAMED EQUIPMENT/MATERIAL SUPPLIER LIST TO BE INCLUDED IN THE PRICE PROPOSAL ONLY

For credit calculations for City-funded contracts, see Chapter 11 in The WHITEBOOK. For non-City funded contracts, refer to the Funding Agency Provisions. If no indication of the supplier, manufacturer, or non-supplier is provided, listed firm will receive no credit for purpose of calculating the Subcontractor Participation Percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF VENDOR/SUPPLIER	MATERIALS OR SUPPLIES	DOLLAR VALUE OF MATERIAL OR SUPPLIES	SUPPLIER (Yes/No)	MANUFACTURER (Yes/No)	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB	WHERE CERTIFIED
Name: SMA America Address: Dept 3314 City: Carol Stream State: IL Zip: 60132-3314 Phone: (916) 625-0870 Email: ryan.leblanc@sma-america.com	Inverters & DAS	\$150,783	Yes	Yes	N/A	N/A
Name: Suniva, Inc. Address: 5765 Peachtree Industrial Boulevard City: Norcross State: GA Zip: 30092 Phone: (415) 683-1582 Email: jfeng@suniva.com	Modules	\$385,543	Yes	Yes	N/A	N/A

① As appropriate, Design-Builder shall identify Vendor/Supplier as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Design-Builder shall indicate if Vendor/Supplier is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC	San Diego Regional Minority Supplier Diversity Council	SRMSDC
State of California's Department of General Services	CADoGS	City of Los Angeles	LA
State of California	CA	U.S. Small Business Administration	SBA

The Design-Builder will not receive any subcontracting participation percentages if the Design-Builder fails to submit the required proof of certification.

ATTACHMENT I
CERTIFICATIONS AND FORMS

The Proposer, by submitting its electronic proposal, agrees to and certifies under penalty of perjury under the laws of the State of California, that the certifications, forms and affidavits submitted as part of this bid are true and correct.

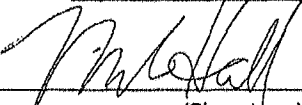
Design-Build Proposal

1. The undersigned The Design-Builder proposes and agrees, if this Proposal is accepted, to enter into an agreement with the City in the form included in the Contract Documents to perform the Work as specified or indicated in said Contract Documents entitled **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract**.
2. The Design-Builder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the RFP.
3. This Proposal will remain open for the period stated in the RFP unless otherwise required by law. The Design-Builder will enter into an agreement within the time and in the manner required in the RFP and will furnish the insurance certificates, Payment Bond, and Performance Bond required by the Contract Documents.
4. The Design-Builder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as The Design-Builder deems necessary.

To all the foregoing, and including all Proposal schedule(s) and information required of the Design-Builder contained in this Proposal Form, said The Design-Builder further agrees to complete the Work and Services required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefore the Contract Price based on the Total Proposal Price(s) named in the aforementioned Proposal schedule(s).

Dated: 17-October-2016

The Design-Builder: Borrego Solar Systems, Inc.

By: 
(Signature)

Title: Chief Executive Officer

PROPOSAL

Design-Builder's General Information

To the City of San Diego:

Pursuant to the "Request for Proposal", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the proposal is genuine and not collusive or sham; that the proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham proposal, or that anyone shall refrain from proposing; that the proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other proposer, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the proposal are true; and, further, that the proposer has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, proposal depository, or to any member or agent thereof to effectuate a collusive or sham proposal. The undersigned proposer(s) further warrants that proposer(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Proposal Documents therefore, and that by submitting said Proposal Documents as its proposal, proposer(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Proposal Documents.

IF A SOLE OWNER OR SOLE CONTRACTOR SIGN HERE:

- (1) Name under which business is conducted _____
- (2) Signature (Given and surname) of proprietor _____
- (3) Place of Business (Street & Number) _____
- (4) City and State _____ Zip Code _____
- (5) Telephone No. _____ Facsimile No. _____
- (6) Email Address _____

IF A PARTNERSHIP, SIGN HERE:

(1) Name under which business is conducted _____

(2) Name of each member of partnership, indicate character of each partner, general or special (limited):

(3) Signature (Note: Signature must be made by a general partner)

Full Name and Character of partner

(4) Place of Business (Street & Number) _____

(5) City and State _____ Zip Code _____

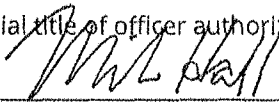
(6) Telephone No. _____ Facsimile No. _____

(7) Email Address _____

IF A CORPORATION, SIGN HERE:

(1) Name under which business is conducted Borrego Solar Systems, Inc.;

(2) Signature, with official title of officer authorized to sign for the corporation:



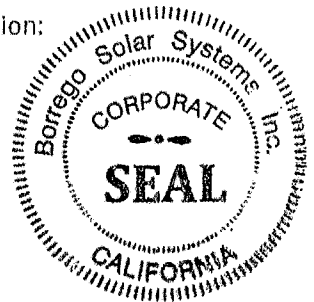
(Signature)

Michael Hall

(Printed Name)

Chief Executive Officer

(Title of Officer)



(Impress Corporate Seal Here)

(3) Incorporated under the laws of the State of California

(4) Place of Business (Street & Number) 5005 Texas Street, Suite 400

(5) City and State San Diego, CA Zip Code 92108
(6) Telephone No. 888-898-6273 Facsimile No. 888-843-6778
(7) Email Address mike@borregosolar.com

THE FOLLOWING SECTIONS MUST BE FILLED IN BY ALL PROPOSERS:

In accordance with the "Request for Proposal", the proposer holds a California State Contractor's license for the following classification(s) to perform the work described in these specifications:

LICENSE CLASSIFICATION A, B, C10, C46

LICENSE NO. 814435 EXPIRES 11/30/2016

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: _____
1000026031

This license classification must also be shown on the front of the proposal envelope. Failure to show license classification on the proposal envelope may cause return of the proposal unopened.

TAX IDENTIFICATION NUMBER (TIN); [REDACTED]

E-Mail Address: cthorne@borregosolar.com

THIS PROPOSAL MUST BE NOTARIZED BELOW:

I certify, under penalty of perjury, that the representations made herein regarding my State Contractor's license number, classification and expiration date are true and correct.

Signature  Title Chief Executive Officer

Please See Attached Notarized Document

SUBSCRIBED AND SWORN TO BEFORE ME, THIS _____ DAY OF _____

Notary Public in and for the County of _____, State of _____

(NOTARIAL SEAL)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189



A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Alameda)
On Oct 17, 2016 before me, Lesley Raphael Notary Public
Date Here Insert Name and Title of the Officer
personally appeared MIKE HALL
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature [Handwritten Signature]
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: _____

Signer's Name: _____

Corporate Officer — Title(s): _____

Partner — Limited General

Individual Attorney in Fact

Trustee Guardian or Conservator

Other: _____

Signer Is Representing: _____

PERFORMANCE BOND AND LABOR AND MATERIAL MEN'S BOND

FAITHFUL PERFORMANCE BOND AND LABOR AND MATERIAL MEN'S BOND:

Borrego Solar Systems, Inc., a corporation, as principal, and
Fidelity and Deposit Company of Maryland, a corporation authorized to do
business in the State of California, as Surety, hereby obligate themselves, their successors and
assigns, jointly and severally, to the City of San Diego a municipal corporation in the sum of
Two Million Six Hundred Seven Thousand Two Hundred Twenty Dollars and Zero Cents
(\$2,607,220.00) for the faithful performance of the annexed contract, and in the sum of **Two**
Million Six Hundred Seven Thousand Two Hundred Twenty Dollars and Zero Cents
(\$2,607,220.00) for the benefit of laborers and materialmen designated below.

Conditions:

If the Principal shall faithfully perform the annexed contract **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract**, RFP Number **K-17-1328-DBA-3-A**, San Diego, California then the obligation herein with respect to a faithful performance shall be void; otherwise it shall remain in full force.

If the Principal shall promptly pay all persons, firms and corporations furnishing materials for or performing labor in the execution of this contract, and shall pay all amounts due under the California Unemployment Insurance Act then the obligation herein with respect to laborers and materialmen shall be void; otherwise it shall remain in full force.

The obligation herein with respect to laborers and materialmen shall inure to the benefit of all persons, firms and corporations entitled to file claims under the provisions of Article 2. Claimants, (iii) public works of improvement commencing with Civil Code Section 9100 of the Civil Code of the State of California.

Changes in the terms of the annexed contract or specifications accompanying same or referred to therein shall not affect the Surety's obligation on this bond, and the Surety hereby waives notice of same.

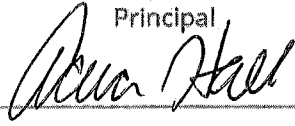
PERFORMANCE BOND AND LABOR AND MATERIALMEN'S BOND (Cont.)

The Surety shall pay reasonable attorney's fees should suit be brought to enforce the provisions of this bond.

Dated January 31, 2017

Approved as to Form

Borrego Solar Systems, Inc.


Principal
By 

AARON HALL
Printed Name of Person Signing for
Principal

Mara W. Elliott, City Attorney

By 
Deputy City Attorney

Fidelity and Deposit Company of Maryland
Surety

By  Richard Hallett
Attorney-in-fact

777 S. Figueroa Street, Suite 3900

Local Address of Surety

Los Angeles, California 90017

Local Address (City, State) of Surety

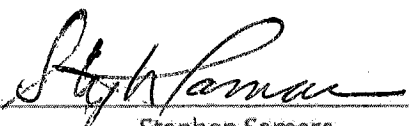
206-346-2641

Local Telephone No. of Surety

Premium \$ 11,733.00

Bond No. 9217759

Approved:

By 
Stephen Samara
Principal Contract Specialist
Public Works Contracts

EXTRACT FROM BY-LAWS OF THE COMPANIES

"Article V, Section 8, Attorneys-in-Fact. The Chief Executive Officer, the President, or any Executive Vice President or Vice President may, by written instrument under the attested corporate seal, appoint attorneys-in-fact with authority to execute bonds, policies, recognizances, stipulations, undertakings, or other like instruments on behalf of the Company, and may authorize any officer or any such attorney-in-fact to affix the corporate seal thereto; and may with or without cause modify or revoke any such appointment or authority at any time."

CERTIFICATE

I, the undersigned, Vice President of the ZURICH AMERICAN INSURANCE COMPANY, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND, do hereby certify that the foregoing Power of Attorney is still in full force and effect on the date of this certificate; and I do further certify that Article V, Section 8, of the By-Laws of the Companies is still in force.

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the ZURICH AMERICAN INSURANCE COMPANY at a meeting duly called and held on the 15th day of December 1998.

RESOLVED: "That the signature of the President or a Vice President and the attesting signature of a Secretary or an Assistant Secretary and the Seal of the Company may be affixed by facsimile on any Power of Attorney...Any such Power or any certificate thereof bearing such facsimile signature and seal shall be valid and binding on the Company."

This Power of Attorney and Certificate may be signed by facsimile under and by authority of the following resolution of the Board of Directors of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at a meeting duly called and held on the 5th day of May, 1994, and the following resolution of the Board of Directors of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at a meeting duly called and held on the 10th day of May, 1990.

RESOLVED: "That the facsimile or mechanically reproduced seal of the company and facsimile or mechanically reproduced signature of any Vice-President, Secretary, or Assistant Secretary of the Company, whether made heretofore or hereafter, wherever appearing upon a certified copy of any power of attorney issued by the Company, shall be valid and binding upon the Company with the same force and effect as though manually affixed.

IN TESTIMONY WHEREOF, I have hereunto subscribed my name and affixed the corporate seals of the said Companies, this ____ day of **JAN 31 2017**, 20____.



Michael Bond, Vice President

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND
POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS: That the ZURICH AMERICAN INSURANCE COMPANY, a corporation of the State of New York, the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, a corporation of the State of Maryland, and the FIDELITY AND DEPOSIT COMPANY OF MARYLAND a corporation of the State of Maryland (herein collectively called the "Companies"), by **THOMAS O. MCCLELLAN, Vice President**, in pursuance of authority granted by Article V, Section 8, of the By-Laws of said Companies, which are set forth on the reverse side hereof and are hereby certified to be in full force and effect on the date hereof, do hereby nominate, constitute, and appoint **Richard HALLETT, Aidan SMOCK, Tim MCCLELLAN and Marta COLLETT, all of San Diego, California, EACH** its true and lawful agent and Attorney-in-Fact, to make, execute, seal and deliver, for, and on its behalf as surety, and as its act and deed: **any and all bonds and undertakings**, and the execution of such bonds or undertakings in pursuance of these presents, shall be as binding upon said Companies, as fully and amply, to all intents and purposes, as if they had been duly executed and acknowledged by the regularly elected officers of the ZURICH AMERICAN INSURANCE COMPANY at its office in New York, New York., the regularly elected officers of the COLONIAL AMERICAN CASUALTY AND SURETY COMPANY at its office in Owings Mills, Maryland., and the regularly elected officers of the FIDELITY AND DEPOSIT COMPANY OF MARYLAND at its office in Owings Mills, Maryland., in their own proper persons.

The said Vice President does hereby certify that the extract set forth on the reverse side hereof is a true copy of Article V, Section 8, of the By-Laws of said Companies, and is now in force.

IN WITNESS WHEREOF, the said Vice-President has hereunto subscribed his/her names and affixed the Corporate Seals of the said **ZURICH AMERICAN INSURANCE COMPANY, COLONIAL AMERICAN CASUALTY AND SURETY COMPANY, and FIDELITY AND DEPOSIT COMPANY OF MARYLAND**, this 19th day of August, A.D. 2015.

ATTEST:

**ZURICH AMERICAN INSURANCE COMPANY
COLONIAL AMERICAN CASUALTY AND SURETY COMPANY
FIDELITY AND DEPOSIT COMPANY OF MARYLAND**



By: *Eric D. Barnes*
Secretary
Eric D. Barnes

Thomas O. McClellan
Vice President
Thomas O. McClellan

State of Maryland
County of Baltimore

On this 19th day of August, A.D. 2015, before the subscriber, a Notary Public of the State of Maryland, duly commissioned and qualified, **THOMAS O. MCCLELLAN, Vice President, and ERIC D. BARNES, Secretary**, of the Companies, to me personally known to be the individuals and officers described in and who executed the preceding instrument, and acknowledged the execution of same, and being by me duly sworn, depose and saith, that he/she is the said officer of the Company aforesaid, and that the seals affixed to the preceding instrument are the Corporate Seals of said Companies, and that the said Corporate Seals and the signature as such officer were duly affixed and subscribed to the said instrument by the authority and direction of the said Corporations.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my Official Seal the day and year first above written.

Constance A. Dunn

Constance A. Dunn, Notary Public
My Commission Expires: July 9, 2019



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT Civil Code § 1189

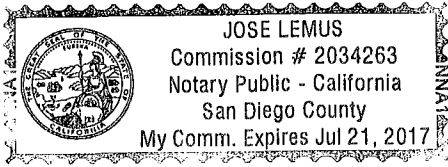
A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy or validity of that document.

STATE OF CALIFORNIA

County of San Diego }

On JAN 31 2017 before me, Jose Lemus, Notary Public,
Date. Insert Name of Notary exactly as it appears on the official seal

personally appeared Richard Hallett
Name(s) of Signer(s)



Place Notary Seal Above

who proved to me on the basis of satisfactory evidence to be the person(~~s~~) whose name(~~s~~) is/~~is/~~ subscribed to the within instrument and acknowledged to me that he/~~she/it/they~~ executed the same in his/~~her/its/their~~ authorized capacity(~~ies~~), and that by his/~~her/its/their~~ signature(~~s~~) on the instrument the person(~~s~~), or the entity upon behalf of which the person(~~s~~) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

Witness my hand and official seal.

Signature [Handwritten Signature]
Signature of Notary Public Jose Lemus

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of the form to another document.

Description of Attached Document

Title or Type of Document: _____

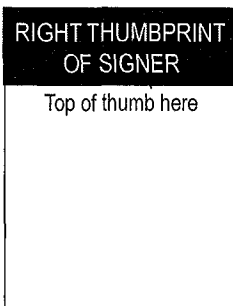
Document Date: _____ Number of Pages: _____

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

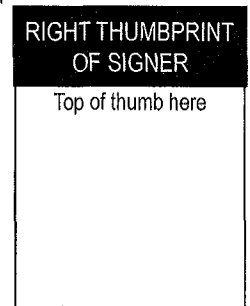
- Individual
- Corporate Officer — Title(s): _____
- Partner Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____



Signer is Representing: _____

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

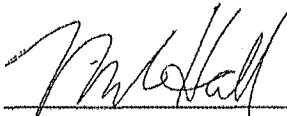


Signer is Representing: _____

**NON-COLLUSION AFFIDAVIT TO BE EXECUTED BY PROPOSER AND
SUBMITTED WITH PROPOSAL UNDER 23 UNITED STATES CODE 112 AND
PUBLIC CONTRACT CODE 7106**

State of California)
County of Alameda) ss.

Mike Hall, being first duly sworn, deposes and says that he or she is CEO of the party making the foregoing proposal that the proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the proposal is genuine and not collusive or sham; that the proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham proposal, or that anyone shall refrain from proposing; that the proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other proposer, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the proposal are true; and further, that the proposer has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, proposal depository, or to any member or agent thereof to effectuate a collusive or sham proposal.

Signed: 

Title: Chief Executive Officer

Subscribed and sworn to before me this _____ day of _____, 20__

Notary Public

Please See Attached (SEAL) Notarized Document

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Alameda)

On Oct 17, 2018 before me, Lesley Raphael Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Mike Hall
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature [Handwritten Signature]
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____
Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

Signer's Name: _____
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

CONTRACTORS CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

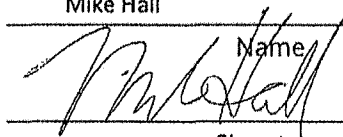
CHECK ONE BOX ONLY.

- The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.

- The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN

Contractor Name: Borrego Solar System, Inc.

Certified By Mike Hall Title CEO
 Name _____
 Signature _____ Date 17-October-16

USE ADDITIONAL FORMS AS NECESSARY

CONTRACTOR CERTIFICATION

DRUG-FREE WORKPLACE

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-17 regarding Drug-Free Workplace as outlined in the WHITEBOOK, Section 7-13.3, "Drug-Free Workplace", of the project specifications, and that;

This company has in place a drug-free workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of subdivisions a) through c) of the policy as outlined.



Mike Hall, CEO / 17-October-16

CONTRACTOR CERTIFICATION

AMERICAN WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the American With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 7-13.2, "American With Disabilities Act", of the project specifications, and that;

This company has in place workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of the policy as outlined.



Mike Hall, CEO / 17-October-16

CONTRACTOR CERTIFICATION

CONTRACTOR STANDARDS - PLEDGE OF COMPLIANCE

I declare under penalty of perjury that I am authorized to make this certification on behalf of the company submitting this bid/proposal, that as Contractor, I am familiar with the requirements of City of San Diego Municipal Code § 22.3004 regarding Contractor Standards as outlined in the WHITEBOOK, Section 7-13.4, ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors whose subcontracts are greater than \$50,000 in value has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.



Mike Hall, CEO / 17-October-16

AFFIDAVIT OF DISPOSAL

**(To be submitted upon completion of Construction pursuant to the contracts
Certificate of completion)**

WHEREAS, on the _____ DAY OF _____, 2_____ the undersigned entered into and executed a contract with the City of San Diego, a municipal corporation, for:

(Name of Task)

as particularly described in said contract and identified as **RFP No. K-17-1328-DBA-3-A; SAP No. (WBS/IO/CC) S-14021 and S-14022;** and **WHEREAS**, the specification of said contract requires the Contractor to affirm that "all brush, trash, debris, and surplus materials resulting from this project have been disposed of in a legal manner"; and **WHEREAS**, said contract has been completed and all surplus materials disposed of:

NOW, THEREFORE, in consideration of the final payment by the City of San Diego to said Contractor under the terms of said contract, the undersigned Contractor, does hereby affirm that all surplus materials as described in said contract have been disposed of at the following location(s)

and that they have been disposed of according to all applicable laws and regulations.

Dated this _____ DAY OF _____, _____.

Contractor
by

ATTEST:

State of _____ County of _____

On this _____ DAY OF _____, 2_____, before the undersigned, a Notary Public in and for said County and State, duly commissioned and sworn, personally appeared _____ known to me to be the _____ Contractor named in the foregoing Release, and whose name is subscribed thereto, and acknowledged to me that said Contractor executed the said Release.

Notary Public in and for said County and State

COMPANY LETTERHEAD
CERTIFICATE OF COMPLIANCE

Materials and Workmanship Compliance

For Contract or Task _____

I certify that the material listed below complies with the materials and workmanship requirements of the Caltrans Contract Plans, Special Provisions, Standard Specifications, and Standard Plans for the contract listed above.

I also certify that I am an official representative for _____, the manufacturer of the material listed above. Furthermore, I certify that where California test methods, physical or chemical test requirements are part of the specifications, that the manufacturer has performed the necessary quality control to substantiate this certification.

Material Description:

Manufacturer: _____
Model: _____
Serial Number (if applicable) _____
Quantity to be supplied: _____
Remarks: _____

Signed by: _____

Printed Name: _____

Title: _____

Company: _____

Date: _____

**City of San Diego
Public Works Department, Field Division**

NOTICE OF MATERIALS TO BE USED

To: _____
Resident Engineer

Date: _____, 20__

You are hereby notified that the materials required for use under Contract No. _____
for construction of _____
_____ in the City of San Diego, will be obtained from sources herein designated.

CONTRACT ITEM NO. (Bid Item)	KIND OF MATERIAL (Category)	NAME AND ADDRESS WHERE MATERIAL CAN BE INSPECTED (At Source)

It is requested that you arrange for a sampling, testing, and inspection of the materials prior to delivery, in accordance with Section 4-1.10 of the WHITEBOOK, where it is practicable, and in accordance with your policy. It is understood that source inspection does not relieve the Contractor of full responsibility for incorporating in the work, materials that comply in all respects with the contract plans and specifications, nor does it preclude subsequent rejection of materials found to be undesirable or unsuitable.

Distribution:

Supplier

Yours truly,

Signature of Supplier

Address

**EQUAL BENEFITS ORDINANCE
CERTIFICATION OF COMPLIANCE**



For additional information, contact:
CITY OF SAN DIEGO
EQUAL BENEFITS PROGRAM
202 C Street, MS 9A, San Diego, CA 92101
Phone (619) 533-3948 Fax (619) 533-3220

COMPANY INFORMATION	
Company Name: Borrego Solar Systems, Inc.	Contact Name: Kory-Oren Eden
Company Address: 5005 Texas Street, Suite 400, San Diego, CA 92108	Contact Phone: 510-496-8704
	Contact Email: keden@borregosolar.com
CONTRACT INFORMATION	
Contract Title: MOC Complex and Bayview Reservoir Solar Project Design-build contract	Start Date: TBD
Contract Number (if no number, state location):	End Date: TBD
SUMMARY OF EQUAL BENEFITS ORDINANCE REQUIREMENTS	
<p>The Equal Benefits Ordinance [EBO] requires the City to enter into contracts only with contractors who certify they will provide and maintain equal benefits as defined in SDMC §22.4302 for the duration of the contract. To comply:</p> <ul style="list-style-type: none"> ■ Contractor shall offer equal benefits to employees with spouses and employees with domestic partners. <ul style="list-style-type: none"> ▪ Benefits include health, dental, vision insurance; pension/401(k) plans; bereavement, family, parental leave; discounts, child care; travel/relocation expenses; employee assistance programs; credit union membership; or any other benefit. ▪ Any benefit not offer an employee with a spouse, is not required to be offered to an employee with a domestic partner. ■ Contractor shall post notice of firm's equal benefits policy in the workplace and notify employees at time of hire and during open enrollment periods. ■ Contractor shall allow City access to records, when requested, to confirm compliance with EBO requirements. ■ Contractor shall submit <i>EBO Certification of Compliance</i>, signed under penalty of perjury, prior to award of contract. <p>NOTE: This summary is provided for convenience. Full text of the EBO and Rules Implementing the EBO are available at www.sandiego.gov/administration.</p>	
CONTRACTOR EQUAL BENEFITS ORDINANCE CERTIFICATION	
<p>Please indicate your firm's compliance status with the EBO. The City may request supporting documentation.</p> <p><input checked="" type="checkbox"/> I affirm compliance with the EBO because my firm (contractor must <u>select one</u> reason):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Provides equal benefits to spouses and domestic partners. <input type="checkbox"/> Provides no benefits to spouses or domestic partners. <input type="checkbox"/> Has no employees. <input type="checkbox"/> Has collective bargaining agreement(s) in place prior to January 1, 2011, that has not been renewed or expired. <p><input type="checkbox"/> I request the City's approval to pay affected employees a cash equivalent in lieu of equal benefits and verify my firm made a reasonable effort but is not able to provide equal benefits upon contract award. I agree to notify employees of the availability of a cash equivalent for benefits available to spouses but not domestic partners and to continue to make every reasonable effort to extend all available benefits to domestic partners.</p> <p>It is unlawful for any contractor to knowingly submit any false information to the City regarding equal benefits or cash equivalent associated with the execution, award, amendment, or administration of any contract. [San Diego Municipal Code §22.4307(a)]</p> <p>Under penalty of perjury under laws of the State of California, I certify the above information is true and correct. I further certify that my firm understands the requirements of the Equal Benefits Ordinance and will provide and maintain equal benefits for the duration of the contract or pay a cash equivalent if authorized by the City.</p>	
Kory-Oren Eden, Sr. Director of HR and Training	
Name/Title of Signatory	Signature
FOR OFFICIAL CITY USE ONLY	
Receipt Date: _____	EBO Analyst: _____ <input type="checkbox"/> Approved <input type="checkbox"/> Not Approved - Reason: _____

(Rev 02/15/2011)

ATTACHMENT J

DESIGN-BUILD AGREEMENT

DESIGN-BUILD AGREEMENT

This Design-Build agreement [Contract] is made and entered into **this day of 2017**, by and between The City of San Diego [City], a municipal corporation, and **Borrogo Solar Systems, Inc.** [Design-Builder], for the purpose of designing and constructing the **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract** (Project) in the amount of **Two Million Six Hundred Seven Thousand Two Hundred Twenty Dollars and Zero Cents (\$2,607,220.00)**. The City and Design-Builder are referred to herein as the "Parties".

RECITALS

- A. The City desires to construct the Project located in the City of San Diego, California.
- B. The City desires to contract with a single entity for design and construction of the Project, as set forth in this Agreement.
- C. The City has issued Request for Proposal (RFP) number **K-17-1328-DBA-3-A** for **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract**, pursuant to which the City solicited Proposals from design-build teams to design, rehabilitate, and build the Project.
- D. In accordance with City's RFP, Design-Builder submitted a Proposal for the Project and is prepared to enter into this Agreement.
- E. The City has selected the Design-Builder to perform, either directly or pursuant to Subcontracts, hereinafter defined, the design, engineering, and construction services set forth in this Agreement and the Contract Documents, hereinafter defined.
- F. The Design-Builder is ready, willing, and able to perform the services required in accordance with the terms and conditions of this Agreement.
- G. Execution of this Agreement by the Design-Builder is a representation that the Design-Builder has visited the Site, become familiar with the local conditions under which the Work is to be performed and correlated personal observations with requirements of the Contract Documents.

In consideration of the above recitals and the mutual covenants and conditions set forth herein, and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby set forth their mutual covenants and understandings as follows.

AGREEMENT

- A. Recitals and Attachments. The above referenced recitals are true and correct and are incorporated into this Agreement by this reference. All attachments referenced in this Agreement section are incorporated into the Contract by this reference.
- B. Contract Performance. The Design-Builder shall design and construct the Project in a good and workmanlike manner to the satisfaction of the City, lien free and in compliance with the Contract Documents and within the time specified, in return for timely payment by the City in accordance with the Contract.

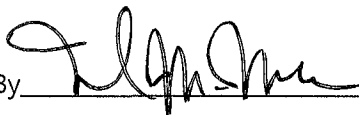
- C. Attachments. All attachments e.g., Reference Standards in the RFP, Supplementary Special Provisions (SSP), the attached Faithful Performance and Payment Bonds, Agreement and Supplemental Agreements, and the attached Proposal included in the Proposal documents by the Contractor are incorporated into the Contract by this reference.
- D. Contract Documents. This Contract incorporates the 2015 Edition of the Standard Specifications for Public Works Construction [The GREENBOOK], including amendments set forth in the 2015 edition of the San Diego Specifications for Public Works Construction [The WHITEBOOK]. The Contract Documents shall include the items mentioned in section 2-5.2 of The WHITEBOOK and shall follow that order of precedence.

IN WITNESS WHEREOF, this Agreement is signed by the City of San Diego, acting by and through its Mayor or designee, pursuant to Municipal Code § 22.3102 authorizing such execution.

THE CITY OF SAN DIEGO

APPROVED AS TO FORM

By 

Mara W. Elliott, City Attorney
By 

Print Name: Stephen Samara
Principal Contract Specialist
Public Works Contracts

Print Name: Mark Aldecoa
Deputy City Attorney

Date: 4-3-17

Date: 4/4/17

CONTRACTOR
By 

Print Name: Aaron Hall

Title: President

Date: 2-2-17

City of San Diego License No.: B2003025165

State Contractor's License No.: 814435

City of San Diego

CITY CONTACT: Rosa Riego, Contract Specialist, Email: rriego@sandiego.gov
Phone No. (619) 533-3426, Fax No. (619) 533-3633

ADDENDUM "2" PROPOSAL DOCUMENTS



 - Bidding FOR

MOC COMPLEX AND BAYVIEW RESERVOIR SOLAR PROJECT DESIGN-BUILD CONTRACT

RFQ NO.: 6137
TASK ORDER NO.: CSD-SP-001
RFP NO.: K-17-1328-DBA-3-A
SAP NO. (WBS/IO/CC): S-14021, S-14022
CLIENT DEPARTMENT: 2000
COUNCIL DISTRICT: 1, 6
PROJECT TYPE: BR, BK

PROPOSAL DUE:
12:00 NOON
OCTOBER 28 2016
CITY OF SAN DIEGO
PUBLIC WORKS CONTRACTS
1010 SECOND AVENUE, 14th FLOOR, MS 614C
SAN DIEGO, CA 92101

A. CHANGES TO CONTRACT DOCUMENTS

The following changes to the RFP are hereby made effective as though originally issued with the RFP. The Design-Builders are reminded that all previous requirements to this solicitation remain in full force and effect.

THE SUBMITTAL DATE FOR THIS PROJECT HAS BEEN **EXTENDED AS STATED ON THE COVER PAGE.**

B. BIDDER'S QUESTIONS

Q1. Section 2.4.1.2 Indicates presence of hazardous materials - can the City please provide the report?

A1. "Hazardous Materials Report for MOC Complex" has been re-uploaded, and is located at:

<ftp://ftp.sannet.gov/OUT/ECP/2-15%20TECHNICAL%20STUDIES%20AND%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

Q2. Section 2.5.6.10 requires epoxy coated NEMA 3R enclosure for the Bay View site. The addition of a non-standard epoxy enclosure will likely introduce overheating concerns for the inverters. If the proposed inverters are specifically designed by the manufacturer to be able to withstand 'salt-laden atmospheric conditions' will this be sufficient?

A2. Yes, it would be sufficient if the inverters are specifically designed by the manufacturer to be able to withstand 'salt-laden atmospheric conditions'.

Q3. Section 2.5.13: Item (4) requires 10 year warranty on 'all other equipment' which is very broad; certain electrical components such as switchgear are simply not available with more than 1 or 2 year warranties. Can the city eliminate requirement (4) since the installation will be covered by the 10 year complete solar system warranty (item 1).

A3. The intention is to have a minimum 10-year warranty on all other equipment as necessary to meet SDG&E Net Energy Metering Successor Tariff (NEM-ST) requirement.

Q4. Section 2.6.3: 80% offset is low; typically systems would be sized for at least 85% or 90% offset - would City accept a higher offset?

A4. For MOC, City will accept 85%. For Bayview, City would like to keep it at 80%. At Bayview solar power will be used by a pump station which is not always continuously operated. Please see in this Addendum, Section C, Changes to the Request for Proposals, Item 9.

Q5. Section 2.6.11.3: Requirement for modules to have 25 year linear guarantee appears very similar to industry-standard requirement for modules to have 25 year power warranty' which typically requires a module manufacturer to 'guarantee' module power output over 25 years. Can the city clarify that this is the intent of this requirement.

A5. The intent of this requirement is outlined in 2.6.11.2 Output (p. 35).

Q6. Can the City clarify whether the intent is for a 25 year OUTPUT (kW) guarantee or a 25 year POWER (kW) guarantee without the City purchasing a maintenance package. (2.6.11.3)

A6. The intent of this requirement is outlined in 2.6.11.2 Output (p. 35).

Q7. **Spec. Section:** RFP Page 35 Attachment A Section 2.6.11.3

Statement: A 25 year linear performance guarantee or better is called for in the RFP in Section 2.6.11, Panels. Does this performance guarantee only relate to the solar panels or the whole system? A 25 year whole system performance guarantee is not a standard industry practice without a maintenance contract.

Question: Please advise.

A7. 2.6.11.3 is related to the panels only.

Q8. Section 2.6.14.4 (inverters) Please confirm that part 3 'input voltage - 480V' is actually AC output voltage and part (5) 'Min DC Ratio' is actually 'maximum DC/AC ratio'

A8. Yes, 'Min DC Ratio' should be 'maximum DC/AC ratio' under Section 2.6.14.4.

Q9. Section 5.2.3 would the City consider changing part 'A' 'First Year Guaranteed minimum...' to 'First Year Expected Minimum.' Without the ability to provide an O&M Package there is no way to guarantee the output of the system.

A9. Please see in this Addendum, Section C, Changes to the Request for Proposals, Item 12.

Q10. Section 5.2.3 would the City consider changing part 'B' 'Five Year Guaranteed minimum...' to 'Five Year Expected Minimum.' Without the ability to provide an O&M Package there is no way to guarantee the output of the system.

A10. Please see in this Addendum, Section C, Changes to the Request for Proposals, Item 12.

- Q11. On page 4 the minimum requirement is stated as 5.7% ELBE/SLBE, however on page 104 of the RFP, section 7.2.6, it appears that DVBE is a possible qualification as well? Is DVBE considered an allowable method to achieve the minimum 5.7%?
- A11. No. The mandatory subcontracting participation percentage goal in Section 2.1.1 is specific to only City of San Diego certified SLBE and ELBE firms. The overall 5.7% mandatory SLBE subcontracting goal can be met with any combination of SLBE or ELBE firms.
- Q12. Can DVBE contribute to additional points for scoring purposes, and if so can it constitute the entirety of the equal opportunity contribution i.e. no ELBE/SLBE component?
- A12. In order to meet the mandatory participation goal, only participation by SLBE/ELBE firms will be counted. Any participation by DVBE's after meeting the mandatory goal will be count towards achieving points as indicated in the scoring table located in section 7.2.6 of Attachment G – Evaluation and Selection.
- Q13. Can other equal opportunity classifications be considered i.e. MBE/WBE/etc?
- A13. The City encourages utilization of DBE/MBE/WBE firms, however, this will not help in meeting the SLBE mandatory subcontracting requirement or in achieving points as indicated in the scoring table located in section 7.2.6 of Attachment G – Evaluation and Selection.
- Q14. Additionally it would be helpful to speak directly with someone at the City on how these programs are administered and how different firms qualify.
- A14. For additional information on the SLBE program and how it is administered, please visit the City's website: <https://www.sandiego.gov/eoc/programs/slbe>.
- Q15. Also - on the bottom of page 51 of the RFP there is an FTP link for hazardous material reports, SDG&E data, and so forth, the link is:
ftp://ftp.sannet.gov/OUT/ECP/2-15%20TECHNICAL%20STUDIES%20AND%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/ However as of this morning there is nothing in the folder at that link?
- A15. The files in the folder have been re-uploaded.
- Q16. Can we consider the additional areas circled in red for solar carports as well? I believe this would be to the City's advantage as the additional array capacity would provide a larger energy offset for the complex and would better meet the goals of the project.
- A16. No, those locations are not feasible due to City fleet vehicle operational needs.

Q17. Can the City make available the most recent 15 minute electricity usage history (minimum 1 year) for all SDG&E meters at the MOC Complex and Bayview Reservoir (including any electric meters that would be on adjacent properties). This data is necessary to help ensure proper solar system sizing pursuant to SDG&E NEM and NEM-Aggregation tariff rules. The data is available from SDG&E upon request by the City.

A17. Yes, the following have been uploaded, and is available at the link below.

1. "1328_MOC Complex and Bayview Reservoir SDGE Data JAN 2015 to SEP 2016"
2. "1328_MOC 1 and 6, SDG&E Interval Data"
3. "1328_MOC 2,3 SDG&E Interval Data"
4. "1328_Bayview SDG&E Interval Data"

<ftp://ftp.sannet.gov/OUT/ECP/2-15%20TECHNICAL%20STUDIES%20AND%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

The intent of sizing requirements are outlined in 2.6.3.

Q18. There is ambiguity on whether the 500MWp and 300MWp system sizes refer to the DC or AC side. Does the City intend that systems be approximately 800MWac or 800MWdc? If the City is trying to meet a specific load, please provide interval data for the relevant building meters so the system can be sized appropriately.

A18. The intent of sizing requirements are outlined in 2.6.3. The interval data is available below:

1. "1328_MOC Complex and Bayview Reservoir SDGE Data JAN 2015 to SEP 2016"
2. "1328_MOC 1 and 6, SDG&E Interval Data"
3. "1328_MOC 2,3 SDG&E Interval Data"
4. "1328_Bayview SDG&E Interval Data"

<ftp://ftp.sannet.gov/OUT/ECP/2-15%20TECHNICAL%20STUDIES%20AND%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

Q19. **Spec. Section:** RFP Page 21 Attachment A Section 1.1
RFP Page 33 Attachment A Section 2.6.3

Statement: The project description calls out for approximately 500KW ac output at MOC and 300 KW ac output at Bayview. Section 2.6.3 calls out to

supply 80% of the site's energy production. Please verify what is required. If 80% is required is total of all of the MOC buildings combined required to calculate the 80%

Question: Please advise.

A19. Please see in this Addendum, Section C, Changes to the Request for Proposals, Item 9.

Q20. Can the City clarify their intent that products must be "Made in America" (2.5.4.10) (1). Note that virtually no major solar provider can satisfy this requirement, however, many can comply with the Buy American Act.

Can the City adjust its requirement that the cost of domestic components must exceed 50% of all the system components (2.5.4.10) (2). Note that this 50% threshold will severely limit the quantity and capability of proposals.

A20. Provide Made in America Panel.

1. The article must be manufactured in the United States
2. The cost of domestic components must exceed 50 percent of the cost of all the components.

Q21. Can the City provide structural drawings for the water tank?

A21. "30026-D Replacement of Bayview Reservoir" has been uploaded, and is located at:

<ftp://ftp.sannet.gov/OUT/ECP/2-15%20TECHNICAL%20STUDIES%20AND%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

Q22. Can the City provide existing geotechnical, underground utility survey, and/or topographical information for the relevant portions of the MOC Complex?

A22. Only geotechnical data is available, this is located:

<ftp://ftp.sannet.gov/OUT/ECP/2-7%20SUBSURFACE%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

It is the design-builder's responsibility to obtain underground utility surveys and topographical information.

Q23. Can the City provide one-line electrical drawings for both sites?

A23. Yes, the following have been uploaded, and is available at the link below.

1. "Bayview E-2"
2. "MOC 3 PV Project"

3. "MOC 4 Parking Lot"
4. "MOC1-E3"
5. "MOC2 Expansion E-7.1"
6. "MOC2 Expansion E-7.2"
7. "MOC2 Expansion E-7"
8. "MOC6 Updated Single Line Drawing"

<ftp://ftp.sannet.gov/OUT/ECP/2-15%20TECHNICAL%20STUDIES%20AND%20DATA/MOC%20Complex%20and%20Bayview%20Reservoir%20Solar%20Project/>

Q24. At the MOC Complex, will the City consider setbacks that encroach on the standard 20' property setbacks.

It appears that some of the proposed project areas at MOC may be within 20 feet of the property line. Would the City consider approving setbacks of less than 20 feet, in particular near Topaz Way?

A24. No, we must comply with the current setbacks.

Q25. Given that the project will be awarded based on an adjusted price, large penalties will be imposed on systems with larger DC to AC ratios even when they provide improved savings to the City. Furthermore, it is not clear how a system with a DC to AC ratio of greater than 1.0 can comply with requirement 2.5.4 (i.e. no clipping in first 5 years). It is likely a bid with a 1.0 DC to AC ratio will be the cheapest system even though it provides significantly less savings than a system with a larger ratio. Does the City intend on taking into account the improved savings from systems with industry-standard DC to AC ratios (i.e. larger than 1.0)?

A25. Yes, per Attachment G, 5.2.3 letter b, Schematic Design Submittal.

Q26. Most companies cannot offer a guaranteed minimum kWh production without also being responsible for the operation and maintenance of the system (i.e. company can't be responsible for system performance if someone else, or no one, is maintaining the system). Please clarify whether the City desires an O&M offering from bidders and, if not, what it intends to do to instead to maintain the equipment.

A26. The City does not intend to accept O&M offering. Please see in this Addendum, Section C, Changes to the Request for Proposals, Item 12.

Q27. Regarding Attachment I (Certifications and Forms) can you please confirm these are to be included in the Technical Proposal (as opposed to the Price Proposal)?

A27. Regarding Attachment I (Certifications and Forms) pages 112-115 and pages 118-119 and 126 should be included as part of the Price Proposal.

5. To Section 4, Instructions To Proposers and General Conditions, page 12, Section 9, Pre-Proposal Activities, Sub-section 9.1., Submission of Questions, Item **9.1.1.**, **DELETE** in its entirety and **SUBSTITUTE** with the following:

9.1.1. The Public Works Department is responsible for opening, examining, and evaluating the competitive Bids submitted to the City for the acquisition, construction and completion of any public improvement except when otherwise set forth in these documents. Any questions related to this solicitation shall be submitted to:

Public Works Contracts
 1010 Second Avenue, 14th Floor
 San Diego, California, 92101

OR:

rriego@sandiego.gov

6. To Section 4, Instructions To Proposers and General Conditions, page 18, Section 17, Additional Policies, Procedures, Terms and Conditions, Sub-section 17.11., Reference Standards, Sub-item **17.11.1.**, **REFERENCE TABLE**, **DELETE** in its entirety and **SUBSTITUTE** with the following:

Title	Edition	Document Number
Standard Specifications for Public Works Construction ("The GREENBOOK") http://www.greenbookspecs.org/	2015	PWPI070011-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")* http://www.sandiego.gov/publicworks/edocref/greenbook.shtml	2015	PWPI07011-02
City of San Diego Standard Drawings* http://www.sandiego.gov/publicworks/edocref/standarddraw/	2016	PWPI07011-03
Citywide Computer Aided Design and Drafting (CADD) Standards https://www.sandiego.gov/publicworks/edocref/drawings	2016	PWPI092816-04
California Department of Transportation (CALTRANS) Standard Specifications http://www.dot.ca.gov/des/oe/construction-contractstandards.html	2015	PWPI092816-05
Caltrans Standard Plans - http://www.dot.ca.gov/des/oe/construction-contract%20standards.html	2015	PWPI0082816-06

Title	Edition	Document Number
California Manual on Uniform Traffic Control Devices Revision 1 (CA MUTCD Rev 1) - http://www.dot.ca.gov/trafficops/camutcd/	2014	PWPI092816-07
NOTE: *Available online under Engineering Documents and References at: http://www.sandiego.gov/publicworks/edocref/index.shtml		

7. To Attachment A, Project Description, Scope of Work, Technical Specifications and/or Bridging Documents, page 29, Section 2, Scope of Work, Sub-section 2.5., Solar PV System Design Specifications, Item 2.5.7., Meters, Sub-item **2.5.7.1., DELETE** in its entirety and **SUBSTITUTE** with the following:

2.5.7.1. Design-Builder will provide revenue grade Interval Data Recording (IDR) meters complete with industry standard telemetry for communication with Ethernet capabilities. If no-hard-wired connection to the Internet is available, the Sunny WebBox must be capable of connecting to the Internet wirelessly.

8. To Attachment A, Project Description, Scope of Work, Technical Specifications and/or Bridging Documents, page 33, Section 2., Scope of Work, Sub-section 2.5., Solar PV System Design Specifications, Item 2.5.13., Warranties and Guarantees, Sub-item 2.5.13.1., Number **4., MINIMUM 10-YEAR WARRANTY ON ALL OTHER EQUIPMENT, DELETE** in its entirety and **SUBSTITUTE** with the following:

4. A minimum 10-year warranty on all other equipment as necessary to meet SDG&E Net Energy Metering Successor Tariff (NEM-ST) requirement.

9. To Attachment A, Project Description, Scope of Work, Technical Specifications and/or Bridging Documents, page 33, Section 2., Scope of Work, Sub-section 2.6., Photovoltaic Equipment, Item **2.6.3., DELETE** in its entirety and **SUBSTITUTE** with the following:

2.6.3. The Design-Builder shall evaluate each location's energy consumptions and propose PV system size at 80% of Bayview's energy consumption, and 85% of MOC's energy consumption, during October 2015 thru September 2016. If the proposed PV system cannot achieve 80% of Bayview's energy consumption and 85% of MOC's energy consumption for the area provided, the Design-Builder shall propose a PV system that maximizes the PV system output for the available area.

10. To Attachment A, Project Description, Scope of Work, Technical Specifications and/or Bridging Documents, page 37, Section 2., Scope of Work, Sub-section 2.6., Photovoltaic Equipment, Item 2.6.14., Inverters, Sub-item **2.6.14.7, DELETE** in its entirety and **SUBSTITUTE** with the following:

2.6.14.7. Inverter shall have the ability to communicate via Ethernet and shall report current inverter status, alarms, input and output voltages and current and metering data on the Internet via Sunny Portal with Sunny WebBox. If no hard-wired connection to the Internet is available, the Sunny WebBox must be capable of connecting to the Internet wirelessly.

11. To Attachment A, Project Description, Scope of Work, Technical Specifications and/or Bridging Documents, page 40, Section 2., Scope of Work, Sub-section 2.7., Low Voltage Electrical Service and Distribution, Item 2.7.6., Installation – General, Sub-item **2.7.6.1., General, ADD** the following:

All connections, wiring, and terminations should be made with copper material.

12. To Attachment G, Evaluation and Selection, page 101, Section 5, Technical Approach and Design Concept (55 Points Max), Sub-section 5.2.3., Performance (35 points), Item **A., First Year guaranteed minimum output (ac KWh/yr)**, and Item **B., 5-year guaranteed minimum annual system performance (ac KWh/yr)**, **DELETE** in their entirety and **SUBSTITUTE** with the following:

- A. Expected first year guaranteed minimum output (ac KWh/yr)
- B. Expected 5-year guaranteed minimum annual system performance (ac KWh/yr)

13. To Attachment H, Price Forms, pages 106 through 108, **Price Forms, DELETE** in their entirety and **SUBSTITUTE** with pages 12 through 14 of this Addendum.

Bid item numbers 8 and 16 "All Permits" has been added as an allowance for all permits including meter upgrades.

James Nagelvoort, Director
Public Works Department

Dated: *October 18, 2016*
San Diego, California

JN/HM/egz

PRICE FORMS

The Design-Builder agrees to the design and construction of **MOC Complex and Bayview Reservoir Solar Project Design -Build Contract**, for the City of San Diego, in accordance with these contract documents for the lump sum price listed below. The Design-Builder guarantees the proposed prices for a period of 120 Days (90 Days for federally funded contracts and contracts valued at \$500,000 or less) from the date Proposals are due until the award of the **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract, Task Order CSD-SP-001**. The duration of the price guarantee shall be extended by the number of Days required for the City to obtain all items necessary to fulfill all conditions precedent e.g., bond and insurance.

Item No.	NAICS CODE	Description	Quantity	D*	Unit	Unit Price	Extension
BASE PROPOSAL (MOC)							
1	524126	Bonds (Payment and Performance)	1		LS	XXXXXX	\$
2	541330	Engineering and Design Services	1	D	LS	XXXXXX	\$
3	238210	Field Construction	1		LS	XXXXXX	\$
4	238990	Traffic Control	1		LS	XXXXXX	\$
5	238210	Mobilization	1		LS	XXXXXX	\$
6	541330	Water Pollution Control Plan Development and Implementation	1		LS	XXXXXX	\$
7		City Contingency - Type II	1		AL	XXXXXX	\$100,000.00
8	541330	All Permits - Type II	1		AL	XXXXXX	\$250,000.00
TOTAL FOR BASE PROPOSAL (MOC) (ITEMS NO. 1 THROUGH 8):							\$
BASE PROPOSAL (BAYVIEW)							
9	524126	Bonds (Payment and Performance)	1		LS	XXXXXX	\$
10	541330	Engineering and Design Services	1	D	LS	XXXXXX	\$
11	238210	Field Construction	1		LS	XXXXXX	\$
12	238990	Traffic Control	1		LS	XXXXXX	\$
13	238210	Mobilization	1		LS	XXXXXX	\$
14	541330	Water Pollution Control Plan Development and Implementation	1		LS	XXXXXX	\$
15		City Contingency - Type II	1		AL	XXXXXX	\$75,000.00
16	541330	All Permits - Type II	1		AL	XXXXXX	\$50,000.00
TOTAL FOR BASE PROPOSAL (BAYVIEW) (ITEMS NO. 9 THROUGH 16):							\$
TOTAL FOR BASE PROPOSAL (MOC) and (BAYVIEW)							\$

* Design Element (For City Use)

PRICE FORMS

Total Contract Price for Design-Build Proposal, (Base Proposal (MOC) Items 1 through 8) Plus (Base Proposal (BAYVIEW) Items 9 through 16), amount written in words:

Design-Builder: _____

Title: _____

Signature: _____

The names of all persons interested in the foregoing proposal as principals are as follows:

IMPORTANT NOTICE: If Design-Builder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Design-Builder or other interested person is an individual, state first and last names in full.

PRICE FORMS

NOTES:

- A. The Contract Price to be used in the selection process as described in Attachment G of the RFP will be determined by the base proposal alone.
- B. After the selected Design-Builder has been determined, the City may, at its sole discretion, award the contract for the Base Proposal alone or for the Base Proposal plus one or more alternates.
- C. Prices and notations shall be in ink or typewritten. All corrections (which have been initiated by the Design-Builder using erasures, strike out, line out, or "white-out") shall be typed or written in with ink adjacent thereto, and shall be initialed in ink by the person signing the Proposal.
- D. Failure to initial all corrections made in the proposal documents may cause the Proposal to be rejected as **non-responsive** and ineligible for award.
- E. Blank spaces must be filled in. The Design-Builder's failure to submit a price may render the Proposal **non-responsive** and ineligible for award.
- F. Unit prices shall be entered for all unit price items. Unit prices shall not exceed two (2) decimal places. If the Unit prices entered exceed two (2) decimal places, the City will only use the first two digits after the decimal points without rounding up or down.
- G. All extensions of the unit prices will be subject to verification by the City. In the case of inconsistency or conflict between the product of the Quantity x Unit Price and the Extension, the product shall govern.
- H. In the case of inconsistency or conflict, between the sums of the extensions with the total proposal price, the sum of the extensions shall govern.
- I. Proposals shall not contain any recapitulation of the Work. Conditional Proposals may be rejected as being **non-responsive**.
- J. Alternate proposals will not be considered unless called for.
- K. Subcontractors' License Numbers must be filled in. Failure to provide the information specified may deem the bidder **non-responsive**.

City of San Diego

CITY CONTACT: Rosa Riego, Contract Specialist, Email: Rriego@sandiego.gov
Phone No. (619) 533-3426, Fax No. (619) 533-3633

ADDENDUM "1" PROPOSAL DOCUMENTS



e - Bidding FOR

MOC COMPLEX AND BAYVIEW RESERVOIR SOLAR PROJECT DESIGN-BUILD CONTRACT

RFQ NO.: 6137
TASK ORDER NO.: CSD-SP-001
RFP NO.: K-17-1328-DBA-3-A
SAP NO. (WBS/IO/CC): S-14021 / S-14022
CLIENT DEPARTMENT: 2000
COUNCIL DISTRICT: 1 / 6
PROJECT TYPE: BR / BK

PROPOSAL DUE:
12:00 NOON
OCTOBER 20, 2016
CITY OF SAN DIEGO
PUBLIC WORKS CONTRACTS
1010 SECOND AVENUE, 14th FLOOR, MS 614C
SAN DIEGO, CA 92101



**TECHNICAL PROPOSAL FOR MOC COMPLEX AND
BAYVIEW WATER RESERVOIR & PUMP STATION
SOLAR PROJECT DESIGN-BUILD CONTRACT
RFP# K-17-1328-DBA-3-A
CITY OF SAN DIEGO**



BORREGO SOLAR

Cameron Thorne, P.E.
Project Developer
Borrego Solar Systems, Inc.
(619) 961-4523
cthorne@borregosolar.com

Cover Letter

Rosa Riego
 Contract Specialist
 City of San Diego – Public Works Contracts
 San Diego, CA 92101

Dear Ms. Riego,

Borrego Solar is truly excited to share with the City of San Diego our proposal for photovoltaic solar electric generating systems for the MOC Complex and Bayview Water Reservoir & Pump Station. By selecting Borrego Solar, the City can be 100% confident that they are selecting the strongest possible partner for this project. **We believe that Borrego Solar can offer the City the most customer-centric installation team in the business as well as the sophistication and capacity of a locally headquartered, nationally recognized commercial solar provider.** We would like to quickly highlight some of the key strengths of the Borrego Solar team and our approach to this project.

1. **The Strongest Team for City of San Diego:** Borrego Solar has been designing and building solar systems for over 35 years. We have specific, recent experience with projects very similar in scope and scale to this project; to date we have designed, permitted, and installed **94 megawatts** for public and municipal agencies and we have installed over **26 megawatts** of carport canopy solar. Earlier this year we completed an initial installation of 3.3 MW on-site at San Diego International Airport, and we are now actively constructing an additional 2.2 MW for the Airport Authority. We believe that Borrego Solar is able to bring this level of capacity and performance to our projects because of the strength of our team, which includes 10 licensed professional engineers and holds over 10 different certifications.
2. **Highest Return on Investment:** We have carefully optimized every aspect of this offering to provide the City with the maximum possible return on investment. Each of the proposed solar systems has been designed to maximize SDG&E bill savings. At the MOC Complex, the proposed carport canopy design will maximize the available parking lot area and will offset the on-site meters via Net Energy Metering Aggregation. At the Bayview facility, the proposed ballasted system will provide an 80% annual energy offset and will be optimized to avoid obstructing key walkways so as to minimize operational impact to the facility. **Solid & Profitable Company to Protect the City’s Investment:** Borrego Solar has 35 years of experience in solar, is profitable, and is well-capitalized with a five billion dollar parent corporation. Our audited financials speak to our ability to make good on our promises and guarantees. Because Borrego Solar is a profitable solar firm, the City can be confident that we have a sustainable business model and will be there to honor our commitments. We understand your crucial need to enter into agreements with a company that can not only build this project but will also honor long term responsibilities, and as a 35 year old, profitable firm backed by a five billion dollar parent corporation there is simply no stronger partner.

3. **The Very Best Equipment and Technology for Your Project – Manufactured in America:** Borrego Solar has specified nothing but the very best for this project: Premium high efficiency, American-made solar modules from Suniva, the leading American manufacturer of high-efficiency, cost competitive PV modules, and string inverters from SMA, the number one provider of solar inverters in the world. Suniva modules are manufactured in Georgia and Michigan and SMA inverters are manufactured in Denver, CO. Additionally we have specified an American-made non-penetrating racking solution from PanelClaw, which has installed over 400 MW of capacity around the world.
4. **A Realistic Project Schedule:** Borrego Solar is committed to meeting the City’s schedule goals for this project. Our proven experience securing the necessary permits from the City of San Diego, our expertise in obtaining the necessary interconnection agreements from SDG&E, and our extensive network of proven subcontractors ensures that we will be able to meet our schedule commitments. Constructing and interconnecting commercial-scale solar photovoltaic projects is a complex undertaking and we believe it pays to work with a proven partner with demonstrated local experience.

We are truly excited to work with the City of San Diego on this exciting project. This opportunity has the highest priority in our company and full support and attention at the executive level. Please do not hesitate to contact us if we can answer any further questions

Sincerely,



Cameron Thorne, P.E.
Project Developer
Borrego Solar Systems, Inc.
Phone: (619)-961-4523
Fax: (888) – 843-6778
cthorne@borregosolar.com



Mike Hall
Chief Executive Officer
Borrego Solar Systems, Inc.

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TECHNICAL PROPOSAL REQUIREMENTS

Legal Form of Entity

Borrego Solar Systems, Inc.(Borrego Solar) is a corporation.

Year of Establishment of Entity

Borrego Solar was founded in 1980 and has been in continuous operation for 36 years. The company was incorporated in its present form in California in 2002.

If Company Is Subsidiary of a Parent Company, Identify the Parent Company

Borrego Solar is a privately held corporation and is 70% owned by our parent company, Walsin Liwha with the balance of ownership is shared between individuals, executive officers and board members of Borrego Solar.

Address of Main Office

Borrego Solar Systems, Inc.
5005 Texas Street, Suite 400
San Diego, CA 92108

Address of San Diego Satellite Office If Applicable

Same address as above.

Contact Information for Firm, Including Name, Title, Email Address and Telephone Number

Cameron Thorne, P.E.
Project Developer
Borrego Solar Systems, Inc.
5005 Texas Street, Suite 400
San Diego, CA 92108
(619) 961-4523
cthorne@borregosolar.com

Number of employees in San Diego County

Borrego Solar has 82 employees in California with 39 working out of our headquarters in San Diego.

Applicable License(s):

City Of San Diego Business License Number

Our San Diego Certificate Number is B2003025165 and expires on 03/31/2017.

State Contractor's License Number

Borrego Solar holds the following licensing in the State of California under license number 814435:

A – General Engineering Contractor

B – General Building Contractor

C-10 – Electrical

C-46 – Solar

This license expires on 11/30/2016.

Borrego Solar also has a current registration with the California Department of Industrial Relations, # 1000026031, expiring 30-June-2017.

We have included evidence of these licenses in our attachments to this proposal.

1. Addenda to this RFP – Pass / Fail

Borrego Solar acknowledges the following issued addenda:

1. Addendum 1
2. Addendum 2

2. Proposer Exceptions to this RFP

Borrego submitted several exceptions within the allowable timeframe (10 days prior to due date for submission of Technical Proposal) and we have received the City’s response to these exceptions. We can comply with all RFP requirements with the following exceptions:

- We can comply with the requirement to complete the project 250 working days from NTP **unless** SDG&E requires anything beyond Initial Review for the Interconnection(s); we will not know the expected Interconnection application and study process durations, as well as any delays or costs associated with any required service or utility upgrades, until after we have submitted the interconnection application and received SDG&E’s response. In addition, the price excludes the costs for any utility or service upgrades.
- The proposed racking solution for the Bayview Reservoir is the PanelClaw Polar Bear III 10 degree tilt product. The components for this product are sourced 100% from the United States and the assembly of the sub-components is also done in the United States. The racking material will be G90 galvanized steel with stainless steel fasteners, consistent with Borrego Solar’s proven approach for installing solar in maritime climates. Borrego procurement teams spoke with a wide range of manufacturers to attempt to meet the City’s request for a stainless steel racking solution or a galvanized solution with epoxy and this product was not available.
- The proposed SMA inverters for both sites will be configured for connection to the SMA web-monitoring service via an SMA Cluster Controller (rather than Sunny WebBox, which, per our conversations with SMA, is more appropriate for smaller installations)

Additionally this offering includes the following assumptions and exclusions:

- Removal of existing trees as required is included but tree or shrub replacements is excluded
- Re-striping to accommodate ADA compliance is included but no other ADA upgrades are included
- Carports at MOC complex will have minimum ground clearance of 9 feet
- Full access to applicable solar areas for installation
- The solar canopies will follow the existing grade of the parking lot. The parking lot will be repaired via patchback to same quality as existing however offering does not include sealing or overlays.
- Offering assumes that during construction heavy equipment can be used and may leave tire marks on finish surfaces; Borrego will make reasonable efforts to minimize damage to these surfaces but may not be able to remove all marks or cracks.
- Pricing does not include upgrades to existing switchgear or electrical services.
- Bayview solar installation to be fully ballasted and will require a full structural review to confirm structural viability.

Offering assumes no groundwater, caving or shoring, hard drilling, or major underground obstructions

3. Summary of Proposal

What Sets Borrego Apart for the City of San Diego

Solar is a fast changing industry, and firms come and go. Borrego stands apart in the industry for three key reasons:

- **Longevity:** Borrego was founded in 1980 and continues today as one of the oldest active solar firms. Our longevity is a testament to our steady and consistent performance.
- **Local Presence:** While Borrego is a leading national commercial solar provider, our headquarters are right here in San Diego at 5005 Texas Street. We are located a short drive from the project sites.
- **Technology Agnostic:** Because Borrego Solar does not manufacturer equipment, we are not hamstrung by a commitment to a specific type of technology or particular brand of equipment. We are able to secure the best equipment at the lowest prices through competitive bidding processes with our key suppliers, and we pass these savings on to our clients.

System Sizing Methodology

Each of the proposed systems has been designed to reach the target annual kWh production values or to come as close as possible given site constraints. The designs have been optimized to reach the target production while minimizing columns and foundations and maximizing energy yield. All of these steps have reduced the up-front cost to the City while maintaining the same total energy production and lifetime savings.

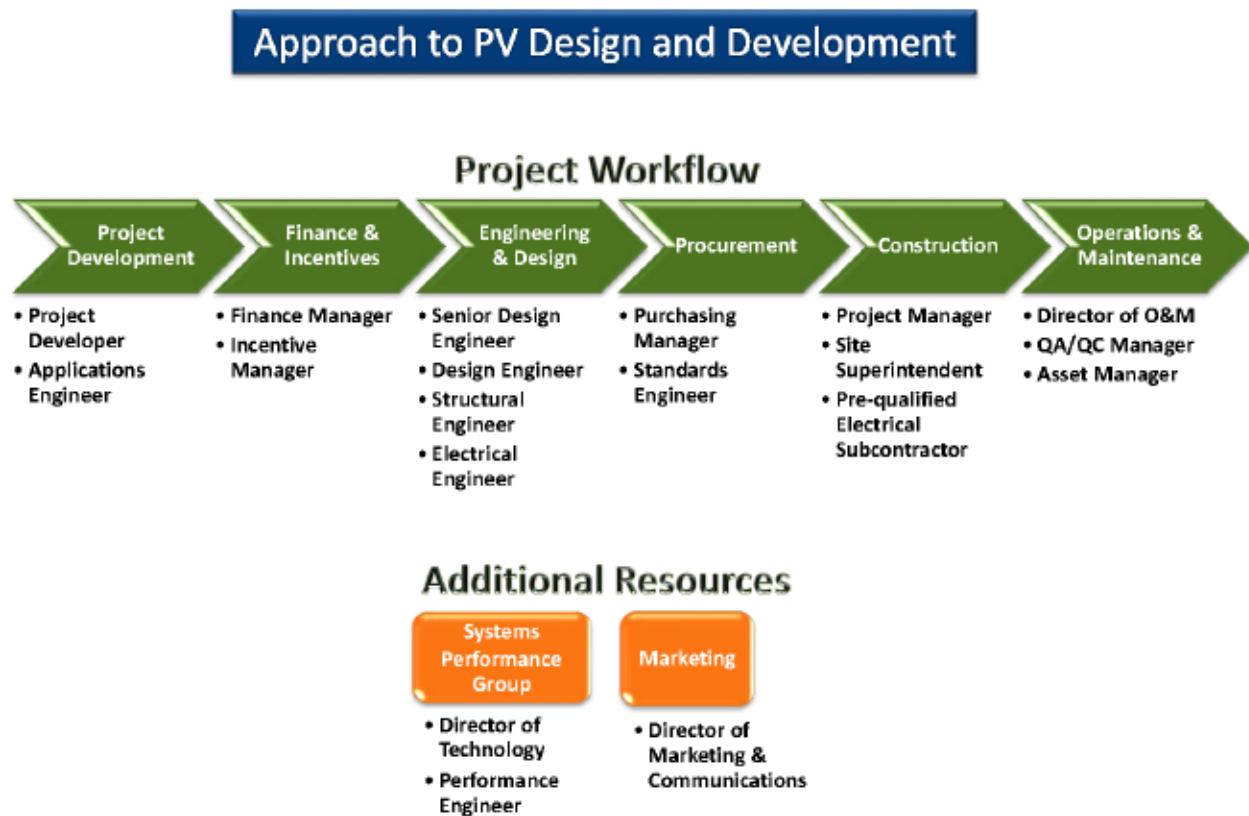
Ready to Help the City Succeed

For all of the reasons specified above, we believe that Borrego offers the City the strongest possible partner for this project. We have done everything possible to provide the City with a full and complete proposal, and we are prepared to begin the project as soon as possible. This project will have the very best of Borrego and the full attention of our executive team, and we look forward to getting started.

4. Project Team

Solar Photovoltaic Project Approach

Borrego Solar has over 35 years of experience delivering turnkey solar photovoltaic (PV) solutions. The figure below is a visual representation of Borrego Solar’s approach to solar PV design and development. Borrego personnel control each stage of project execution, from the initial site feasibility to the long term operations and maintenance. As a “one-stop-shop” we are your main point of contact throughout the life of your solar system construction and operation, giving you the best customer service for the long term.



Borrego Solar’s Project Developers and Applications Engineers have in-depth experience installing solar and will move this project from feasibility to design having determined the optimal system configuration given the site characteristics and your goals. This team collaborated with our Engineers and System Performance Group to conduct site evaluations from which they provided a preliminary design and prediction of system performance.

Once the EPC contract is signed, our System Designers will move the project through permitting and work with our Procurement team to obtain high quality equipment for the project. Borrego Solar performs our own engineering and design work through our in-house staff of 26 full time PV

engineers, including Professional Electrical, Structural and Electrical Engineers. As a technology agnostic solar PV provider with long standing industry relationships, we source products from a variety of tier-one, credit-worthy manufacturers with custom negotiated warranties. All products are vetted and approved by our in-house quality assurance team.

After the Development and Design phases, the project will be handed off to a single Project Manager and Site Superintendent who will direct work at your site, managing the installation team and controlling the budget. This dedicated team of solar installation experts will partner with qualified, local general and electrical subcontractors during the physical installation of the system. Borrego Solar shall maintain contact through weekly overview meetings with the client and daily site strategy meetings with our subcontractors, project partners and relevant client representatives. Borrego Solar's Project Managers and Site Superintendents will manage subcontractors before, during and after the installation process and hold them to the same leading safety and quality standards we've been known for 35 years.

Before commissioning, the Project Manager or a Site Supervisor will run through a 70-point Quality Assurance checklist to ensure that the system has been installed in a manner consistent with Borrego Solar's commitment to excellence in solar design and construction.

Once the solar installation is built, commissioned and is connected to the grid, Borrego Solar can provide additional services both on-site through our Operations and Maintenance plans and within the community through our Marketing team. Our O&M offering includes semi-annual site assessments, preventative maintenance checks and round-the-clock monitoring to ensure your system's continuous operation. This proactive approach is intended to reduce operational downtime and performance losses to guarantee that return on investment goals are achieved or exceeded. In addition to on-site care, Borrego Solar can develop a full marketing strategy to promote your new PV system and your overall sustainability and energy goals. After a strategy session to identify your goals, we'll pull from years of experience to determine the most effective approach in letting your desired audience know the steps you've taken to create local jobs, support our nation's energy independence, and protect the environment for generations to come.

Team Resumes

Development Team

Borrego Solar's Project Development Team consists of highly-trained individuals experienced in developing customized solar electric solutions. Collectively, our team members have developed and contracted more than 254 MW of solar electric projects.

Cameron Thorne, P.E., Project Developer

Cameron joined Borrego Solar in 2012 and as a project developer his focus is on developing projects that provide the best value and ROI for Borrego Solar's commercial and governmental clients. Cameron has been interested in energy his entire career. His first exposure to renewables took place as a member of the first Appropriate Technology class ever offered by Seattle Pacific University in which they designed and built a biogas generator, a micro-hydro installation and a small wind



turbine. Later Cameron worked in the oil and gas industry as a consulting engineer before finding his true calling in solar. Cameron is passionate about making solar energy highly competitive with traditional energy sources through technological innovation and a ‘can-do’ approach to project development. Cameron is a licensed Electrical Engineer and obtained a Bachelors of Science in Electrical Engineering from Seattle Pacific University and a Masters of Business Administration from the Kellogg School of Management at Northwestern University.

Rogan Guild, Applications Engineer

Rogan has been with Borrego Solar since the fall of 2015 and is based in San Diego where he serves as a technical resource for the Project Development team. His primary role is producing optimal designs that provide the best value and ROI for Borrego Solar’s private and public customers throughout the Southern California Region. Rogan has over 6 years of experience in solar applications engineering, including previous positions in project development and component manufacturing companies. He earned his Bachelors of Science in Electrical Engineering from Cal Poly, San Luis Obispo, and holds an Engineer in Training (EIT) certificate in California.

Engineering & Design Team

One of Borrego Solar’s signature features is the strength of our in-house engineering division. Our team is comprised of full-time solar design professionals in roles ranging from value engineering and feasibility assessment to system commissioning and performance monitoring. Borrego’s in-house technical staff is unsurpassed in the PV industry and includes professional structural and electrical engineers. Each working group within the engineering division informs the efforts of all the others, which allows Borrego Solar to produce high-quality working designs smoothly and quickly. The expertise of the Borrego in-house engineering and design team will ensure that the best design is chosen to meet your needs and the most high-quality equipment is sourced for your projects.

Benjamin Walter, Engineering Lead – P.E.

Benjamin Walter is a Professional Electrical Engineer based out of the Oakland office, and serves as the Engineering Lead for Borrego Solar’s West Coast operations. Ben joined Borrego Solar in 2010 with a tremendous depth of solar PV design and engineering experience including the design of high-end building integrated (BIPV) systems, such as PV glass facades for skyscrapers, PV skylights, PV curtain walls, and zero-net energy homes. His comprehensive experience with photovoltaic technology makes him a valuable asset for any client looking to develop large-scale solar projects. Ben leads the engineering effort on commercial and government projects in the Western US and manages a team of engineers who design solar power installations that maximize production, efficiency and longevity for customers. Ben holds a Bachelor of Science degree in Electrical Engineering from the University of Akron, Ohio.

Construction and Project Management Team

Borrego Solar maintains one of the most accomplished construction teams in the industry and consists of seasoned construction veterans with years of experience managing on-site installations. Our Project Managers and Site Superintendents are quality control and safety ambassadors committed to providing quality workmanship on each and every installation.

Brendan Neagle, Chief Operations Officer

Brendan serves as Chief Operations Officer (COO) at Borrego Solar. Brendan joined Borrego Solar in 2006 as the VP of Business Development and helped open three regional offices in Northern and Southern California. In 2007, Brendan moved to Massachusetts and helped open the East Coast regional headquarters to service the New England and Mid-Atlantic markets. Brendan was promoted to COO in 2009 and is currently tasked with management of all engineering, installation and maintenance activities. Brendan has more than 8-years of solar photovoltaic operations and business development experience. Prior to joining Borrego Solar, Brendan worked as a business development executive for a large solar integrator in California. Brendan holds a Bachelor's degree from Brown University.

Brian Barker, Regional Operations Director Southern California

Brian is Borrego Solar's Regional Operations Director based out of the corporate headquarters in San Diego, California. He joined Borrego Solar a year ago as the Regional Operations Director and leads our team of Project Managers and Superintendents in executing a strategic construction plan for commercial-scale solar projects in the western US. Brian guides his team in establishing priorities and resource allocation with the goal of improving efficiency and the effectiveness of all construction projects. He directs, mentors and leads the Project Management team in the successful completion of all solar installation projects in his region. Brian has been in the solar industry since 2003 and has completed over 100MW of utility and commercial-scale solar throughout North American, Europe and Africa. Prior to joining Borrego Solar, Brian was a Technical Program Manager for Soitec Solar, an international concentrated photovoltaic manufacturer and developer, where he was responsible for the development, design, installation and commissioning of Soitec's solar projects. Brian was also a Construction Manager for Michael Baker International where he provided Agency Construction Management services on public works projects including water reservoirs, pipelines, pump stations, waste water treatment facilities, roadways and utility improvements. Brian is a Certified Construction Manager through the Construction Management Association of America (CMAA) and he earned his Bachelors of Science degree in Environmental Science from California State University at Humboldt.

Alejandro Fernandez, Senior Project Manager

Alejandro Fernandez is a Senior Project Manager with Borrego Solar based out of the company's Southern California headquarters in San Diego, California. Alejandro works primarily on DSA-governed private and public school solar energy projects and large-scale utility (WDG-wholesale distributed generation) projects throughout the Western US. As a Senior Project Manager, Alejandro supports the project development lifecycle from conditional use permitting, engineering, procurement and construction through closeout when the PV installation is given permission to operate (PTO) by the utility. Prior to joining the Borrego Solar team in 2013, Alejandro worked in the solar industry for 7-years starting at a net-zero custom home start-up near Aspen, Colorado and then moving on to larger scale DG projects in Northern California with SunPower. Alejandro is a NABCEP Certified PV installer and a LEED Accredited Professional. He earned his Bachelors of Arts in Architecture from Washington University in St. Louis

Joe Daugirda, Site Superintendent

Joe is a Site Superintendent with Borrego Solar based out of the company's headquarters in San Diego. As a Site Superintendent specializing in utility-scale ground mounted solar photovoltaic (PV) energy systems, Joe's primary focus is on working with land owners, municipal inspectors, manufacturers, suppliers, and contractors as Borrego Solar's safety ambassador, main point of contact on site, and liaison between field operations and the Project managers and Professional Engineers. Prior to joining Borrego Solar in 2013, Joe spent three years completing PV installations for Real Goods Solar, and helped transition the firm to a 100% sub-contractor business model while maintaining high levels of quality and maximum energy production. Before that, Joe worked for Alteris Renewables and has personally completed more than 50 solar PV projects. Joe is a licensed Electrician in MA and RI and a CA Certified Journeyman Electrician. He holds an OSHA 10 Certificate, NFPA 72 Arc Flash Certificate, and First Aid & CPR Certificates.

O&M Management Team

Matt Murphy, Director of Operations & Maintenance

Mr. Matt Murphy is the Director of Operations & Maintenance for Borrego Solar and is based out of the regional headquarters in Lowell, Massachusetts. Matt has been with the firm since 2012 and manages the nationwide O&M team and is responsible for the highest level of escalation within the department. On a daily basis he ensures that each region is performing optimally. He also serves as the department's data & communications technical expert. Formerly Matt was the East Coast Operations & Maintenance Manager for Borrego, where he oversaw the East Coast fleet as it grew from five to fifty megawatts. Prior to joining Borrego Solar, he worked for five years at the Vermont-based electrical contracting company Peck Electric, where he was instrumental in creating and running Peck's solar PV division and was responsible for every job function from sales to system commissioning. While at Peck, Matt oversaw the design, development, construction, and maintenance of over 5 MW of solar PV capacity. Matt also has 5 years' experience teaching PV construction and troubleshooting to electricians at the Vermont NJATC training center, where he prepared students for the entry level NABCEP certification test. Matt is a licensed journeyman electrician and is NABCEP certified.

David Marks, Southern California Operations and Maintenance Manager

David Marks is the Regional Operations and Maintenance Manager based out of Borrego Solar's headquarters in San Diego, California. As a member of the Operations and Maintenance team, David primarily focuses on the routine maintenance of, and incidental service required for, Borrego Solar's commercial and utility-scale PV systems in Southern California. This includes reactive services, performance investigations, and preventative maintenance, all of which are performed to ensure maximum energy production and the highest quality across all assets. He also concentrates on the installation and monitoring of various data acquisition systems (DAS) and troubleshooting inverters, solar panels, DAS products, and racking materials to facilitate any warranty claims on behalf of the customer. David started in the electric industry in 2004 and quickly specialized in solar photovoltaics. He now has a California C-10 license, is a certified Journeyman Electrician, and earned his certification in Electrical Theory from San Diego City College.

Bradley Hibberd, Director of Solar Technology

Mr. Bradley Hibberd is currently the Director of Solar Technology for Borrego Solar. He joined the company in June 2003 from the oil and gas industry, where he worked as a Mechanical Engineer for Kvaerner Oilfield Products in London, UK. Bradley is NABCEP certified and has managed the design and engineering of over 12 Megawatts of PV installations with Borrego Solar. As a member of Borrego Solar’s Resources Group, Bradley is currently working to reduce the installed cost of the company’s solar energy systems through value engineering, standardization, and product development. Bradley co-authored Solar Pro Magazine’s April/May 2010 featured article Production Modeling for Grid-Tied PV Systems. Bradley holds a Bachelor’s, with honors, and Master’s degrees in Mechanical Engineering from the University of Auckland, New Zealand.

Gary Buchanan, Asset Performance Manager

Mr. Gary Buchanan is the Manager of Asset Performance. As Asset Performance Manager, Gary tracks the performance of all Borrego Solar’s systems under management, using various data acquisition systems (DAS) and production forecasts. Gary has experience in all aspects of solar installation, service, and management, and is responsible for assuring Borrego Solar’s installed base of systems is producing at or above the predicted levels of generation, and that production guarantee targets are met. His past experience in Telecommunications and IT Project Management made for a successful transition to solar in 2007. Since then, Gary has overseen the installation of over 100 megawatts of solar photovoltaic projects in Education, Affordable Housing and Public Utility markets, and has been heavily involved in setting up Borrego Solar’s Operations & Management division for growth and success. Gary has an Entry-level NABCEP certification and earned his Bachelor of Arts degree in Business and Computer Science from Rutgers University, New Jersey. He has completed both basic and advanced solar PV design classes at Diablo Valley College in Northern California, and is involved with Sandia Labs’ efforts to develop guidelines and standards in the area of Solar PV O&M.

Subcontractors

Borrego Solar approaches our installations from a Project Management perspective, developing a design-build team by partnering with various manufacturers as well as electrical, structural, and installation subcontractors. Our bidding and procurement process is three-fold, intent on finding qualified firms that have extensive experience in their field, offer extremely competitive pricing for their products/services and show proof of a stellar safety record.

Borrego Solar qualifies companies based on numerous criteria including previous work experience, the number of NABCEP certified employees, references, and reputation within the industry. Our Resources Group and Project Manager work together to review preliminary and final designs, develop construction standards, and perform post mortems. Subcontractors are chosen based on their ability to adhere to our design and cooperate with our site management direction. Any subcontractor that fails to adhere to our policies and site direction or that behaves in an unprofessional manner either on or off the site can be removed from Borrego Solar’s short list. In order to assure maximum performance from our systems we rely on high quality installations, run by the highest trained project managers and installers. Borrego Solar meets this high standard of installation through the use of NABCEP installers. We have worked with multiple electrical and general contractors in the past and have found many of them to be reliable, knowledgeable, and responsible partners on all types of installations.

We have identified the following major subcontractors for this project:

Valor Constructors, Inc. - Valor Constructors, Inc. (Valor) is a licensed and privately held Service Disabled Veteran Owned Small Business (SDVO-SB) providing general contracting and consulting services. The company is exceptionally proficient with the contracting rules, regulations, and requirements of state and federal government agencies, and has well developed quality control and safety plans in place for agency specific projects. Their experience comes from leading the design and construction of multi-million dollar construction projects for The Army Corps of Engineers (ACOE), Naval Engineering Facilities Command (NAVFAC), Department of Homeland Security (DHS), US Customs and Border Protection (CBP), and General Services Administration (GSA). Valor is a SDVO-SB certified (CVE) from the US Department of Veteran Affairs and DVBE from the California State Department of General Services (DGS), ##1786167 and a SLBE with the City of San Diego.

Person of Contact: Bryce Brown

Address: 270-F N. El Camino Real #385, Encinitas, CA 92024

Phone: (866) 496-1959

HMT Electric, Inc. - HMT Electric Inc., was established in 2007 and they specialize in a variety of commercial electrical installations including high-rise construction projects that utilize cast-in place concrete design, commercial tenant improvements, building core and shells, school remodels, telecommunications infrastructure, building automation and control, fire alarm and security and commercial solar installations. HMT and Borrego have partnered on solar PV projects since 2011. We have recently worked together on Seneca Solar, our 8+MW project in Victorville, CA, as well as the Anaheim Convention Center. The Borrego and HMT team has completed various types of multi-site projects in the past including a school district, a repeat commercial client in LA, and a military base project.

Person of Contact: Carl Price, Project Manager

Address: 2340 Meyers Avenue, Escondido, CA 92029

Phone: (858) 458-9771

M Bar C Construction, Inc. - Family owned and operated, M Bar C Construction, Inc. was established in 2005 out of M Bar C Carports. M Bar C Construction was formed to serve the increasing demands of commercial, government and industrial customers. The company has been installing carports since 1975 and solar structures since 1997. M Bar C Construction installs 30-40 Megawatts of solar canopies every year. Our expertise and experience is a direct reflection of the passionate commitment to quality and performance our customers demand. Borrego has partnered with at least one other project with M Bar C (San Diego International Airport) and we have partnered again with them for our 2nd project (in construction) at San Diego International as well.

Person of Contact: Erik Krivokopich, V.P. of Sales & Estimating

Address: 674 Rancheros Dr., San Marcos, CA 92069

Phone: (760) 744-4131

5. Technical Approach and Design Concept

Design Concept & Performance:

A. Expected first year minimum output (ac KWh/yr)

Site	1 st YR Expected Output (AC kWh) ¹
MOC Complex	711,960
Bayview Water Res. & Pump Station	310,410
<i>Total</i>	1,022,370

Note 1: Borrego is not providing a performance guarantee for this project

B. Expected 5-year year minimum annual system performance (ac KWh/yr).

Site	5-YR Expected Output (AC kWh) ¹
MOC Complex	3,524,380
Bayview Water Res. & Pump Station	1,536,607
<i>Total</i>	5,060,986

Note 1: Borrego is not providing a performance guarantee for this project

C. System Size (dc KW)

Site	System Size (DC kW)
MOC Complex	433.500
Bayview Water Res. & Pump Station	180.880
<i>Total</i>	614.380

D. PV Module Degradation Factor (%)

The Expected Module Performance Degradation factor is .5% per year.

E. System efficiency (%)

Site	Sys. Efficiency (%) ¹
MOC Complex	87%
Bayview Water Res. & Pump Station	88%
<i>Total</i>	88%

Note 1: System Efficiency is defined above as [CEC system size] / [kW DC STC]

F. Unsubsidized cost per kilowatt(dc) installed and cost per kilowatt-hour(ac)

The below chart summarizes the expected **costs** of the system:

Site	Unsubsidized Cost (\$/kW DC)	Unsubsidized Cost (\$/kWh AC) ¹	Unsubsidized Cost (\$/kWh AC) ²
MOC Complex	\$3,563	\$2.17	\$.11
Bayview Water Reservoir & Pump Station	\$3,250	\$1.89	\$.10
<i>Total</i>	\$3,471	\$2.09	\$.11

Note 1: Defined as project cost divided by 1st YR Expected Energy Production. Note 2: Defined as project cost divided by 20 YR Expected Energy Output

The below chart summarizes the expected **savings** from the system:

Site	Estimated 1 st YR Avoided Cost	Estimated 20 YR Avoided Cost
MOC Complex	\$73,792	\$1,882,151
Bayview Water Reservoir & Pump Station	\$33,680	\$859,038
<i>Total</i>	\$107,472	\$2,741,188

Note 1: Unsubsidized Cost / kWh is defined as project cost divided by 1st YR Expected Energy Production

G. Schedule Optimization

For schedule for this project please see **attached proposed schedules**. The proposed schedules reflect our best understanding of the project scope and realistic schedule expectations based on Borrego’s years of experience installing grid-connected solar systems in the City of San Diego.

We have included two schedules for your review:

- A. **Baseline Schedule** assuming fast-track approval of both interconnections (no service upgrades etc)
- B. **Alternate Schedule** assuming non-fast track approval

We look forward to working with the City to better understand the City’s needs and goals with regards to scheduling. We believe there are opportunities to further optimize the schedule by removing unknowns and examining key assumptions; this will require further conversation with the City.

Schematic Design Submittal:

A. PV modules or array materials quality

With headquarters in metro-Atlanta and manufacturing facilities in Georgia and Michigan, Suniva is the leading American manufacturer of high-efficiency, cost-competitive PV solar cells and modules. The company is known worldwide for its high-quality solar products, patented low-cost manufacturing technology, and long-term reliable performance. Their ground-breaking manufacturing process ensures the combination of high power and exceptional value in every product they make, while their research milestones continue to set the standard in the global PV marketplace. Suniva’s rich research heritage has resulted in the development of ground-breaking technologies for PV manufacturing, resulting in cell and module efficiencies that are reaching 21% and 18%, all while lowering costs to levels that rival manufacturing found anywhere in the world today. Suniva is committed to providing the highest levels of quality and reliability in their products and treating their customers with the utmost professionalism. These modules come with a 10 year limited product warranty and a 25 year limited power warranty.



B. Proposed Inverter characteristics (brand, rating, efficiency, etc.)

The solar energy system proposed here incorporates Tripower string inverters from SMA America. **These inverters are 98% efficient.** SMA is the Number One provider of solar inverters in the world, and Borrego Solar believes SMA makes the most reliable inverters on the market. We’ve done business with SMA since 2008, and the company’s response time to system issues is faster than any inverter company with which we’ve worked. Its robust infrastructure allows it to deliver replacement parts within 24 hours. Furthermore, its inverters are assembled in the United States, at its facility in Rocklin, CA. **We have specifically selected inverters from SMA both because they are manufactured in the United States, will be compatible with the MOC’s existing SMA Sunny Boy inverters, and feature a corrosion-resistant design that is especially well suited for this project. These inverters will include a 15 year warranty.**



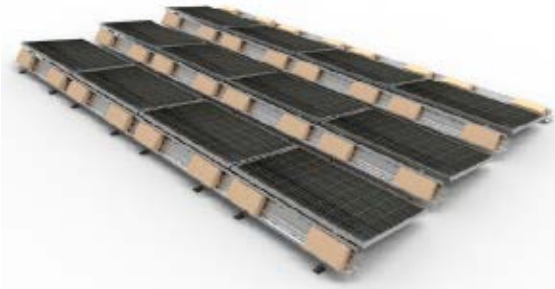
C. PV system configuration and aesthetics

The solar support structures proposed for this installation is a robust and flexible system that will elevate the module arrays above parking areas. The vertical columns and purlins of these structures will be composed of structural steel with a galvanized finish. Lighting is included in the parking structures and will meet or exceed IES standards for parking lot illumination.



We are proposing a fixed tilt custom-designed long-span structure which will cover both double-wide parking rows in the MOC parking lot as well as the drive aisle between them. This will maximize the amount of solar energy generated in the available area. This design is structurally sound, will not result in the loss of any parking spaces and will lower the overall cost of the system by maximizing the system size thus minimizing the per-kW fixed costs.

For the Bayview facility we are proposing the Polar Bear III HD non-penetrating racking solution. This design draws on seven years of industry experience and provides more design and energy density, flexibility, improved constructibility, universal framed module support, enhanced roof protection, better wire management, and a lower cost than any other reliable flat roof mounting solution in the market today. Combined with PanelClaw’s project support team of flat roof experts, Polar Bear III HD is an outstanding choice for projects that involve mounting on flat surfaces. **This racking solution features galvanized steel structural materials with stainless steel fasteners** and comes with a 25-year warranty.



D. Integration of PV into electrical system

Both of the proposed systems (MOC Complex and Bayview facility) will be interconnected per SDG&E Net Energy Metering tariff schedules. The proposed system for the MOC complex will interconnect to meter 6556502 (MOC-6) which is located in existing 3P 208V, 1000A switchgear. The meter is located just to the east of the proposed solar installation. We **do anticipate** that this switchgear and associated SDG&E service will require an upgrade to accommodate the proposed solar installation and the cost for this is not included in this offering.

The proposed system for the Bayview facility will be interconnected to meter 6699332 which is situated at the adjacent pump station. The interconnection will be made to existing 3P 480V 800A switchgear.

E. Meets functional requirement

We believe that the proposed systems will meet all of the City’s functional requirements for this project. Specifically, the systems have been sized to reach the target energy offset (Bayview facility) or have been made as large as possible given the available space (MOC complex).

Additionally the systems will not adversely impact facility operations (no loss of parking spaces or obstruction of key walkways), have been electrically designed to integrate with the existing switchgear as much as possible, and will be aesthetically pleasing with the utmost care taken in all aspects of workmanship. The system will include a 10 year warranty per by SDGE’s Net Energy Metering 2.0 program.

F. Proposed methods of coordination with Owner’s work force and Proposed Operator Training Program

The proposed construction plan does presume full access to the affected MOC parking areas during construction, which will require close coordination with the City. Because of our extensive experience constructing carport canopy solar, we have a well-developed approach, based on close client coordination, for carefully planning and phasing the various stages of construction to cause minimal impact to facility operations.

We expect a much smaller operational impact at the Bayview facility as the top of the reservoir is generally unoccupied and the presence of solar installation crews should cause minimal facility impact. Nevertheless we will coordinate closely with City personnel to minimize any undue impact to operations.

G. Schedule Optimization

The **attached** proposed schedule has been carefully assembled to reflect Borrego’s realistic expectations for the required durations to fully design, construct, and interconnect the proposed solar systems. We believe that our years of experience installing commercial-grade solar in the City of San Diego provides Borrego with a unique and well-informed understanding of the required durations for all critical project steps.

H. Design Innovation(s)

Borrego takes pride in the continual improvement of our engineering and construction processes. We are particularly proud of our in-house energy production modeling capabilities, which have been featured in several notable commercial solar publications, as well as our in-house engineering and licensure, which is unusual within the industry. Our engineering team includes 10 licensed Professional Engineers and we hold over 10 different construction licenses.



I. Schematic Design submittal

The **attached** proposed designs for both facilities provide a clear overview of the intended location of the solar arrays as well as the exact layout and equipment selection. The solar has been located in the areas specified in the RFP.

6. Construction Plan

Proposed Construction Plan

Construction Approach

Borrego Solar sets the project velocity and controls all stages of implementation from the initial site feasibility by our in house team of engineers through the management of the construction to the long term operations and maintenance by our O&M department. Because we self-perform, we can assure our clients that our installations meet rigorous quality standards. Throughout the life of your solar system, Borrego Solar remains your main point of contact to give you superior customer service for the long term.

Design through Permitting

The quality of your system begins with a superior design. Borrego Solar’s Project Developers and Applications Engineers will move the initial designs through the preliminary design phase by determining what the most effective solar generation system is given the site characteristics and your goals. Our team of performance modeling experts run system production estimates through our chosen production model (PVsyst) to calculate the optimal cost savings scenario.

Borrego Solar engages appropriate client personnel to assist in the development of the project with the client receiving a 50% and 90% plan set for review. Feedback is then incorporated into the final design to make sure that the system takes into consideration any safety, aesthetics and daily site operations. Once finalized, our Project Management team and in-house Professional Engineering team move the project through permitting.

The Professional Engineering team will manage all interactions with the Permitting Authority of Record (“AHJ”). We understand how to work with these review agencies and because we’ve already done work in the region, we understand its jurisdictional requirements. Borrego Solar’s Engineering and Project Management teams are able to quickly address local code concerns and are experienced with the specifics of the Department of State Architect, Building Code, National Electric Code, and engineering best practices to ensure a timely response to permit office reviews. Additionally, we maintain an in-house Utility Engineer to complete Medium Voltage interconnection engineering in-house, further expediting the permitting and interconnection processes.

Procurement

Borrego Solar’s Project Managers move the project from permitting into construction execution by working with our in-house Procurement team. The President of Borrego Solar, Aaron Hall, personally oversees our major vendor relationships and has for more than ten years, ensuring we receive favorable treatment and contractually guaranteed timing for delivery of product.

As a technology agnostic solar PV provider with long standing industry relationships, we source products from a variety of Tier One, credit-worthy manufacturers with custom negotiated

warranties. All products are vetted and approved by our in-house quality assurance team. The combination of long-standing relationships with product manufacturers and continual technical review of our product vendors ensures the procurement for these long-lead time items such as electrical transformers, inverters, structural steel, and solar modules follows in line with the project schedule developed by Borrego Solar. We maintain long-term Master Service Agreements with our product vendors to ensure this is the case.

Construction

Borrego Solar maintains regional Operations staff of Project Managers, Assistant Project Managers and site Superintendents based out of our San Diego office as well as staff based throughout Southern California, allowing us to put personnel on-site every day of construction. This field staff is supported by our licensed in-house engineering to keep the project moving forward at all times. In addition to the Project Manager, the project will also be assigned a Site Superintendent along with an Assistant Project Manager. This core group are the key members who will direct the work at the project site, manage the subcontractors, oversee the quality assurance/quality control procedures, interface with outside inspection entities, and ultimately deliver you project on schedule.

Borrego Solar strictly manages the construction documentation, project schedule, daily construction activities, equipment procurement, logistics, and quality control. The Project Manager at each site is the single point of contact for all project information.

Communications

Clear communication is key to a successful project and to foster this, Borrego Solar's operations team initiates partnering at the project kick-off where we establish early project phasing, get approvals and resolve any outstanding issues that affect our established project velocity. This initial partnering is led by the Project Manager and Site Superintendent. During the installation, Borrego Solar's Superintendent holds weekly partnering meetings with subcontractors to go over schedules, site logistics, closeout docs, or resolve any other issue that may arise so to keep the project moving forward. During construction, Borrego Solar also has weekly overview meetings with the client to address progress on site and reaffirm scheduling expectation. By maintaining consistent communication with all stakeholders, we are able to increase productivity onsite while managing and communicating expectations.

Schedule

Borrego Solar creates Microsoft Project schedules in a Gantt chart format based on Critical Path Methodology (CPM). We create a detailed schedule at the beginning of each project that shows the entire process up front, with critical path items clearly identified for client, engineers, subcontractors, and vendors. Upon contract execution, this initial schedule is updated to reflect actual contractual start times and durations as well as incorporate any additional client requirements such as phasing, added scope, or other logistical requirements such as concurrent construction projects.

As the project progresses from the initial bid through the design phases, mutually agreed upon schedule changes are incorporated and the schedule revised. Borrego Solar devotes a large part of our project schedule to the system design so by the time we get into the field, we know we have a solid, buildable designs.



During construction, the City of San Diego will receive a three-week look ahead schedule each week and a full and updated schedule once a month. In the unlikely event a schedule should slip, we make adjustments to recover the schedule to deliver your project on time. Through our vendor relationships, we have the ability to procure equipment with reliable lead times because having equipment delivered on site when it is needed is crucial to keeping a project moving forward. Many of the subcontractors we work with also have the ability to add staffing when needed to meet increased scheduling demands ensuring that the site is appropriately staffed to meet schedule demands. Ultimately, Borrego Solar is responsible for delivering the project on time and we take pride in our ability to do just that.

Subcontractors

Borrego Solar pre-qualifies subcontractors based on a number of factors assuring that by the time we enter into construction, we have a qualified team on site and ready to install your system. A subcontractor's EMR rating, past performance on similar contracts, and bonding capacity are key factors in determining whether we will use a subcontractor for an installation. Through maintaining a list of qualified subcontractors, Borrego Solar has the ability to mobilize teams of subcontractors based on an individual project's needs.

The subcontractor relationship is initially led by the Project Manager up until construction mobilization. When a project mobilizes, our site superintendents oversee the daily work of the subcontractors to ensure quality control is maintained for the duration of the project. We hold weekly meetings between our site superintendent and the subcontractor's superintendents to go over the three week look-ahead schedule, budgets, and other site logistics. Weekly partnering meetings support ongoing communications.

Quality Control / Quality Assurance

We implement rigorous Quality Control / Quality Assurance measures through the project phases so that before we go into the field, our designs and equipment are thoroughly vetted through our internal processes. Once in the field, we hold our subcontractors to the same strict QA/QC measures ensuring that the system is built to specifications and exceeds your expectations.

Solar PV technology is constantly changing with new equipment coming to market often. When Borrego Solar uses new equipment or changes an installation technique, we use mock ups available to the installation crew to demonstrate how the item is to be installed before they begin. Our Project Managers conduct field visits to check in on critical milestones and do spot checks and tests on the installation to ensure everything is being installed within parameters. Borrego Solar uses a detailed Inspection Log for each jobsite and all information is recorded. This log is mandatory on all of our jobsites and rolls into our commissioning procedures ensuring a smooth transition from installation to operation.

Borrego Solar has a **ZERO** allowable fail rate during installation and has enacted Standard Operating Procedures to prescribe appropriate testing to ensure compliance. For instance, if a racking bolt fails a torque test, then all of the bolts within a specified radius are tested. If all bolts within the radius pass, then we feel strongly that the single failure was just that, a single failure. If even a single bolt fails within the radius, then the test area is widened in increments until we can

be assured that all equipment is installed correctly.

Plan for Facility Operation

The proposed construction plan does presume full access to the affected MOC parking areas during construction, which will require close coordination with the City. Because of our extensive experience constructing carport canopy solar, we have a well-developed approach, based on close client coordination, for carefully planning and phasing the various stages of construction to cause minimal impact to facility operations.

We expect a much smaller operational impact at the Bayview facility as the top of the reservoir is generally unoccupied and the presence of solar installation crews should cause minimal facility impact. Nevertheless we will coordinate closely with City personnel to minimize any undue impact to operations.

Phasing

Because we are planning on full access to the MOC parking lot and Bayview Reservoir site during construction we have not created a parking lot phasing plan for this project. Additionally we don't anticipate any issues with regard to concurrent construction activities at the sites, based on the information provided.

If the City requests a phasing approach we are able to work with the City, but this may have schedule and/or cost impacts.

Commissioning

Once the project is fully constructed, Borrego Solar will perform field inspection and quality assurance tests to verify the operability of the system and prepare the installation for commissioning. Our field inspection includes a complete 200-point examination of the system and its components. This checklist was developed internally and is an expanded version of the Solar Electric (PV) System Installation Checklist as contained within the California Energy Commission's *A Guide to Photovoltaic (PV) System Design and Installation*.

Before starting any PV System testing, a pre-check checklist is acknowledged to ensure that proper safety precautions are observed. Once all pre-check safety precautions have been observed, a thorough quality assurance inspection is conducted to ensure that the system is operable and ready for commissioning. This quality assurance testing includes:

Quality Assurance Testing
<ul style="list-style-type: none">• Source Circuit Testing - Voltage and continuity to ground all strings• Output Circuits – Insulation testing of wires from CB to inverter and verification of polarity• AC Wiring Circuits – Insulation testing of wires from AC tie in point (POCC) to Inverter and verification of phasing• Connection Testing

Positive results for the above quality assurance tests allows for full system commissioning, which consists of the following activities:

Quality Assurance Testing

- Inverter Commissioning
- Combiner Box Commissioning
- Imp Test of DC Output Circuits
- DAS Commissioning

All product commissioning is performed in accordance with the recommended procedures as detailed within the Installation Guides for each component. All costs for labor and equipment during system commissioning are provided by Borrego Solar. No costs for these items will be incurred by the client.

Safety

Borrego Solar mitigates project safety risks by strictly adhering to worksite policies that are enforced in parallel by an internal safety lead and an external contractor. In this way, we promote a consistent culture of safety while maintaining checks and balances on our own systems.

Overall Safety Record

- Our OSHA Recordable Incident Rate has been 0 since at least 2008. We have had no Lost Workday Incidents or deaths.
- We have maintained one of the lowest workers' compensation Experience Modification Ratings in solar; our EMR for the 2016 policy year is .69.

Internal Controls

- We create a project-specific safety plan, available for review, for every project.
- One Borrego Solar employee, Joe Daugirda, oversees all safety efforts and reports them weekly to our Chief Operations Officer, Brendan Neagle.
- Borrego holds quarterly internal, mandatory safety trainings for the entire Operations department.
- All new Operations employees complete a mandatory safety training upon hire, and annually thereafter.
- Our site superintendents hold weekly, mandatory on-site safety meetings for all subcontractors and their employees.
- Each of Borrego Solar's subcontractor foremen are required to be CPR-, first aid- and OSHA-certified.

External Controls

Borrego Solar retains Smart Safety Group to audit four Borrego Solar jobsites per month on an ongoing basis. Smart Safety updates Joe with the results of these site visits and he presents the results to the entire Operations team monthly.

Borrego Solar's safety program exceeds OSHA standards, and we have a zero-tolerance policy for risky behavior on site.

You may view a copy of a sample Project Safety Manual via this link:
<https://borregosolar.box.com/s/wz4rb53hnm1iv0y0je7zk9jpk0mykx04>

You may view a copy of our Project Safety Plan via this link:
<https://borregosolar.box.com/s/nyo427zb3wu5eapy4rwryvet171gg3he>

Emergency Response Plan

Each of Borrego's subcontractor foremen are required to be CPR-, first aid- and OSHA-certified. In the event of a safety emergency our site superintendents will take immediate action to alert any required first responders, and the issue will be immediately escalated to the executive level at Borrego. Borrego Solar's safety program exceeds OSHA standards, and we have a zero-tolerance policy for risky behavior on site.

Schedule

A detailed proposed detailed construction schedule for this project is **attached**.

Traffic Control Management

In our experience the process of managing vehicle traffic affected by carport canopy solar installations is highly specific to each project and varies depending on level of traffic, number of affected parking stalls, and the typical operational patterns for any given facility. We expect and look forward to developing a custom traffic control plan with the City to manage vehicle traffic affected by the MOC canopy installations. At a minimum the affected work area will be fenced off from the public during heavy construction. We expect little to no traffic impact at the Bayview facility.

Community Impact

In general commercial solar installations, particularly those in non-residential areas, cause minimal impact to local communities. Nevertheless we are always prepared to assist our clients in managing this aspect of the process. Because the Bayview facility is located in a high visibility residential area, we do anticipate some potential community involvement. However because the proposed system design will be low profile and is set well apart from any particular residential properties we do not anticipate any problems. We would encourage the City to consider offering local community members the chance to attend an informational session where community members can get their questions answered by City and Borrego personnel; Borrego has participated in many such meetings previously and would be pleased to offer similar support for this project, at no additional charge to the City.

CERTIFICATIONS AND FORMS

Design-Build Proposal

Design-Builder's General Information

Non-Collusion Affidavit

Certification of Pending Actions

Drug-Free Workplace

American with Disabilities Act (Ada) Compliance Certification

Contractor Standards – Pledge Of Compliance

Equal Benefits Ordinance Certification of Compliance

Design-Build Proposal

1. The undersigned The Design-Builder proposes and agrees, if this Proposal is accepted, to enter into an agreement with the City in the form included in the Contract Documents to perform the Work as specified or indicated in said Contract Documents entitled **MOC Complex and Bayview Reservoir Solar Project Design-Build Contract.**

2. The Design-Builder accepts all of the terms and conditions of the Contract Documents, including without limitation those in the RFP.

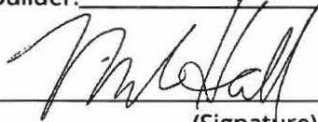
3. This Proposal will remain open for the period stated in the RFP unless otherwise required by law. The Design-Builder will enter into an agreement within the time and in the manner required in the RFP and will furnish the insurance certificates, Payment Bond, and Performance Bond required by the Contract Documents.

4. The Design-Builder has familiarized itself with the nature and extent of the Contract Documents, Work, site, locality where the Work is to be performed, the legal requirements (federal, state and local laws, ordinances, rules, and regulations), and the conditions affecting cost, progress or performance of the Work and has made such independent investigations as The Design-Builder deems necessary.

To all the foregoing, and including all Proposal schedule(s) and information required of the Design-Builder contained in this Proposal Form, said The Design-Builder further agrees to complete the Work and Services required under the Contract Documents within the Contract Time stipulated in said Contract Documents, and to accept in full payment therefore the Contract Price based on the Total Proposal Price(s) named in the aforementioned Proposal schedule(s).

Dated: 17-October-2016

The Design-Builder: Borrego Solar Systems, Inc.

By: 
(Signature)

Title: Chief Executive Officer

PROPOSAL

Design-Builder's General Information

To the City of San Diego:

Pursuant to the "Request for Proposal", specifications, and requirements on file with the City Clerk, and subject to all provisions of the Charter and Ordinances of the City of San Diego and applicable laws and regulations of the United States and the State of California, the undersigned hereby proposes to furnish to the City of San Diego, complete at the prices stated herein, the items or services hereinafter mentioned. The undersigned further warrants that this proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the proposal is genuine and not collusive or sham; that the proposer has not directly or indirectly induced or solicited any other proposer to put in a false or sham proposal, and has not directly or indirectly colluded, conspired, connived, or agreed with any proposer or anyone else to put in a sham proposal, or that anyone shall refrain from proposing; that the proposer has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the proposal price of the proposer or any other proposer, or to fix any overhead, profit, or cost element of the proposal price, or of that of any other proposer, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the proposal are true; and, further, that the proposer has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company, association, organization, proposal depository, or to any member or agent thereof to effectuate a collusive or sham proposal. The undersigned proposer(s) further warrants that proposer(s) has thoroughly examined and understands the entire Contract Documents (plans and specifications) and the Proposal Documents therefore, and that by submitting said Proposal Documents as its proposal, proposer(s) acknowledges and is bound by the entire Contract Documents, including any addenda issued thereto, as such Contract Documents incorporated by reference in the Proposal Documents.

IF A SOLE OWNER OR SOLE CONTRACTOR SIGN HERE:

- (1) Name under which business is conducted _____
- (2) Signature (Given and surname) of proprietor _____
- (3) Place of Business (Street & Number) _____
- (4) City and State _____ Zip Code _____
- (5) Telephone No. _____ Facsimile No. _____
- (6) Email Address _____

IF A PARTNERSHIP, SIGN HERE:

(1) Name under which business is conducted _____

(2) Name of each member of partnership, indicate character of each partner, general or special (limited):

(3) Signature (Note: Signature must be made by a general partner)

Full Name and Character of partner

(4) Place of Business (Street & Number) _____

(5) City and State _____ Zip Code _____

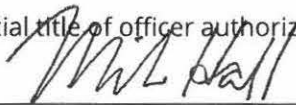
(6) Telephone No. _____ Facsimile No. _____

(7) Email Address _____

IF A CORPORATION, SIGN HERE:

(1) Name under which business is conducted Borrego Solar Systems, Inc.;

(2) Signature, with official title of officer authorized to sign for the corporation:



(Signature)

Michael Hall

(Printed Name)

Chief Executive Officer

(Title of Officer)



(Impress Corporate Seal Here)

(3) Incorporated under the laws of the State of California

(4) Place of Business (Street & Number) 5005 Texas Street, Suite 400

(5) City and State San Diego, CA Zip Code 92108
(6) Telephone No. 888-898-6273 Facsimile No. 888-843-6778
(7) Email Address mike@borregosolar.com

THE FOLLOWING SECTIONS MUST BE FILLED IN BY ALL PROPOSERS:

In accordance with the "Request for Proposal", the proposer holds a California State Contractor's license for the following classification(s) to perform the work described in these specifications:

LICENSE CLASSIFICATION A, B, C10, C46

LICENSE NO. 814435 EXPIRES 11/30/2016

DEPARTMENT OF INDUSTRIAL RELATIONS (DIR) REGISTRATION NUMBER: _____
1000026031

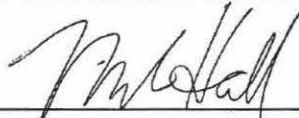
This license classification must also be shown on the front of the proposal envelope. Failure to show license classification on the proposal envelope may cause return of the proposal unopened.

TAX IDENTIFICATION NUMBER (TIN): [REDACTED]

E-Mail Address: cthorne@borregosolar.com

THIS PROPOSAL MUST BE NOTARIZED BELOW:

I certify, under penalty of perjury, that the representations made herein regarding my State Contractor's license number, classification and expiration date are true and correct.

Signature  Title Chief Executive Officer

Please See Attached Notarized Document

SUBSCRIBED AND SWORN TO BEFORE ME, THIS _____ DAY OF _____.

Notary Public in and for the County of _____, State of _____

(NOTARIAL SEAL)

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

CIVIL CODE § 1189



A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of Alameda)
On Oct 17, 2016 before me, Lesley Raphael Notary Public,
Date Here Insert Name and Title of the Officer
personally appeared Mike Hill
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.
Signature [Handwritten Signature]
Signature of Notary Public



Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____
Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

Signer's Name: _____
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Individual Attorney in Fact
 Trustee Guardian or Conservator
 Other: _____
Signer Is Representing: _____

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

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State of California)

County of Alameda)

On Oct 17, 2016 before me, Lesley Raphael Notary Public
Date Here Insert Name and Title of the Officer

personally appeared Mike Hall
Name(s) of Signer(s)

who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.

I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.



Signature [Handwritten Signature]
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____

- Corporate Officer — Title(s): _____
- Partner — Limited General
- Individual Attorney in Fact
- Trustee Guardian or Conservator
- Other: _____

Signer Is Representing: _____

Signer's Name: _____

- Corporate Officer — Title(s): _____
- Partner — Limited General
- Individual Attorney in Fact
- Trustee Guardian or Conservator
- Other: _____

Signer Is Representing: _____

CONTRACTORS CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

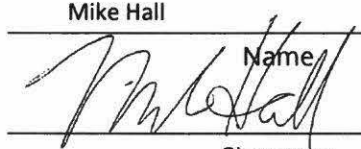
CHECK ONE BOX ONLY.

- The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.

- The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN

Contractor Name: Borrego Solar System, Inc.

Certified By Mike Hall Title CEO
 Name
 Signature Date 17-October-16

USE ADDITIONAL FORMS AS NECESSARY

CONTRACTOR CERTIFICATION

DRUG-FREE WORKPLACE

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-17 regarding Drug-Free Workplace as outlined in the WHITEBOOK, Section 7-13.3, "Drug-Free Workplace", of the project specifications, and that;

This company_has in place a drug-free workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of subdivisions a) through c) of the policy as outlined.



Mike Hall, CEO / 17-October-16

CONTRACTOR CERTIFICATION

AMERICAN WITH DISABILITIES ACT (ADA) COMPLIANCE CERTIFICATION

I hereby certify that I am familiar with the requirements of San Diego City Council Policy No. 100-4 regarding the American With Disabilities Act (ADA) outlined in the WHITEBOOK, Section 7-13.2, "American With Disabilities Act", of the project specifications, and that;

This company has in place workplace program that complies with said policy. I further certify that each subcontract agreement for this project contains language which indicates the subcontractor's agreement to abide by the provisions of the policy as outlined.



Mike Hall, CEO / 17-October-16

CONTRACTOR CERTIFICATION

CONTRACTOR STANDARDS – PLEDGE OF COMPLIANCE

I declare under penalty of perjury that I am authorized to make this certification on behalf of the company submitting this bid/proposal, that as Contractor, I am familiar with the requirements of City of San Diego Municipal Code § 22.3004 regarding Contractor Standards as outlined in the WHITEBOOK, Section 7-13.4, ("Contractor Standards"), of the project specifications, and that Contractor has complied with those requirements.

I further certify that each of the Contractor's subcontractors whose subcontracts are greater than \$50,000 in value has completed a Pledge of Compliance attesting under penalty of perjury of having complied with City of San Diego Municipal Code § 22.3004.



Mike Hall, CEO / 17-October-16

**EQUAL BENEFITS ORDINANCE
CERTIFICATION OF COMPLIANCE**



For additional information, contact:
CITY OF SAN DIEGO
EQUAL BENEFITS PROGRAM
 202 C Street, MS 9A, San Diego, CA 92101
 Phone (619) 533-3948 Fax (619) 533-3220

COMPANY INFORMATION	
Company Name: Borrego Solar Systems, Inc.	Contact Name: Kory-Oren Eden
Company Address: 5005 Texas Street, Suite 400, San Diego, CA 92108	Contact Phone: 510-496-8704
	Contact Email: keden@borregosolar.com

CONTRACT INFORMATION	
Contract Title: MOC Complex and Bayview Reservoir Solar Project Design-build contract	Start Date: TBD
Contract Number (if no number, state location):	End Date: TBD

SUMMARY OF EQUAL BENEFITS ORDINANCE REQUIREMENTS

The Equal Benefits Ordinance [EBO] requires the City to enter into contracts only with contractors who certify they will provide and maintain equal benefits as defined in SDMC §22.4302 for the duration of the contract. To comply:

- Contractor shall offer equal benefits to employees with spouses and employees with domestic partners.
 - Benefits include health, dental, vision insurance; pension/401(k) plans; bereavement, family, parental leave; discounts, child care; travel/relocation expenses; employee assistance programs; credit union membership; or any other benefit.
 - Any benefit not offer an employee with a spouse, is not required to be offered to an employee with a domestic partner.
- Contractor shall post notice of firm's equal benefits policy in the workplace and notify employees at time of hire and during open enrollment periods.
- Contractor shall allow City access to records, when requested, to confirm compliance with EBO requirements.
- Contractor shall submit *EBO Certification of Compliance*, signed under penalty of perjury, prior to award of contract.

NOTE: This summary is provided for convenience. Full text of the EBO and Rules Implementing the EBO are available at www.sandiego.gov/administration.

CONTRACTOR EQUAL BENEFITS ORDINANCE CERTIFICATION

Please indicate your firm's compliance status with the EBO. The City may request supporting documentation.

I affirm **compliance** with the EBO because my firm (*contractor must select one reason*):

- Provides equal benefits to spouses and domestic partners.
- Provides no benefits to spouses or domestic partners.
- Has no employees.
- Has collective bargaining agreement(s) in place prior to January 1, 2011, that has not been renewed or expired.

I request the City's approval to pay affected employees a cash equivalent in lieu of equal benefits and verify my firm made a reasonable effort but is not able to provide equal benefits upon contract award. I agree to notify employees of the availability of a cash equivalent for benefits available to spouses but not domestic partners and to continue to make every reasonable effort to extend all available benefits to domestic partners.

It is unlawful for any contractor to knowingly submit any false information to the City regarding equal benefits or cash equivalent associated with the execution, award, amendment, or administration of any contract. [San Diego Municipal Code §22.4307(a)]

Under penalty of perjury under laws of the State of California, I certify the above information is true and correct. I further certify that my firm understands the requirements of the Equal Benefits Ordinance and will provide and maintain equal benefits for the duration of the contract or pay a cash equivalent if authorized by the City.

Kory-Oren Eden, Sr. Director of HR and Training

Name/Title of Signatory Signature

FOR OFFICIAL CITY USE ONLY	
Receipt Date: _____	EBO Analyst: _____ <input type="checkbox"/> Approved <input type="checkbox"/> Not Approved – Reason: _____

(Rev 02/15/2011)

ATTACHMENTS

Licenses and Registrations

Preliminary Designs

Schedule

Product Specifications

Monitoring Solutions

Licenses and Registrations



Contractor's License Detail for License # 814435

DISCLAIMER: A license status check provides information taken from the CSLB license database. Before relying on this information, you should be aware of the following limitations.

CSLB complaint disclosure is restricted by law (B&P 7124.8) if this entity is subject to public complaint disclosure, a link for complaint disclosure will appear below. Click on the link or button to obtain complaint and/or legal action information.

Per B&P 7071.17, only construction related civil judgments reported to the CSLB are disclosed.

Arbitrations are not listed unless the contractor fails to comply with the terms of the arbitration.

Due to workload, there may be relevant information that has not yet been entered onto the Board's license database.

Data current as of 1/5/2016 3:15:45 PM

Business Information

**BORREGO SOLAR SYSTEMS INC
5005 TEXAS STREET STE 400
SAN DIEGO, CA 92108
Business Phone Number:(619) 961-4525**

**Entity Corporation
Issue Date 11/05/2002
Expire Date 11/30/2016**

License Status

This license is current and active.

All information below should be reviewed.

Classifications

C48 - SOLAR
B - GENERAL BUILDING CONTRACTOR
C10 - ELECTRICAL
A - GENERAL ENGINEERING CONTRACTOR

Bonding Information

Contractor's Bond

This license filed a Contractor's Bond with INTERNATIONAL FIDELITY INSURANCE COMPANY.

Bond Number: 0538565

Bond Amount: \$15,000

Effective Date: 01/01/2016

Contractor's Bond History

Bond of Qualifying Individual

This license filed Bond of Qualifying Individual number 1032022 for HALL AARON STEPHEN in the amount of \$12,500 with HANOVER INSURANCE COMPANY.

Effective Date: 10/30/2014

BQI's Bond History

This license filed Bond of Qualifying Individual number 7840240 for ANDERSON CHRISTOPHER JOSEPH in the amount of \$12,500 with FIDELITY AND DEPOSIT COMPANY OF MARYLAND.

Effective Date: 05/13/2014

Workers' Compensation

This license has workers compensation insurance with the BERKLEY REGIONAL INSURANCE COMPANY
Policy Number: RWC8016242
Effective Date: 04/01/2014
Expire Date: 04/01/2016
[Workers' Compensation History](#)

Other

Personnel listed on this license (current or disassociated) are listed on other licenses.



[Public Works](#)

Public Works Contractor (PWC) Registration Search

This is a listing of current and active PWC registrations pursuant to Division 2, Part 7, Chapter 1 (commencing with section 1720 of the California Labor Code.)

Enter at least one search criteria to display active registered public works contractor(s) matching your selections.

Registration Year:

PWC Registration Number:

Contractor Legal Name:

[Contractor License Lookup](#)

License Number:

County:

[Search](#)

[Reset](#)

Export as: Excel | PDF

Search Results

One registered contractor found: 1

Details	Legal Name	Registration Number	County	City	Registration Date	Expiration Date
View	BORREGO SOLAR SYSTEMS, INC.	1000026031	SAN DIEGO	SAN DIEGO	06/27/2016	06/30/2017

v2.20160101

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Notification of activities
Public Records Act

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Jobs at DIR

POST IN CONSPICUOUS PLACE OR KEEP ON PERSON

CITY OF SAN DIEGO * CERTIFICATE OF PAYMENT OF BUSINESS TAX

BORREGO SOLAR SYSTEMS INC
ACCOUNTING
5005 TEXAS ST #400
SAN DIEGO CA 92108-3725

Certificate Number: B2003025165
Business Name: BORREGO SOLAR SYSTEMS INC
Business Owner: BORREGO SOLAR SYSTEMS INC
Business Address: 5005 TEXAS ST #400
SAN DIEGO CA 92108-3725

Primary Business Activity: ALL OTHER SPECIAL TRADE CONTRACTORS

Secondary Business Activity:

Effective Date: 04/01/2016
Expiration Date: 03/31/2017

PLEASE NOTIFY THE CITY TREASURER'S OFFICE IN WRITING OF ANY CHANGE IN OWNERSHIP OR ADDRESS - BUSINESS TAX PROGRAM, PO BOX 122289, SAN DIEGO, CA 92112

BUSINESS FILE COPY

CITY OF SAN DIEGO
CERTIFICATE OF PAYMENT OF BUSINESS TAX
PO BOX 122289, SAN DIEGO, CA 92112-2289
1200 3RD AVENUE, MS 511, SAN DIEGO, CA 92101
(619) 615-1500; FAX (619) 533-3272
www.sandiego.gov/treasurer



00264
3

Certificate Number: B2003025165
Business Name: BORREGO SOLAR SYSTEMS INC
Business Owner: BORREGO SOLAR SYSTEMS INC
Business Address: 5005 TEXAS ST #400
SAN DIEGO CA 92108-3725

Primary Business Activity: ALL OTHER SPECIAL TRADE CONTRACTORS

Secondary Business Activity:

Effective Date: 04/01/2016
Expiration Date: 03/31/2017

Mailing Address: BORREGO SOLAR SYSTEMS INC
ACCOUNTING
5005 TEXAS ST #400
SAN DIEGO CA 92108-3725

This certificate acknowledges payment of business taxes pursuant to the San Diego Municipal Code. This **is not** a License to do business within the City of San Diego in violation of any section of the Municipal Code or regulation adopted by the City Council including, but not limited to: Zoning restrictions; Land Use specifications as defined in Planned Districts, Redevelopment areas, Historical Districts, or Revitalization areas; Business Tax Regulations; Police Department Regulations; and Fire, Health or Sanitation Permits and Regulations.

This document is issued without verification that the payer is subject to or exempt from licensing by the State of California.

Payment of the required tax at the time or times due is for the term and purpose stated and is pursuant to City Ordinance. Please refer to delinquency information under "Notice".

NOTICE: It is the responsibility of the certificate holder to renew this certificate of payment of business tax within the proper time limits. Failure to do so, even if you have not received a renewal notice, will result in the assessment of a penalty. Please note your expiration date on this certificate above. The certificate holder is requested to notify the City Treasurer's Office upon sale or closure of the business, change of location, or change of business activity.

The tax or fees collected are **Not Refundable** unless collected as a direct result of an error by the City of San Diego.

This certificate is NOT transferable for a change in business ownership.

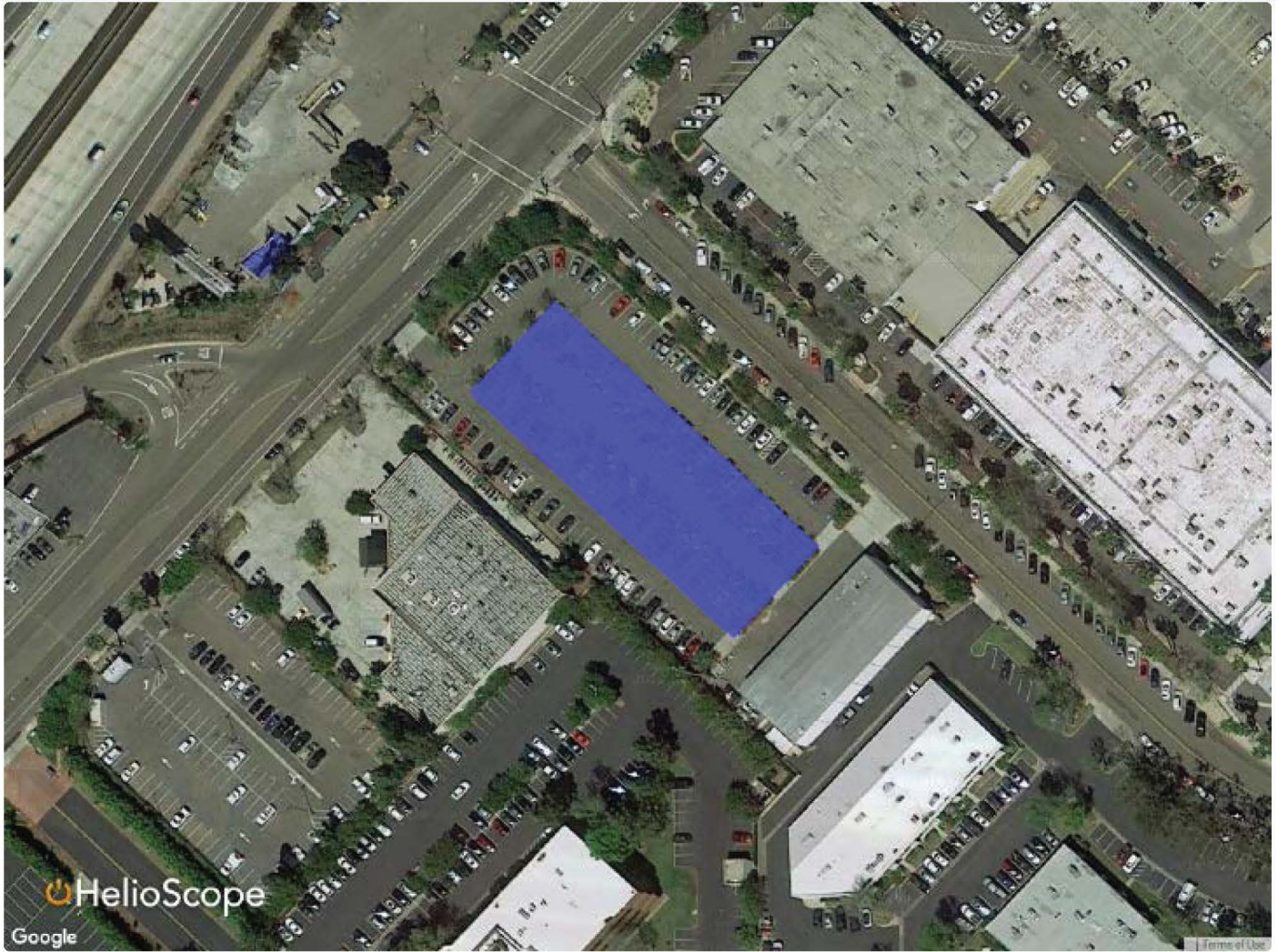
This information is available in alternative formats upon request.

Preliminary Designs

Detailed Layout



▼ Detailed Layout



Schedule

Baseline Schedule

City of San Diego

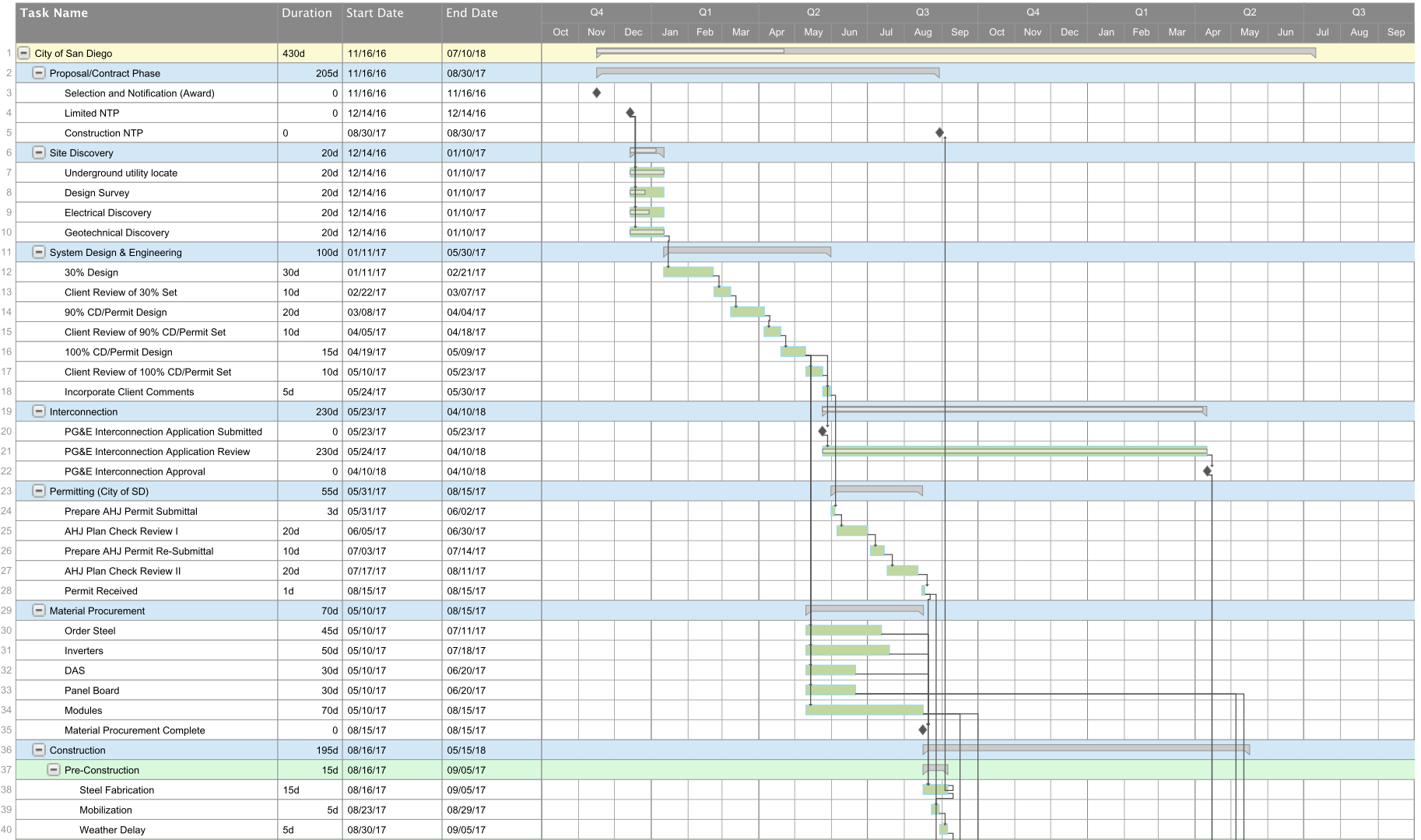


Task Name	Duration	Start Date	End Date	Q4			Q1			Q2			Q3			Q4			
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
City of San Diego	290d	11/16/16	12/26/17	[Gantt bar spanning from Nov 16, 2016 to Dec 26, 2017]															
Proposal/Contract Phase	200d	11/16/16	08/23/17	[Gantt bar spanning from Nov 16, 2016 to Aug 23, 2017]															
Selection and Notification (Award)	0	11/16/16	11/16/16	[Milestone diamond at Nov 16, 2016]															
Limited NTP	0	12/14/16	12/14/16	[Milestone diamond at Dec 14, 2016]															
Construction NTP	0	08/23/17	08/23/17	[Milestone diamond at Aug 23, 2017]															
Site Discovery	20d	12/14/16	01/10/17	[Gantt bar spanning from Dec 14, 2016 to Jan 10, 2017]															
Underground utility locate	20d	12/14/16	01/10/17	[Gantt bar spanning from Dec 14, 2016 to Jan 10, 2017]															
Design Survey	20d	12/14/16	01/10/17	[Gantt bar spanning from Dec 14, 2016 to Jan 10, 2017]															
Electrical Discovery	20d	12/14/16	01/10/17	[Gantt bar spanning from Dec 14, 2016 to Jan 10, 2017]															
Geotechnical Discovery	20d	12/14/16	01/10/17	[Gantt bar spanning from Dec 14, 2016 to Jan 10, 2017]															
System Design & Engineering	100d	01/04/17	05/23/17	[Gantt bar spanning from Jan 4, 2017 to May 23, 2017]															
30% Design	30d	01/04/17	02/14/17	[Gantt bar spanning from Jan 4, 2017 to Feb 14, 2017]															
Client Review of 30% Set	10d	02/15/17	02/28/17	[Gantt bar spanning from Feb 15, 2017 to Feb 28, 2017]															
90% CD/Permit Design	20d	03/01/17	03/28/17	[Gantt bar spanning from Mar 1, 2017 to Mar 28, 2017]															
Client Review of 90% CD/Permit Set	10d	03/29/17	04/11/17	[Gantt bar spanning from Mar 29, 2017 to Apr 11, 2017]															
100% CD/Permit Design	15d	04/12/17	05/02/17	[Gantt bar spanning from Apr 12, 2017 to May 2, 2017]															
Client Review of 100% CD/Permit Set	10d	05/03/17	05/16/17	[Gantt bar spanning from May 3, 2017 to May 16, 2017]															
Incorporate Client Comments	5d	05/17/17	05/23/17	[Gantt bar spanning from May 17, 2017 to May 23, 2017]															
Interconnection	45d	05/16/17	07/18/17	[Gantt bar spanning from May 16, 2017 to Jul 18, 2017]															
PG&E Interconnection Application Submitted	0	05/16/17	05/16/17	[Milestone diamond at May 16, 2017]															
PG&E Interconnection Application (Fast Track) Review	45d	05/17/17	07/18/17	[Gantt bar spanning from May 17, 2017 to Jul 18, 2017]															
PG&E Interconnection Approval	0	07/18/17	07/18/17	[Milestone diamond at Jul 18, 2017]															
Permitting (City of SD)	55d	05/24/17	08/08/17	[Gantt bar spanning from May 24, 2017 to Aug 8, 2017]															
Prepare AHJ Permit Submittal	3d	05/24/17	05/26/17	[Gantt bar spanning from May 24, 2017 to May 26, 2017]															
AHJ Plan Check Review I	20d	05/29/17	06/23/17	[Gantt bar spanning from May 29, 2017 to Jun 23, 2017]															
Prepare AHJ Permit Re-Submittal	10d	06/26/17	07/07/17	[Gantt bar spanning from Jun 26, 2017 to Jul 7, 2017]															
AHJ Plan Check Review II	20d	07/10/17	08/04/17	[Gantt bar spanning from Jul 10, 2017 to Aug 4, 2017]															
Permit Received	1d	08/08/17	08/08/17	[Milestone diamond at Aug 8, 2017]															
Material Procurement	70d	05/03/17	08/08/17	[Gantt bar spanning from May 3, 2017 to Aug 8, 2017]															
Order Steel	45d	05/03/17	07/04/17	[Gantt bar spanning from May 3, 2017 to Jul 4, 2017]															
Inverters	50d	05/03/17	07/11/17	[Gantt bar spanning from May 3, 2017 to Jul 11, 2017]															
DAS	30d	05/03/17	06/13/17	[Gantt bar spanning from May 3, 2017 to Jun 13, 2017]															
Panel Board	30d	05/03/17	06/13/17	[Gantt bar spanning from May 3, 2017 to Jun 13, 2017]															
Modules	70d	05/03/17	08/08/17	[Gantt bar spanning from May 3, 2017 to Aug 8, 2017]															
Material Procurement Complete	0	08/08/17	08/08/17	[Milestone diamond at Aug 8, 2017]															
Construction	60d	08/09/17	10/31/17	[Gantt bar spanning from Aug 9, 2017 to Oct 31, 2017]															
Pre-Construction	15d	08/09/17	08/29/17	[Gantt bar spanning from Aug 9, 2017 to Aug 29, 2017]															
Steel Fabrication	15d	08/09/17	08/29/17	[Gantt bar spanning from Aug 9, 2017 to Aug 29, 2017]															
Mobilization	5d	08/16/17	08/22/17	[Gantt bar spanning from Aug 16, 2017 to Aug 22, 2017]															
Weather Delay	5d	08/23/17	08/29/17	[Gantt bar spanning from Aug 23, 2017 to Aug 29, 2017]															

Task Name	Duration	Start Date	End Date	Q4			Q1			Q2			Q3			Q4			
				Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
41 <input type="checkbox"/> MOC Complex 422KW	45d	08/30/17	10/31/17	[Gantt bar spanning from 08/30/17 to 10/31/17]															
42 Site Improvements/Directional Boring	5d	08/30/17	09/05/17	[Gantt bar from 08/30/17 to 09/05/17]															
43 Pier Installation	15d	09/06/17	09/26/17	[Gantt bar from 09/06/17 to 09/26/17]															
44 Steel Erection	15d	09/13/17	10/03/17	[Gantt bar from 09/13/17 to 10/03/17]															
45 PV Module installation	15d	09/20/17	10/10/17	[Gantt bar from 09/20/17 to 10/10/17]															
46 DC Installation	10d	10/04/17	10/17/17	[Gantt bar from 10/04/17 to 10/17/17]															
47 AC Installation	25d	09/27/17	10/31/17	[Gantt bar from 09/27/17 to 10/31/17]															
48 <input type="checkbox"/> Bayview Water Reservoir 263KW	34d	08/16/17	10/02/17	[Gantt bar spanning from 08/16/17 to 10/02/17]															
49 Site Mobilization	3d	08/16/17	08/18/17	[Gantt bar from 08/16/17 to 08/18/17]															
50 Roof Prep	3d	08/21/17	08/23/17	[Gantt bar from 08/21/17 to 08/23/17]															
51 Racking Installation	8d	08/24/17	09/04/17	[Gantt bar from 08/24/17 to 09/04/17]															
52 PV Module installation	10d	09/05/17	09/18/17	[Gantt bar from 09/05/17 to 09/18/17]															
53 DC Installation	8d	09/12/17	09/21/17	[Gantt bar from 09/12/17 to 09/21/17]															
54 AC Installation	20d	09/05/17	10/02/17	[Gantt bar from 09/05/17 to 10/02/17]															
55 <input type="checkbox"/> Commissioning	30d	11/01/17	12/12/17	[Gantt bar spanning from 11/01/17 to 12/12/17]															
56 Testing	10d	11/01/17	11/14/17	[Gantt bar from 11/01/17 to 11/14/17]															
57 Substantial Completion	0	11/14/17	11/14/17	[Point marker at 11/14/17]															
58 Utility Commissioning	20d	11/15/17	12/12/17	[Gantt bar from 11/15/17 to 12/12/17]															
59 Commercial Operation Date	0	12/12/17	12/12/17	[Point marker at 12/12/17]															
60 <input type="checkbox"/> Closeout	30d	11/15/17	12/26/17	[Gantt bar spanning from 11/15/17 to 12/26/17]															
61 Complete Punchlist	10d	11/15/17	11/28/17	[Gantt bar from 11/15/17 to 11/28/17]															
62 Submit project documentation	10d	12/13/17	12/26/17	[Gantt bar from 12/13/17 to 12/26/17]															
63 Final Completion	0	12/26/17	12/26/17	[Point marker at 12/26/17]															

Alternate Schedule

City of San Diego Alternate



Product Specifications



SUNIVA OPTIMUS® SERIES MONOCRYSTALLINE SOLAR MODULES

OPT SERIES: OPT 72 CELL MODULES (SILVER FRAME)

ENGINEERING EXCELLENCE

- Built exclusively with **Suniva's premium ARTisun Select cells**, providing one of the highest power outputs per square meter at an affordable price
- **The leading US-born, US-operated crystalline silicon cell and module manufacturer**, spun out of Georgia Tech's University Center of Excellence in Photovoltaics; one of only two such research centers in the U.S.
- Suniva's state-of-the art manufacturing and module lab facilities feature the most advanced equipment and technology

QUALITY & RELIABILITY

- Suniva Optimus modules are manufactured and warranted to our specifications assuring consistent high performance and high quality.
- Rigorous in-house quality management tests beyond standard UL and IEC standards
- Performance longevity with advanced polymer backsheet
- UL1703 listed Type 2 PV module
- Passed the most stringent salt spray tests based on IEC 61701
- Passed enhanced stress tests¹ based on IEC 61215 conducted at Fraunhofer ISE²

Optimus® modules are known for their superior quality and long-term reliability. These high-powered modules consist of Suniva's premium ARTisun® Select cell technology manufactured in the U.S.A. using our pioneering ion implantation technology. Suniva's high power-density Optimus modules provide excellent performance and value.

FEATURES

- ☀ Utilizes our premier American-made cell technology, ARTisun Select®
- ☀ Superior performance and reliability; enhanced stress tests conducted at Fraunhofer ISE
- ☀ Module families ranging from 325-340W
- ☀ Positive only power tolerance
- ☀ Marine grade aluminum frame with hard anodized coating
- ☀ Certified PID-free by PV Evolution Labs (PVEL)
- ☀ 1000V UL
- ☀ 25 year linear power warranty; 10 year product warranty

CERTIFICATIONS



OPTIMUS SERIES: OPT 72 CELL MODULES

ELECTRICAL DATA (NOMINAL)

The rated power may only vary by -0/+10W and all other electrical parameters by $\pm 5\%$

Module Type	OPT325-72-5-800	OPT330-72-5-800	OPT335-72-5-800	OPT340-72-5-800
Power Classification (Pmax)	325 W	330 W	335 W	340 W
Module Efficiency (%)	16.66%	16.92%	17.18%	17.43%
Voltage at Max. Power Point (Vmp)	37.5 V	37.6 V	37.7 V	37.8 V
Current at Max. Power Point (Imp)	8.67 A	8.78 A	8.89 A	8.99 A
Open Circuit Voltage (Voc)	45.8 V	45.9 V	45.9 V	46.0 V
Short Circuit Current (Isc)	9.42 A	9.54 A	9.66 A	9.78 A

The electrical data apply to standard test conditions (STC): Irradiance of 1000 W/m² with AM 1.5 spectra at 25°C.

CHARACTERISTIC DATA

Type of Solar Cell	High-efficiency ARTisun Select cells
Frame	Silver anodized aluminum alloy
Glass	4.0 mm (0.16 inches) tempered glass
Junction Box	IP68 rated (3 bypass diodes)
Cable & Connectors	4.0 mm ² , 12 AWG, Symmetrical cable lengths 1100 mm (43.3 in.), Amphenol H4 connectors

MECHANICALS

Cells / Module	72 (6 x 12)
Module Dimensions	1956 x 992 mm x 40mm (77 x 39.05 x 1.6 inches)
Module Thickness (Depth)	40 mm (1.6 inches)
Approximate Weight	25.8 kg (56.9 lbs.)

TEMPERATURE COEFFICIENTS

Voltage	β , Voc (%/°C)	-0.335
Current	α , Isc (%/°C)	+0.047
Power	γ , Pmax (%/°C)	-0.420
NOCT Avg	(+/- 2 °C)	46.0

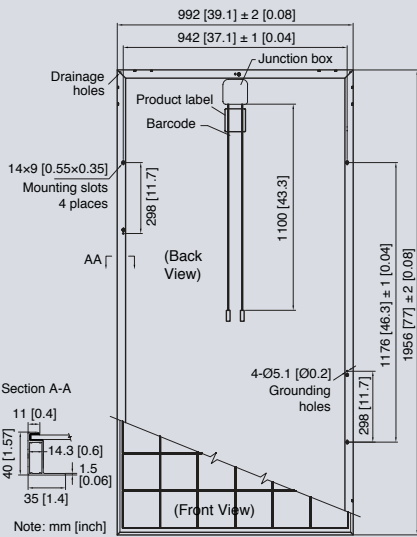
LIMITS

Max. System Voltage	1000 VDC for IEC, 1000 VDC for UL
Max Series Fuse Rating	20 Amps
Operating Module Temperature	-40°C to +85°C (-40°F to +185°F)
Storm Resistance/Static Load	Module certified to withstand extreme wind (3800 Pascal) and snow loads (5400 Pascal)

Suniva® reserves the right to change the data at any time. View manual at suniva.com.

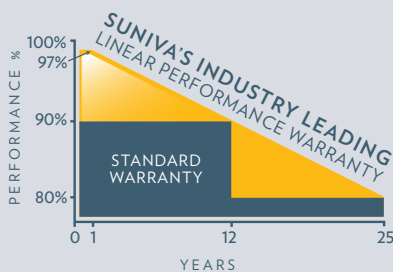
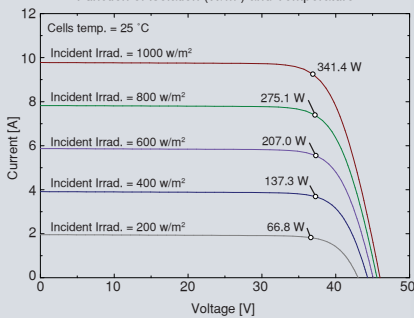
¹UV 90 kWh, TC 400, DH 2000. ²Tests were conducted on module type OPT 60 silver frame.

Please read installation manual before installing or working with module.



PV module: Suniva, OPT340-72-5-800

Current-Voltage (IV) as a Function of Isolation (W/m²) and Temperature



PLEASE RECYCLE

PRELIMINARY
© Suniva, Inc., 2016

Product	Modules per pallet:	Modules per full 53 ft. truck load, double stacked
OPT - 72 cell	25	675

HEADQUARTERS

5765 Peachtree Industrial Blvd.,
Norcross, Georgia 30092 USA
Tel: +1 404 477 2700

www.suniva.com

Suniva
The Brilliance of Solar Made Sensible®

SUNNY TRIPOWER 12000TL-US / 15000TL-US / 20000TL-US / 24000TL-US / 30000TL-US



STP 12000TL-US-10 / STP 15000TL-US-10 / STP 20000TL-US-10 / STP 24000TL-US-10 / STP 30000TL-US-10



**RATED FOR
1000 V DC & 600 V DC
SYSTEMS**



Design flexibility

- 1000 V DC or 600 V DC
- Two independent DC inputs
- 15° to 90° mounting angle range
- Detachable DC Connection Unit

System efficiency

- 98.0% CEC, 98.6% Peak
- 1000 V DC increases system efficiency
- OptiTrac Global Peak MPPT

Enhanced safety

- Integrated DC AFCI
- Floating system with all-pole sensitive ground fault protection
- Reverse polarity indicator in combination with Connection Unit

Future-proof

- Complete grid management feature set
- Integrated Speedwire, WebConnect, ModBus interface
- Bi-directional Ethernet communications
- Utility-interactive controls for active and reactive power

SUNNY TRIPOWER 12000TL-US / 15000TL-US / 20000TL-US / 24000TL-US / 30000TL-US

The ultimate solution for decentralized PV plants, now up to 30 kilowatts

The world's best-selling three-phase PV inverter, the SMA Sunny Tripower TL-US, is raising the bar for decentralized commercial PV systems. This three-phase, transformerless inverter is UL listed for up to 1000 V DC maximum system voltage and has a peak efficiency above 98 percent, while OptiTrac Global Peak minimizes the effects of shade for maximum energy production. The Sunny Tripower delivers a future-proof solution with full grid management functionality, cutting edge communications and advanced monitoring. The Sunny Tripower is also equipped with all-pole ground fault protection and integrated AFCI for a safe, reliable solution. It offers unmatched flexibility with a wide input voltage range and two independent MPP trackers. Suitable for both 600 V DC and 1,000 V DC applications, the Sunny Tripower allows for flexible design and a lower leveled cost of energy.

www.SMA-America.com

Technical data	Sunny Tripower 12000TL-US	Sunny Tripower 15000TL-US	Sunny Tripower 20000TL-US	Sunny Tripower 24000TL-US	Sunny Tripower 30000TL-US
Input (DC)					
Max. usable DC power (@ $\cos \varphi = 1$)	12250 W	15300 W	20400 W	24500 W	30800 W
Max. DC voltage	*1000 V	*1000 V	*1000 V	*1000 V	1000 V
Rated MPPT voltage range	300 V...800 V	300 V...800 V	380 V...800 V	450 V...800 V	500 V...800 V
MPPT operating voltage range	150 V...1000 V	150 V...1000 V	150 V...1000 V	150 V...1000 V	150 V...1000 V
Min. DC voltage / start voltage	150 V / 188 V	150 V / 188 V	150 V / 188 V	150 V / 188 V	150 V / 188 V
Number of MPP tracker inputs	2	2	2	2	2
Max. input current / per MPP tracker input	66 A / 33 A	66 A / 33 A	66 A / 33 A	66 A / 33 A	66 A / 33 A
Output (AC)					
AC nominal power	12000 W	15000 W	20000 W	24000 W	30000 W
Max. AC apparent power	12000 VA	15000 VA	20000 VA	24000 VA	30000 VA
Output phases / line connections	3 / 3-N-PE				3 / 3-N-PE, 3-PE
Nominal AC voltage	480 / 277 V WYE				480 / 277 V WYE, 480 V Delta
AC voltage range	244 V...305 V				
Rated AC grid frequency	60 Hz				
AC grid frequency / range	50 Hz, 60 Hz / -6 Hz...+5 Hz				
Max. output current	14.4 A	18 A	24 A	29 A	36.2 A
Power factor at rated power / adjustable displacement	1 / 0.0 leading...0.0 lagging				
Harmonics	< 3%				
Efficiency					
Max. efficiency / CEC efficiency	98.2% / 97.5%	98.2% / 97.5%	98.5% / 97.5%	98.5% / 98.0%	98.6% / 98.0%
Protection devices					
DC reverse polarity protection	●	●	●	●	●
Ground fault monitoring / grid monitoring	●	●	●	●	●
All-pole sensitive residual current monitoring unit	●	●	●	●	●
DC AFCI compliant to UL 1699B	●	●	●	●	●
AC short circuit protection	●	●	●	●	●
Protection class / overvoltage category	I / IV	I / IV	I / IV	I / IV	I / IV
General data					
Dimensions (W / H / D) in mm (in)	665 / 650 / 265 (26.2 / 25.6 / 10.4)				
Packing dimensions (W / H / D) in mm (in)	780 / 790 / 380 (30.7 / 31.1 / 15.0)				
Weight	55 kg (121 lbs)				
Packing weight	61 kg (134.5 lbs)				
Operating temperature range	-25°C...+60°C				
Noise emission (typical) / internal consumption at night	51 dB(A) / 1 W				
Topology	Transformerless				
Cooling concept / electronics protection rating	OptiCool / NEMA 3R				
Features					
Display / LED indicators (Status / Fault / Communication)	- / ●				
Interface: RS485 / Speedwire, WebConnect	○ / ●				
Data interface: SMA Modbus / SunSpec ModBus	● / ●				
Mounting angle range	15°...90°				
Warranty: 10 / 15 / 20 years	● / ○ / ○				
Certifications and approvals	UL 1741, UL 1998, UL 1699B, IEEE 1547, FCC Part 15 (Class A & B), CAN/CSA C22.2 107.1-1				

NOTE: US inverters ship with gray lids. Data at nominal conditions. *Suitable for 600 V DC max. systems

● Standard features ○ Optional features - Not available

Type designation STP 12000TL-US-10 STP 15000TL-US-10 STP 20000TL-US-10 STP 24000TL-US-10 STP 30000TL-US-10

Accessories



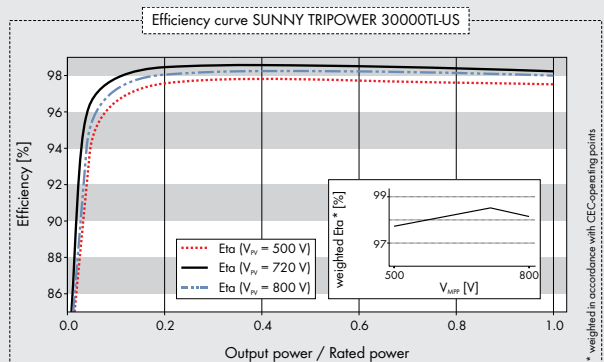
RS485 interface
DM-485CB-US-10



Connection Unit
CU 1000-US-10



SMA Cluster Controller
CLCON-10



Polar Bear® III HD

10 Degree Flat Roof Mounting System

THE ENERGY DENSITY YOU NEED



Flat roof racking that delivers cost savings and peace of mind

The new Polar Bear III HD design draws on seven years of industry experience. It provides more design and energy density flexibility, improved constructability, universal framed module support, enhanced roof protection, better wire management, and a lower cost than Polar Bear III or any other reliable flat roof mounting solution in the market today. Combined with PanelClaw's project support team of flat roof experts, Polar Bear III HD is the obvious choice for your commercial flat roof projects.

With over 6,000 flat roof projects completed around the world including more than 2,000 jurisdictions in 44 states in the US, we are your flat roof partners. Experience the PanelClaw® Advantage on your next flat roof project.



panelclaw.com

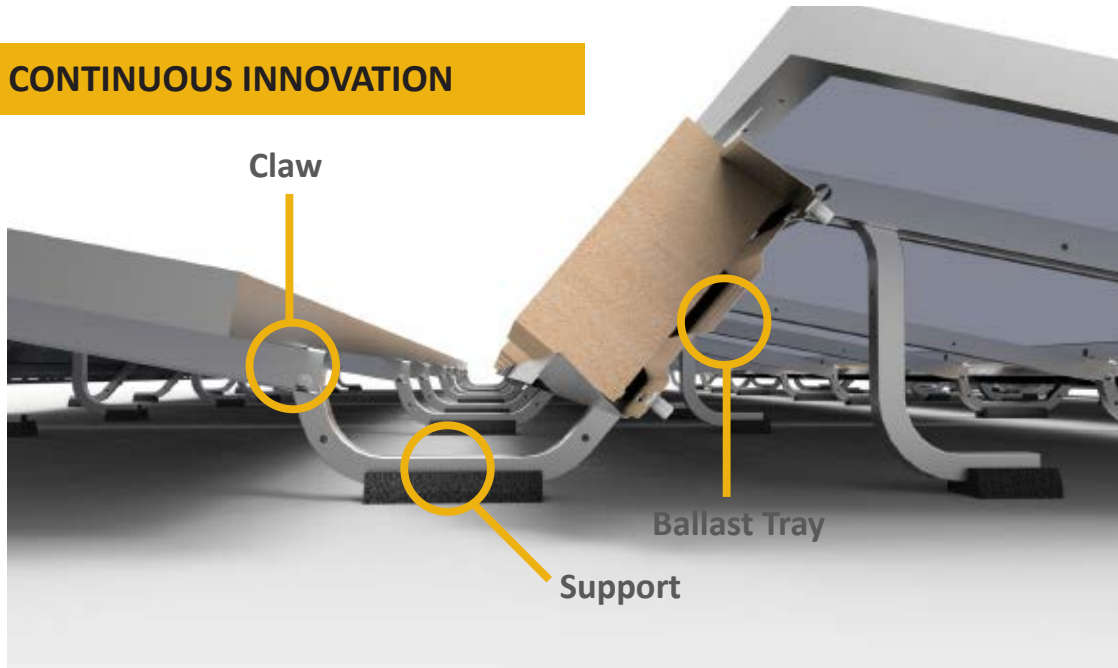
panel
claw®

Polar Bear III HD

10 Degree Flat Roof Mounting System



CONTINUOUS INNOVATION



Applications

Flat roof (max slope 5°)

Fully ballasted or mechanically attached

Module Tilt Angle

10° nominal

North/South Module to Module Repeat

52", 55", 56" or 59"

Platform Load

~1.9psf - 8 psf

Module Orientation

Landscape

Module Attachment

Standard module mounting holes

Basic Wind Speed

Up to 150 mph (>150 mph by approval)

Wind Exposure Category

B and C (D by approval)

Seismic Compatibility

C, D, E and F

Material

G90 steel with stainless steel fastener

Warranty

25 years

Listings and Certifications

ANSI/UL 2703-2015 listed

UL 2703 System Fire Rating: Class A with Type 1 and Type 2 modules

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Trusted Roof Integrity

Polar Bear® III HD protects the roof with fully captured ballast, integrated recycled rubber roof protection pads and a system design that allows for free water flow.

Accelerated Construction

The engineered design emphasizes built-in features for construction efficiency:

- Three major components that are light-weight and easy to move
- Pre-installed bolts to quickly mount Ballast Trays
- Single-module tilt-up feature
- Enhanced wire management options

Safety and Reliability

PanelClaw's industry-leading reliability track record in the flat roof space is the result of our investment in an extensive test program that goes beyond existing codes and standards. We maintain long term partnerships with third party test laboratories and codes and standards bodies throughout the industry.

Three Components

Support

- Easy-to-handle components that weigh less than 2.5 pounds
- Integrated recycled rubber roof protection pads
- Pre-drilled holes for wire management cabling options

Ballast Tray

- Angled fit with locking end-tab to fully capture ballast blocks
- Hemmed edges and chamfered corners prevent wiring from coming into contact with sharp edges

Claw

- Attachment to module using standard module mounting holes
- UL 2703 certified for electrical bonding and grounding
- Two energy density mounting options
- Pre-drilled for E/W module-to-module wire management

(978) 688.4900 | sales@panelclaw.com

Monitoring Solutions



Easy to use

- Monitors and controls up to 75 string inverters
- Exchanges real-time data with other devices and systems using the standard Modbus® communications protocol

Versatile

- Complies with national and international requirements for grid integration
- Integrated analog and digital interfaces for sensors and active/reactive power setpoints

Professional

- Easy installation due to top-hat rail mounting and connectors
- Optimized for industrial use, thanks to a robust enclosure and high-quality components

Safe

- Immediate e-mail notification in the event of a failure
- Remote monitoring and maintenance over the integrated online interface and Sunny Portal

SMA CLUSTER CONTROLLER

Professional monitoring and controlling for decentralized large-scale PV plants

The SMA Cluster Controller is the ideal system solution for decentralized large-scale PV plants when combined with SMA's highly efficient string inverters. It offers reliable monitoring and control of up to 75 inverters, thanks to its Ethernet-based Speedwire fieldbus and high-performance, dual-core processor. Advantages of the SMA Cluster Controller include optimum data transmission rates for plant monitoring and fast processing of the measured values, status updates, and plant control commands. Furthermore, myriad sensor connection options allow for precise evaluation of plant power, which can also be viewed via the integrated online interface or Sunny Portal.

Technical data	SMA Cluster Controller
Communication	
Inverters	Speedwire, 10 / 100 Mbit/s
Data network (LAN)	Fast Ethernet, 10 / 100 Mbit/s
Data interfaces	HTTP, FTP, Modbus TCP/UDP, SMTP, Sunny Portal
Connections	
Inverters / data network (LAN)	2 Ports, 10BASE-T or 100BASE-TX, RJ45, switched
Data storage	2 USB 2.0 High-Speed sockets, Type A
Voltage supply / analog/digital signals	Connector, push-in cage clamp terminal
Max. number of SMA devices	
Speedwire	75
Max. communication range	
Speedwire / LAN	100 m (between two devices)
Voltage supply	
Voltage supply	External power supply unit (available as an accessory)
Input voltage	18 V DC ... 30 V DC
Power consumption	Typical 12 W / max. 30 W
Ambient conditions in operation	
Ambient temperature	-25 °C ... +60 °C (-13 °F ... +140 °F)
Relative air humidity	4 % ... 95 %, not condensing
Altitude above sea level	0 m ... 3000 m
Display	
Type	LC display, monochromatic, back-lit
Display languages	English, German
Memory	
Internal	1.7 GB as ring buffer
External	USB mass storage (optional, available as an accessory)
USB-Interfaces	
Quantity / specification / sockets	2 / USB 2.0 High-Speed / Type A
Digital inputs	
Quantity	8
Usage	Specification for active and reactive power
Analog inputs	
Quantity	3 x current signal, 1 x voltage signal
Measuring range	0 mA ... 20 mA or 0 V ... +10 V
Usage	Irradiation measurement, specification for active and reactive power or current/voltage measurement
Temperature Measurement	
Quantity / sensor type	2 / PT100 / PT1000 (two or four-cable connection)
Measuring range	-40 °C ... +85 °C (-40 °F ... +185 °F)
Usage	Measurement of ambient and module temperature
Digital outputs	
Quantity / design	3 / potential-free relay contacts
Max. load tolerance	48 V DC / 30 W
Usage	Error message, warning and active power limitation
Analog outputs	
Number / signal current	2 / 4 mA ... 20 mA
Usage	Feedback of the active and reactive power setpoints
General data	
Dimensions (W / H / D)	275 / 133 / 71 mm (10.8 / 5.2 / 2.8 inches)
Weight	0.9 kg (2.0 lb)
Installation site / degree of protection provided by enclosure	Indoor / IP20
Mounting type	Top-hat rail mounting
Status display	LC-Display, LEDs
Software languages, languages of the manual	German, English, Italian, Spanish, French, Dutch, Portuguese, Greek, Czech
Features	
Operation	Integrated web server, display, keypad
Clock	Real time clock (RTC) with maintenance-free buffering
Advanced functions using the Sunny Portal	Plant and yield monitoring, measured value processing, performance analyses, presentation, status reports, mobile data access
Warranty	5 years
Certificates and approvals	www.SMA-Solar.com
Accessories (optional)	
Top-hat rail power supply	Input: 100 V ... 240 V AC / 45 ... 65 Hz, Output: 24 V DC / 2.5 A
USB flash drive	4 GB or 8 GB, highly reliable industrial quality
Type designation	CLCON-10

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Choose Solar.

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